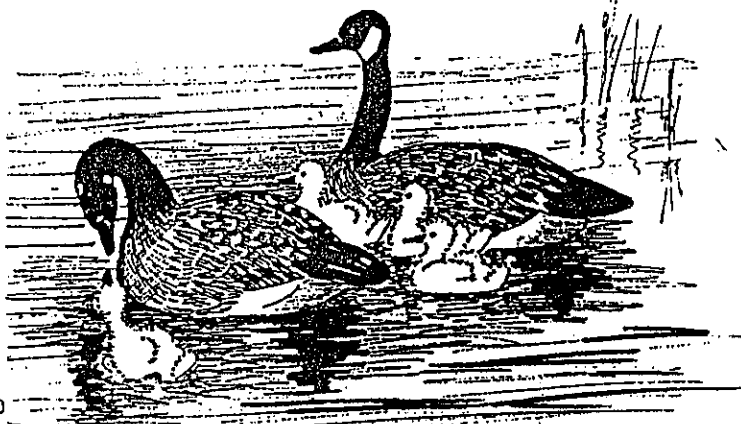


# BLOMIDON NATURALISTS SOCIETY NEWSLETTER



VOLUME 17  
NUMBER 1  
MARCH 1990

## BNS Winter and Early Spring Programme

**MONDAY EVENING MEETINGS:** All meetings will start at 7:30 p.m. and, unless otherwise indicated, will be held in Room 244 of the Beveridge Arts Centre at Acadia University. All lectures and field trips are open to the public and BNS members are encouraged to bring friends and neighbours. Any changes in the date, time or subject of meetings are announced on posters, the Kings Kable notice board and in The Kentville Advertiser and The Hants Journal.

1. March 19 -- "Motion in the Heavens" by Sherman Williams. On the sixteenth anniversary of the founding of the Society, Sherman will use computer images and slides to illustrate events and changes in the evening sky. This program will be followed up with a field excursion on March 21st (see Field Trips).

2. April 16 -- "Impact of People on the Maritime Fishery" by Mike Dadswell. A fisheries biologist and Associate Professor of Biology at Acadia University, Mike worked for many years with the Department of Fisheries and Oceans. You will surely find his vast experience and interesting ideas stimulating.

3. May 21 -- "Into Africa: People, Places, and Organisms, on the road from London to Nairobi". Nancy House, an M.Sc. student at Acadia University, will give a slide presentation on her four-month trip driving through Africa from Morocco to Kenya.

4. June 18 -- A presentation on the cultural history of the dykelands by Barbara LeBlanc, Superintendent of the Grand Pre' National Historic Park.

## Field Trips

Unless otherwise noted, all times given are for meeting at the Acadia Gym parking lot. Leaders' telephone numbers are included to allow those without access to local news to confirm trips.

1. Wednesday, March 21, 7:30 p.m. -- Star Night at Stiles Park with Sherman Williams (542-5104). Follow-up to Sherman's Monday night meeting presentation, "Motion in the Heavens". Meet at the Park. Storm or cloud date: March 22.

2. Tuesday, March 27, 7:30 p.m. -- Goose Flypast at Wellington Dyke with Sherman Bleakney (542-3604).

3. Saturday, April 28, 8:30 a.m. -- Mosses and Ferns in New Minas with John Pickwell (678-8281). Alternate meeting place: parking lot at Exit # 12 of Highway 101, at 8:45 a.m. Rain date: April 29.

4. Sunday, April 29, 10:00 a.m. -- Wolfville Area Birds (a combined Blomidon Naturalists Society / Nova Scotia Bird Society trip). Led by Jim Wolford (542-7650).

5. Sunday, May 13, 8:30 a.m. -- Mother's Day walk through various orchards in Hillaton and Gaspereau with a discussion of ongoing research on tree swallows and other birds in orchards. Led by Denise Packard and Sherman Boates (542-2361).

6. Thursday, May 24, 6:30 p.m. -- Spring Gaspereau River walk with Ruth and Reg Newell (542-2095). Alternate meeting place: White Rock Bridge at 6:45 p.m.

7. Saturday, June 2, 8:30 a.m. -- Sherman Williams (542-5104) will lead his popular Scots Bay, Cape Split hike. All day. Pot luck lunch at the Cape; bring a lunch to share with others. Alternate meeting place: Scots Bay at 9:00 a.m.

8. June 8, 9, 10 -- A series of field trips associated with the Federation of Nova Scotia Naturalists first annual general meeting and conference. Details to be announced.

9. Saturday, June 16, 1:00 p.m. -- Curry Brook Ravine, West Brooklyn, Kings County. Birds, mosses and ferns in a picturesque habitat with Bernard Forsythe (542-2427) and John Pickwell (678-8281).

10. Saturday, June 23, 8:30 a.m. -- A Habitat Walk through History, looking at man-made or man-influenced habitats with George (542-7116) and Harold Forsyth (542-5983). Alternate meeting place: Harold Forsyth's at 8:45 a.m. Trip will end at Hennigar's Farm Market at about lunch time -- in time for an ice cream!

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The BNS Newsletter is published on equinoxes and solstices.

Editors: George and Margaret Alliston  
Art: Mary Pratt  
Production: Larry Bogan  
Distribution: Lana Churchill and Brenda Thexton

"The primary objective of the Society shall be to encourage and develop in its members an understanding and appreciation of nature. For the purpose of the Society, the word 'nature' will be interpreted broadly and shall include the rocks, plants, animals, water, air, and stars."  
from the BNS constitution

The Blomidon Naturalists Society is an Affiliated Member of the Canadian Nature Federation and a member of the Nova Scotia Trails Federation.

The Blomidon Naturalists Society is a registered charity. Receipts for income tax purposes will be issued for all donations.

Address correspondence to:  
Blomidon Naturalists Society  
P.O. Box 127  
Wolfville, Nova Scotia  
BOP 1X0

### Acknowledgements

Many thanks to:

everyone who provided material for "Show and Tell" night. The variety of the slides, presentations, and the displays made it very successful once again;

the "predatory trio" of Peter Austin-Smith, Peter MacDonald and Soren Bondrup-Nielsen, for fascinating talks on hawks, eagles and owls to a standing-room-only audience;

our "field trip" leaders: Sherman Bleakney, Cyril Coldwell and Merritt Gibson;

and all of our Newsletter contributors.

### THE NEWSLETTER

### Erratum

Our apologies to Soren Bondrup-Nielsen for misspelling his name in the last issue.

### BNS Newsletter Submissions Deadline - June 1, 1990

Please send or give all contributions to the Newsletter to:

George Alliston (542-3651)  
R.R 3  
Wolfville, N.S. BOP 1X0

For "Trivial Tidbits" only, send your written observations (on separate slips of paper, one slip per species) to Jim Wolford at:

Biology Department  
Acadia University  
Wolfville, N.S. BOP 1X0

Last-minute observations can be phoned in to 542-2201, ext. 334 (leave a message) or 542-7650 (late evening to midnight).

The editors would greatly appreciate submissions being at least double-spaced to facilitate both editing and word processing. If you are able to submit articles in word-processed form, please contact the editors for technical details. Sketches or diagrams should be submitted in final form, preferably on a separate page.

**Summary of Minutes - BNS Directors Meeting \***  
January 31, 1990

by Peter Austin-Smith  
Wolfville, N.S.

The inaugural annual general meeting of the Federation of Nova Scotia Naturalists is to be hosted by the BNS during the weekend of June 8-10 (Environment Week). An organizing committee consisting of George Forsyth, Merritt Gibson and Miriam Tams, with Peter Austin-Smith, was appointed to make the appropriate arrangements for the meeting.

Harold Forsyth, reporting on the Wolfville Chimney Swift Project, noted that a grant of \$2,000 has been applied for from the James Baillie Memorial Fund. He said that discussions were taking place with the Wolfville Business Development Corporation concerning ownership of the land, legal arrangements and the appointment of an architect.

Proposed terms of reference for a Conservation Committee were circulated for comment at a future meeting.

The Treasurer reported that the BNS has a balance of \$1,257.58 and there are 66 new members for a total of 261. The Newsletter Editor stated that, if the Executive was agreeable, one advertisement per issue would be included in the Newsletter to help offset the cost of production. After discussion, it was agreed that there be not more than two pages per issue of advertising and they be confined to "environmentally friendly" items. After noting that assistance with printing from the N.S. Museum was not without several drawbacks, it was agreed that we continue, for the time being, with our present system. A vote of appreciation was extended to George and Margaret Alliston for the time and effort that they put into the publication of our Newsletter.

A request for additional funding for the Maritime Breeding Bird Atlas was granted in the amount of \$70 (to bring the total to \$100).

A number of suggestions for improving "Show and Tell" night were discussed.

The meeting concluded with an agreement that members of the Society be encouraged to participate in a blitz of squares that remain to be completed during this final year of the Maritime Breeding Bird Atlas program.

\* Additional Special Directors Meetings were held on February 11, 1990, and February 26, 1990, to deal with the Swift Project. The results of these meetings are discussed in the article, "A Raffle for the Chimney Swifts", in this issue of the Newsletter.



## C.R.K. Allen Honoured by the Blomidon Naturalists Society

by Judy Tufts  
Wolfville, N.S.

Unfortunately, due to serious illness, Mr. C.R.K. Allen was unable to travel to Wolfville in September, 1989, to officially receive his Honourary Life Membership from the Blomidon Naturalists Society in recognition of his many contributions as a Nova Scotia birder and for his encouragement in appreciating a love of nature.

Mr. Allen is a charter member (1955) of the Nova Scotia Bird Society. Before retiring to Tusket, Yarmouth County, in the early 1970's, Mr. Allen taught biology at Halifax Academy and Queen Elizabeth High School in Halifax and, later, became Superintendent of the Halifax School for the Blind.

Born of an artist mother and a father, E. Chesley Allen, who was a well-known naturalist and author (Our Northern Year and others), it was indeed of little surprise that Charles Allen would himself become a naturalist and author. Many will be familiar with his recent popular book Yarmouth County - A Naturalist's Notebook (1987). Also, with Dr. Phyllis Dobson, he co-authored Where to find the birds in Nova Scotia and, later, with L.B. Macpherson, Nova Scotia Birds. He was president of the Yarmouth County Historical Society twice and is widely known for his special efforts over the years with the Nova Scotia Christmas Bird Counts, having headed the Yarmouth area count for 17 of the last 18 years. He has shown great support for our own Society and became a member in 1976. C.R.K. Allen is indeed a worthy recipient of our award.

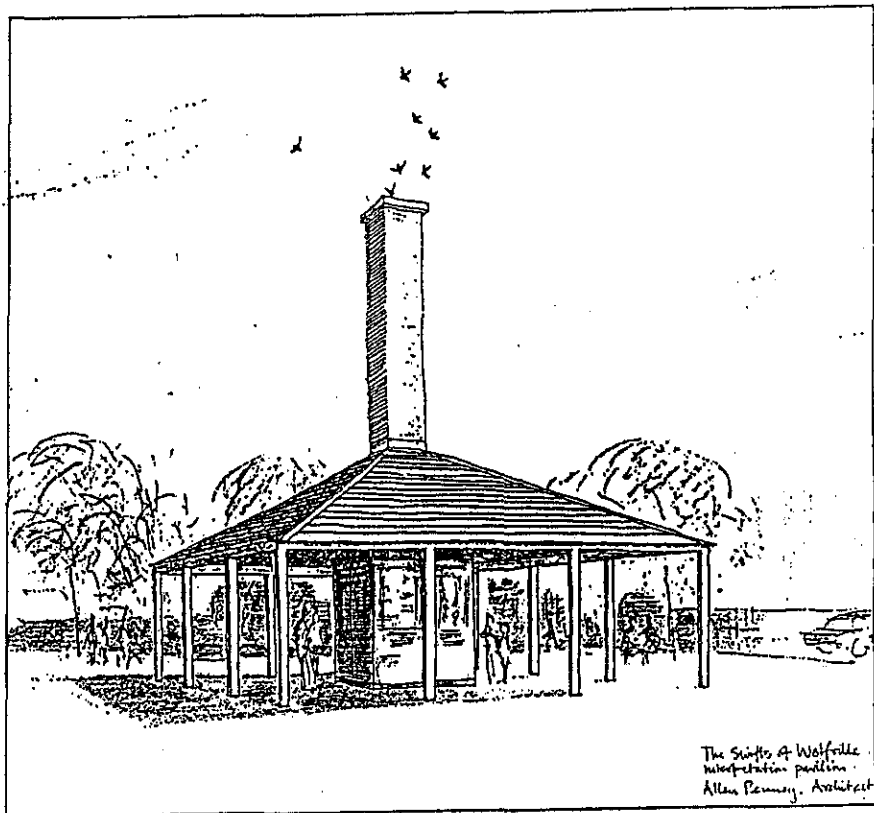
We are happy to report that Mr. Allen is now home from hospital recuperating and is feeling much better. We wish him a full and speedy recovery.

### Federation of Nova Scotia Naturalists Annual General Meeting and Conference

by George E. Forsyth  
Port Williams, N.S.

Nova Scotia's newest naturalists' organization will be born officially this spring! The Federation of Nova Scotia Naturalists will hold their first annual general meeting and conference in Wolfville this June 8, 9, and 10, hosted by the Blomidon Naturalists Society. A BNS committee is presently finalizing plans for field trips, lectures, films, discussion groups and displays to take place during the final weekend of Environment Week. All members of the Blomidon Naturalists Society are encouraged to attend this conference: to learn more about our environment, to launch an affiliate and to meet and share our area with fellow Nova Scotia naturalists.

Watch for registration information at BNS meetings, in newspapers and on radio and TV.



## A Raffle for the Chimney Swifts

by George Alliston  
West Brooklyn, N.S.

### Current Status of the Wolfville Chimney Swifts Project

Progress continues to be made on the Wolfville Chimney Swifts Project and plans for the site have been finalized. An open interpretive centre will be built around the lower chimney. Under the roof, surrounding the base of the chimney, will be mounted display panels describing the natural history of the chimney swifts, as well as other local natural attractions (see architect's sketch). The area immediately to the north and east of the interpretive centre will be a mini-park with plantings of trees, shrubs and flowers designed to be both aesthetically pleasing and to attract birds. Benches where people can sit and relax will also be a feature of the mini-park.

The construction of this project is to take place in two phases; the first phase will consist of making the necessary repairs to the chimney and the construction of the interpretive centre. It is planned that Phase 1 of the project be

completed by May 15, 1990 before the swifts return from their wintering grounds in the Amazon. The second phase of the project: the landscaping, installation of park benches and interpretive panels, will be carried out during the spring and summer of 1990 as funding becomes available. The estimated cost for each phase is \$20,000 (for a total of \$40,000).

The Wolfville Business Development Corporation (WBDC) is co-ordinating and administering the project and it is largely a result of their co-operation and enthusiasm that the chimney has been saved and the interpretive centre and mini-park are being built. To finance Phase 1, the WBDC has secured a pledge from a local business to match, to a maximum of \$10,000, other funds that can be generated for this project. Because the Directors of the BNS feel that there is strong support for this project within our membership and the community at large, The Directors have accepted the WBDC's proposal that the responsibilities for raising the "matching" \$10,000 be divided equally between the BNS and the WBDC. We propose to raise most of this \$5,000 by sponsoring a raffle (see below).

Funding for Phase 2 of the project will be generated through grants and a public appeal. Applications for grants have already been submitted to the Environmental Partners Fund and the James Baillie Memorial Fund; the Nova Scotia Museum has been asked to assist with the design and construction of display panels.

### The Raffle

We have included with this Newsletter 20 raffle tickets in the hope that you will be enthusiastic enough about the Wolfville Chimney Swift Project to sell them. Through the generosity of several businesses, the Brier Island Ocean Study group and one of our own members, a very attractive set of prizes has been assembled (see back page of this Newsletter). These attractive prizes should make the tickets easy to sell. More tickets are available so anyone wishing to sell more than 20 would be accommodated gladly.

Of course you are under no obligation to sell these tickets and if you can't or don't wish to sell them, simply return them so that someone else can try.

As you are aware, last summer the Wolfville chimney swifts received a good deal of attention; locally, provincially and even nationally. The co-operative efforts of our Society, the Town of Wolfville and the local business community are being watched closely by other interested groups. We hope that you will find it possible to support this project and your Society by selling these raffle tickets.

Information on how to return ticket stubs and money (and get more tickets) is presented on the back page of this Newsletter.

Also, please note that the Blomidon Naturalists Society is a registered charity and donations to the Society are tax deductible. To make a contribution to the Swift Project, simply make your cheque payable to the "Blomidon Naturalists Society (Swift Project)" and you will receive a receipt for your donation.

Thanks for your help.



**Maritime Breeding Bird Atlas**

For the past four years a great number of people have been participating in a voluntary study of birds which breed in our three Maritime provinces. This is the last year of the study but there are still a number of secondary and tertiary 10 x 10 km squares still to be covered here in the Valley. If you are interested in helping and having fun, too, please contact the Valley Coordinator, Jean Timpa, at 542-5678.

**Geological Highway Map of Nova Scotia**

by Robert P. Raeside  
Wolfville, N.S.

Nova Scotia has a wide variety of rocks, fossils, minerals and landforms that provide a wealth of information about its geological past. The new edition of the Geological Highway Map is an invitation to explore and discover the natural history of the province. The map is a combination of the provincial highway map and the most recent geological compilation, superimposed on each other. The geology is sufficiently generalized to make it understandable to the non-geologist, but detailed enough to be useful to the student and professional geologist. Geological terms are defined in the text and in a glossary.

The bedrock geology is shown across the province and stretches of highway with extensive outcrop are identified. Seventy-four sites are described which illustrate the range of landforms, rocks, mining history and geological evolution of the province. Eight block diagrams give a three-dimensional image of the relationship between bedrock geology and landforms.

On the reverse of the map are panels illustrating in more detail the mining history, the glacial history, the offshore geology of the province, and further information about the Yarmouth, Joggins, Arisaig, Cabot Trail, Windsor-Wolfville, Parrsboro and Halifax-Dartmouth areas.

The map is available at \$3.95 from the Nova Scotia Museum in Halifax, from bookstores, or from the Geology Department at Acadia University.

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A similar map, covering New Brunswick and Prince Edward Island, was produced in 1985. It is available from the Atlantic Geoscience Society or the Geology Department at Acadia University for \$4.00 Ed.



GROUSE

Global Change and Sustainable Development

Canadian Nature Federation

19th Annual Conference

London, Ontario May 18-21, 1990

London in Springtime

Join internationally-recognized scientists as the CNF's 1990 conference opens with a day-long session on global change. Follow the "global" session with workshops on the impact at the local level - and what you can do about it - or attend seminars on a variety of natural history topics. With approximately 16 workshops planned, the choice is yours.

London is your gateway to Canada's Carolinian zone. Field trips (in association with Federation of Ontario Naturalists Membership Trips Program) will visit: Point Pelee National Park, Pelee Island, Rondeau Provincial Park, Backus Woods, Bruce Peninsula National Park. Many local trips will also be offered.

The McIlwraith Field Naturalists of London, Ontario, will be your hosts as they celebrate their 100th anniversary.

For information write:

CNF Conference 1990  
P.O. Box 4185  
London, Ontario  
N5W 5H6

or contact: Jim Wolford (542-7650).



RACCOON

BIOS NEWS

The Brier Island Ocean Study (BIOS) has recently published the first issue of its newsletter, BIOS NEWS. The following article is reprinted, with permission, from this newsletter.

What is BIOS?

by Deborah Tobin, B.A., B.Ed.  
Editor: BIOS NEWS

BIOS, an acronym for the Brier Island Ocean Study has its roots in the Greek language and means - appropriately - life. Appropriate because it is life we are studying, specifically the marine wildlife surrounding Brier Island.

BIOS founders, Carl Haycock and Harold Graham began conducting vessel surveys in the lower Bay of Fundy in 1984 and found the waters surrounding Brier Island ideal for studying cetaceans (whales, dolphins and porpoises) and other marine life including seabirds. BIOS research programs

have contributed important information about several endangered species including the Humpback, Finback and Right Whales which inhabit these waters.

The Brier Island Ocean Study became incorporated under the Societies Act in September, 1987 and appointed a board of directors. We have expanded to include not only research programs but habitat studies and educational programs as well.

BIOS NEWS will provide our membership with regular information on our activities as well as educational articles and a series of fact sheets which we hope will inform, educate and entertain.

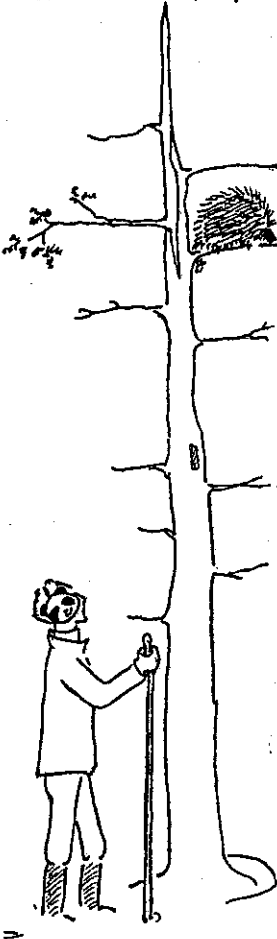
We welcome new members to BIOS and are sure they will find a great deal of satisfaction in being part of our work. BIOS NEWS encourages comments, criticisms, and articles.

BIOS memberships are available by sending a cheque or money order to the Brier Island Ocean Study, Westport, Digby County, Nova Scotia, B0V 1H0. Yearly membership fees are: Individual \$15; Family \$30; Students and Seniors \$10. Ed.

### FIELD TRIP REPORTS

#### A Muddling Meander to Moosehorn January 21, 1990

by Sherman Bleakney  
Wolfville, N.S.



It was supposed to be sunny and mild; instead it was very grey and very cold. There were supposed to be lots of animal tracks in the snow; instead a morning flurry of flakes had obscured them. The beavers could have been in their lodge; instead the beaver house was empty. On such an awful day only four autos should have shown up at the Gym parking lot; instead there were 12 carloads of keeners. The Ridge Road girls sure had their hopes up -- whispering rumours about panda bears -- really!

So off we trundled to Sunken Lake, walked the Moosehorn Lake Road and saw: lots of A.T.V. tracks; some deep holes in the snow (deer tracks); some deep holes in a tree (pileated woodpecker tracks); a hairless hairy woodpecker trying to make a deep hole; several trees stripped of their bark and the parasite-infested, butter-ball porcupine that did it; a fox-type track with a drag mark that might have been a snare wire; one squirrel track; and, if you bent low and used your imagination, perhaps some bunny tracks. Next year I want everyone to come with me the day before the field trip, that is

the day when I scout the area. You should have been with Nancy and me on Saturday!

It was sunny and mild and a thin dusting of snow had lain over a frozen crust for several days. Track impressions were perfect and the low angle of the afternoon sun shadowed them into detailed relief. We began at the Moosehorn road, where there were no A.T.V. tracks and where within 30 metres of the busy Sunken Lake residential and recreational road, there were tracks of deer, rabbit, squirrel, shrew, mouse, grouse, weasel and an unexpected bonus of long-fingered raccoon. Further along the road, near the open brook, we flushed a ruffed grouse from the new cut-over area, probably feasting on the maple buds in the piles of slash. Nearby was a porcupine in a tree and plenty of porcupine feeding activity evident in maples and firs. Beneath the porcupine trees, varying hare had been feeding on the bark flakes and twigs dropped or discarded by the "porky" pigging-out high above. The "porkies", like everything else that day, had crossed the log road several times, and signatred with their classic toed-in, large-pad tracks decorated with claw drag marks in between.

We then explored an old log road that turns off on the Little River Lake road and found a deer wintering yard. Deer tracks on the hard crust were quite different from those in soft snow. Their toes were splayed far apart and the two dewclaws on the ankle had left an impression as well; the end-effect was a squirrel-like track, but more flying squirrel than red squirrel. There were also interesting coniferous and deciduous porcupine feeding stations in the same area. The numerous rabbit tracks led to woody plants with twig tips nipped off with a single sharp slash whereas, a metre higher up on the same shrubs, the twig tips had been severed by the crush and pinch-off technique of deer.

Other trackways on that road proved that ruffed grouse had slowly strutted by; that mice had taken the risk and dashed across the road so fast that their tails had not touched the snow; that tiny, long-tailed shrews had found it easier to tip-toe through the surface dusting of snow than tunnel through the hard packed crust beneath; and that red squirrels had been conducting frantic forays in every direction.

It has already been an unusually long, cold and sparse-snow-cover winter and walking in the stillness near Moosehorn Lake, with your head up and eyes on the forest, could easily convince you that these woodlands are devoid of animal life. But look down at your feet where tracks, trails, turds, woodchips, bark flakes, and nipped off twigs declare a diversity of nocturnal denizens from four gm shrews to 90,000 gm deer, all finding enough to eat to keep themselves and their hundreds of internal and external parasites fat and healthy. One has to marvel at the survival capabilities of the authors of these tracks. Imagine yourself, without clothes or cottage, spending three to four months in that forest in freezing temperatures with absolutely no heat sources except that which you generate yourself, and you traditionally hunt for food only at night when temperatures are coldest, and the food you do find is frozen solid and must be thawed out in your mouth and stomach!





Young Peoples' Museum Evening  
January 29, 1990

by George E. Forsyth  
Port Williams, N.S.

On January 29, 1990, a special evening for the younger members of our Society was hosted by Cyril Coldwell in the Robie Tufts Ornithology Laboratory at Acadia University. Approximately twenty young people were introduced to taxidermy and the vast collection of biological specimens on the shelves. The youngest guests enjoyed petting the specimens that were "just sleeping"; older guests had many questions for Cyril and the other adult visitors.

The most conspicuous "young person", wearing a plaid jacket, green peaked cap and a beard, proved that naturalists are as young as they think they are and never run out of questions. Hopefully our very young members will pursue their interests as fully as the guest in the plaid jacket.

**Eagle Trip**  
February 4, 1990

by Merritt Gibson  
Canning, N.S.

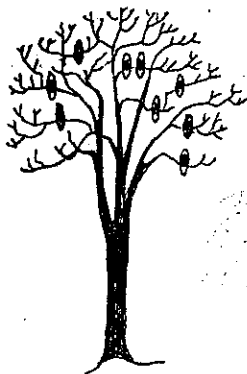
Sunday, February 4, was cloudy and the forecast was for heavy snow and poor driving conditions by afternoon. Nevertheless, 23 people boarded the bus at 10:00 a.m. and we headed for eagle country.

Individual eagles were seen along the route, small groups were found at Church Street and Kingsport, and larger numbers at Sheffield Mills, Pereau and White Rock. A total of 134 eagles was counted during the two and one-half hour trip, the highest number yet recorded on a single trip. Also of interest was the observation that 87 of the eagles were immature birds. This is good news for it means that more young birds are surviving the winter season and will enter the breeding population. The availability of carrion from the poultry farms is an important reason for their overwinter survival.

Judy Tufts, our faithful recording secretary, also kept a tally of the red-tailed hawks. Red-tails were also scattered along the route, but the large concentrations observed in past years at Sheffield Mills and Canning were absent this year. We found only 27 red-tails, a low number for this route.

The snow started by late morning and limited visibility. The group returned to the Robie Tufts Laboratory at Acadia University where we ate lunch and had the opportunity to examine specimens of eagles of various ages and several species of hawks.

A small group of participants but a record number of eagles!





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TRIVIAL TID-BITS  
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TRIVIAL TIDBITS  
of Local Natural History  
December 1, 1989 to February 28, 1990

HARE

selected and compiled  
by Jim Wolford  
Wolfville, N.S.

From the compiler:

First, a large thank you from the readers and myself to the very few of you who regularly supply me with written observations. Much smaller thanks to those whose tidbits are reported orally, and often indirectly, to me (and then, perhaps, forgotten or published inaccurately).

Now, a request: from now on, please send your notes on separate slips of paper, if possible, rather than in lists of sightings. I'm still technologically illiterate, with no immediate signs of changing, and I now use 3-by-5 filing cards arranged by categories (weather, stars, etc.), groups (insects, herptiles, flora, etc.) and species, rather than lists in chronological order.

Remember that each piece of paper should include your name (or "Trivia" initials), telephone number and item of interest; include what, how many, when, where, doing what, seen by whom, degree of certainty of identifications, etc.

Finally, a plea: please do report what you are experiencing, or even what you are not seeing, or what you are wondering about, etc. And we need more non-bird information plus behavioral items on birds.

Thanks in anticipation.

Skies

There were only two reports of aurora borealis, both in December. Also, on Dec. 11, Sean Timpa saw a fireball (a large meteor) which was long-lasting and left a trail of smoke.

Weather

My journal tells me that, as is "normal" for a Wolfville "winter", over the three months we've had five periods of cold, with snow-covered ground, and four periods of above-zero to very warm thaws that removed the snow.

Plants and Fungi

Maples had sap running Feb. 8 and 9 in Kentville (BH). On Feb. 14, pussy willows were open at Scotch Village and an intact puffball was found at Mosherville (SAC).



## Invertebrates

Sowbugs and a spider were active under a mulched carrot bed, Jan. 5 (SAC). We had two reports of cecropia moth cocoons being brought inside Dec. 4 and Dec. 17 and the adults emerging on Jan. 11 and Feb. 15 respectively (BGR, CKC, RF). Honeybees plus other insects were active on a very warm Feb. 22 (GF).

## Mammals

The Yoells at Lumsden Reservoir had an approachable flying squirrel at their feeder in December and an eastern chipmunk was active three times in January! In Blomidon Park on Feb. 25, a porcupine's "tracks" (a trough) led to a resting spot under low conifer branches and then on to a den in an underground burrow-system (MT).



On Feb. 12 in Canning, Merritt Gibson had an aromatic encounter with three of five skunks that had been de-denned from a neighbour's barn undergoing renovations; the skunks were sluggish, but not sluggish enough!

On Dec. 19, a white-tailed deer ran into a truck, left large dents, then disappeared into the Mosherville woods (SAC). On Dec. 30 along North Mountain, a deer yard contained signs of perhaps up to 30 deer (MG).

Also on Dec. 30, red fox tracks and pounce-marks were seen west of Delhaven (MG). Fox calls were heard Jan. 8, then daily and nightly for a week to Feb. 9; two foxes were sleeping together at Mosherville on Feb. 12 (SAC). A probable coyote was seen on Wolfville Ridge Feb. 6 (AC). A freshly road-killed raccoon was at Brooklyn Jan. 29 (SAC).

On Feb. 26 and 27, at Cadden Beach ("Keji" Park adjunct), fresh tracks of bobcats and coyotes were common, some other tracks were seen and even some raccoons had been active (spring hormones?) (PMA, SBN).

## BIRDS

### Loons and Grebes

A red-throated loon was seen along the Fundy shore Jan. 29 (JGT), and a horned grebe at Cadden Beach Jan. 27 (PMA, RRN).

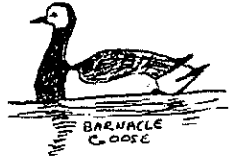
### Hérons and Allies

A colourful (but plastic) flamingo was on the Acadia University Nature Trail in late January (HT). There were two reports of great blue herons in December, but none thereafter.

### Cormorants

In early December, four cormorants were seen flying up the Cornwallis River from the Minas Basin (GD).

## Geese and Ducks



A super highlight was George Forsyth's find of an apparently wild barnacle goose, on Nov. 18 and 19, seen by lots of birders. The only report of snow geese was of two adults at Port L'Hebert Dec. 5 (RBU).

A report from Nov. 28 indicates a very small Canada goose (cackling goose race) alone on a road in "Kejl" Park (EM). Locally, there were 48 Canada geese reported in mid-December, reports of 22 and 19 in late January and no reports for February (but 30 were seen Mar. 1 by HTH and RRN).

No mallards were reported after Dec. 18. A male gadwall and six green-winged teal were at Greenwich until at least Jan. 16. With them was one (or two) of the Eurasian race of the green-winged teal Dec. 2 to 18 (JW).

Some common goldeneyes were at Melanson Jan. 23 (JGT) and several parties saw up to five Barrow's goldeneyes at the Annapolis Causeway up to early February. All three scoter species were seen along the Fundy shore Jan. 29 (JGT). Single hooded mergansers were at Melanson Jan. 27 and Ketch Harbour Feb. 7 (JGT). Two harlequin ducks were at Herring Cove Feb. 7 (JGT). A male common eider was in the Cornwallis River at the Port Williams bridge Jan. 9 (PA).

## Diurnal Raptors

Turkey vultures were on Brier Island Dec. 19 and Feb. 18 (RS); another was reported near Windsor in early January; and at least one was at Grand Pre and Hantsport Jan. 18 to 28 (BF, GM, DP).

An immature golden eagle was seen Dec. 11 and 29 and Jan. 27 at Cadden Bay (PM, SBN, RRN). At least 19 bald eagles were at Scots Bay Jan. 6 (MTH) and 18 at Gaspereau Jan. 16 (CKC, GDI). Numbers of bald eagles in our area suddenly rose to record counts from mid-January to late February (GDI et al.); the highest total was 134 on the Feb. 4 BNS bus tour. On Feb. 19 there were 54 bald eagles at Gordon Young's farm southwest of White Rock.

Two partial-albino red-tailed hawks were near Sheffield Mills - sightings from Nov. 22 to Dec. 27 (GDI, RS, JW). An adult red-shouldered hawk, in Kentville from Jan. 3 (RS) to at least Feb. 18, was seen by numerous birders and loves to feed on suet at feeders (BH, JW)! A dead, emaciated, immature broad-winged hawk was found Dec. 11 at Starr's Point

Sharp-shinned hawks provided three anecdotes: one took two dark-eyed juncos in quick succession (MZ); one took a blue jay and an evening grosbeak (JGT); and another knocked a European starling onto a frozen farm pond but was scared away by a nearby farmer; the starling recovered and flew away (SAC). Northern goshawks were seen at Grand Pre (EM) and Avonport (SW); the latter killed and ate a ring-necked pheasant.

A dark-phase gyrfalcon was at Grand Pre in early December (BBT, JGT); a gray-phase individual was there Feb. 25 (BLF); and December reports of possible white gyrfalcons may have been white red-tailed hawks. Single peregrine falcons were east of Scots Bay Dec. 30 (MG) and near Canning Jan. 24 (PA). Three reports of merlins in January were from Wolfville and Canard (CB, AR, BBT). One American kestrel was



reported Jan. 13 (JGT).

### Grouse, Pheasants, etc.

A possible single guineafowl was seen at Sheffield Mills in early February (VB). Ruffed Grouse reports came only from Mosherville, in apple and serviceberry trees (SAC). Gray partridges continue to be quite scarce, with sightings only from Windsor and Lower Canard (BBT). Ring-necked pheasants, on the other hand, seem to have done reasonably well through our off-and-on but "real" winter; several people reported them in numbers at feeders. The Pheasants Forever program of widespread feeders is undoubtedly helping them. I heard a pheasant crowing Jan. 24 then there were no other reports until Feb. 27 (JT).

### "Shorebirds"

A possible killdeer was heard Jan. 21 and 31 near Canard Poultry (DK). Three sanderlings were seen Dec. 11 at Cadden Bay (PMA, SBN). Sixty purple sandpipers were seen west of Margaretsville Jan. 29 (JGT).

An American woodcock was on Wolfville Ridge from Dec. 9 to Jan. 1 (BLF). Another woodcock was seen Jan. 21 at Aldershot (DD).



### Gulls and Auks

Three Bonaparte's gulls were on Brier Island Feb. 18 (RS). The famous "Volvo plant" lesser black-backed gull in Halifax was seen Feb. 7 (JGT). Ring-billed gulls were reported only from the Wolfville sewage ponds (JW, BBT).

Two Iceland gulls were reported at the Wolfville sewage ponds in January and one at Canard Poultry Dec. 19. Two glaucous gulls were at Canard Poultry, one of them until Feb. 26 (RS, BBT, JW).

On Jan. 2, Mike Dadswell saw "lots" of black guillemots in Chester Basin.

### Doves and Owls

Mourning doves were reported only from two feeders (BBT, EU). After three sightings of short-eared owls in mid-December, no more were reported except one at Cherry Hill Beach Feb. 13 (JGT). In early February, a barred owl was heard calling in Kentville (RS).

After not being used last year, Cyril Coldwell's ridiculous-looking nest-platform was re-occupied extremely early this year; feathers were noted there Feb. 4 (BLF), then the female great horned owl sat there Feb. 15 and 16, then off Feb. 17 (no eggs - BLF), then back on the nest Feb. 18 to present (Mar. 2 - presumably incubating eggs).

Acadia Biology learned of a band return for a northern saw-whet owl banded on Bon Portage Island Oct. 1, 1989 and recaptured at Cape May Point, New Jersey, on Nov. 12, 1989.

## Woodpeckers

Four reports of northern flickers from late January through early February were from Kingsport (JG), Berwick (DJo), Tatamagouche (MMC), and Starr's Point (KV). In late February one was seen eating bayberries (yuk!) on Wolfville Ridge (BLF).

Pileated woodpeckers were reported at Delhaven and twice at Kentville; one at Mosherville was drumming on Feb. 13 (SAC). There was one report of a black-backed woodpecker Dec. 27 at North Range, Digby Co. (SM).

## "Dickey-Birds"

The Thextons saw 100 horned larks at Melanson Feb. 1. Apparent courtship antics, i.e. acrobatics, of common ravens were noted as early as Dec. 30 (MG); I saw one gathering sticks in Wolfville Feb. 19. Two American crows were copulating Jan. 31 in Port Williams (MT) and displaying was noted Feb. 16 at Mosherville (SAC).

Miriam Tams supplied these items on black-capped chickadees in Port Williams: one was perched inside a van and unknowingly taken for a ride Feb. 15, then returned and released; one was "singing" Feb. 17; and a mostly white, partial-albino was seen Feb. 25. Miriam also saw a common yellowthroat in Port Williams on Nov. 26.



Red-breasted nuthatches are unusually abundant this year and several people had both red-breasted and white-breasted nuthatches visiting their feeders in early winter. (However, our count of 20 on the Wolfville Christmas Bird Count was far below 1988's total of 83.)

Only one brown creeper was reported, in Wolfville on Jan. 24 (JDP, JW). American robins are scattered in small numbers at Greenwich, Kentville and Wolfville (up to 30 there - MG, PCS). No northern mockingbirds were reported after the single sighting at Grand Pre during the Wolfville Christmas Bird Count Dec. 16 (BET, LC, GT).

Wolfville has a flock of up to 60 cedar waxwings (PCS) which often join up with this year's hordes of Bohemian waxwings. The first large numbers of Bohemians were noted in early January (ES, MG). I've had reports of 322 at Canning, 200 at Bear River (CH), 200 in Kentville, 500+ in Wolfville, and many more sightings of smaller flocks in assorted localities.

Eight sightings of northern shrikes were reported, beginning on Dec. 6 (JGT), with six seen between Jan. 28 and 31, from Kingston to Melanson (BLF, MG, JG, JGT). Up to seven yellow-rumped warblers were seen on Wolfville Ridge; five were still there eating bayberries up to late February (BLF).

The male northern cardinal in Wolfville was still being seen in early February (PCS). A vesper sparrow was reported northwest of Port Williams on Dec. 16 (MA, JW). Savannah sparrows were seen near Port Williams and Wolfville in December but not thereafter. No one reported white-throated sparrows but I saw one in Wolfville Jan. 24.

At least 30 Lapland longspurs were seen at Grand Pre through December (92 on Wolfville Christmas Bird Count); there were no reports for January; then 52 were there on

Feb. 20 (JGT). Snow buntings were obviously very abundant this year; 1,000 were seen at Grand Pre and another 1,000 in the Canard Valley in mid-January (JGT, BBT), but the total reports were few which probably reflects the difficulty of locating the huge flocks. Another 60 snow buntings were at Mosherville Dec. 21 (SAC). After our recent storm, there were several reports of up to 100 snow buntings at feeders in Wolfville and Kentville.

Three female red-winged blackbirds were at Avonport (EU) and one male at Mosherville (SAC) in January. I had no reports of common grackles after the six seen during the Wolfville Christmas Bird Count until late January when three were seen in Port Williams; one of the latter was "gronking" on Feb. 23 (MT) (a month early). Another grackle, in Westport on Brier Island on Feb. 18, had a deformed crossed bill but was feeding effectively on seeds (RS).

In mid-December Gordon Tufts said pine grosbeaks were "everywhere" including in a stubble field; after that I had only five reports of from seven to 15 birds from Kentville to Wolfville to Scots Bay (CB, RS, BBT, GT, JW). Eric Muntz saw 12 red crossbills at Grand Pre on Dec. 16 and seven white-winged crossbills were seen along the Fundy shore Jan. 29 (JGT).

Lana Churchill's male house finch in Port Williams was seen throughout December - January - February; then, on Feb. 28, another male, an orange variant, appeared in Port Williams (MT). Purple finches have been very scarce since late October; I've only had five reports (two of them my own) of very few birds, all in Wolfville; one sighting was of eight or nine brown-plumaged purple finches at a feeder, but only for one day (EEE).

American goldfinches were widespread at feeders and the plumages of some males were brightening by Feb. 6 (MT). I have only five reports of common redpolls: one in Wolfville Dec. 21 (BBT), five at Starr's Point Dec. 24 (BLF), two on Wolfville Ridge (MP, JGT), 70 on Brier Island Feb. 18 (RS) and three in Canning Feb. 25 (MG). Even rarer were pine siskins, with only two in Wolfville Feb. 1 (BBT) and one at Port Williams Feb. 24 (MT).

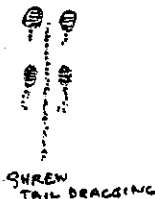
Finally, evening grosbeaks were not abundant this winter; only a few feeders had to cater to them e.g. 40 on Wolfville Ridge in early January (JGT).



REDPOLL



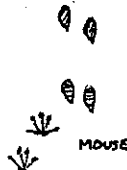
SHREW



SHREW  
TAIL DRAGGING



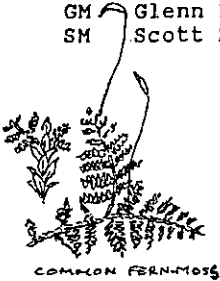
WEASEL



MOUSE

## Contributors

MA	Marc Adam	PMA	Peter MacDonald
PA	Peter Austin-Smith	PMC	Pat McLeod
CB	Calvin Brennan	RRN	Ruth & Reg Newell
VB	Val Blanchard	SRN	Soren Bondrup-Nielsen
JSB	Nancy & Sherman Bleakney	DP	Denise Packard
RBu	Roland Burgess	MP	Mary Pratt
AC	Alice Chapman	SPr	Shirley Prescott
LC	Lana Churchill	JDP	Joyce & Don Purchase
CKC	Cyril Coldwell	AR	Ann Ryan
MMC	Mary Louise & Mindy Condon	BGR	Barb & Gerry Rogers
PJC	Pat and Joe Clifford	ES	Edgar Spalding
SAC	Sheila Connell	JS	Jack Scott
DD	Don Dodds	RS	Richard Stern
GD	Graham Daborn	ECS	Chalmers Smith
MD	Mike Dadswell	PCS	Peter Smith
RD	Richard Daury	DT	Dianne Thorpe
GDi	Gerry Dickie	GT	Gerry Trueman
EEE	Ev & Ed Eagles	HT	Hilda Taylor
BF	Bob Flecknell	JT	Jean Timpa
GF	George Forsyth	MT	Miriam Tams
HF	Harold Forsyth	ST	Sean Timpa
RF	Rick Fisher	HTh	Heather Thorpe
BLF	Sandra & Bernard Forsythe	MTh	Merrill Thorpe
JG	Jamie Gibson	BBT	Brenda & Bill Thexton
MG	Merritt Gibson	JGT	Judy & Gordon Tufts
TG	Tony Green	EU	Eva Urban
BH	Bill Horton	KV	Kate Van Nostrand
CH	Chris Hawes	JW	Jim Wolford
DJo	Dave Johnson	SW	Sherman Williams
DK	Dave Kristie	BBY	Betty & Barry Yoell
EM	Erich Muntz	MZ	Marian Zinck
GM	Glenn MacDougall	EGZ	E. and G. Zillig
SM	Scott McMillan		



COMMON FERN-MOSS

### ARTICLES

#### Mosses

by John Pickwell  
New Minas, N.S.

Mosses can be found almost everywhere: in the woods, on roadsides and even on the roofs of houses. Without their bits of colour, how much more barren the natural world would be. The eye is attracted by the green velvety clumps of the upright plants, the delicate texture of the prostrate mosses and by the bright colours of the slender fruiting bodies. Although mosses are relatively small plants, they often form a conspicuous part of the natural vegetation due to their elongated stems, extensive branching and rapid multiplication. The plants are predominantly green, the shade varying, often brightened by touches of red, orange or yellow in the fruiting bodies and seta (fruit stalks).

The word "moss" is often applied to plants that are not really mosses. Lichens (e.g. reindeer moss) are often referred to as "mosses" but they are a totally different plant

form. Some algae (e.g. Irish moss) are confused with mosses. Club mosses are not mosses at all but are more closely related to ferns. Some small flowering plants are called mosses but mosses don't have flowers. Mosses, along with liverworts and hornworts, are known collectively as bryophytes. In the bryophytes, unlike the flowering plants (angiosperms), vascular systems never evolved. Bryophytes are small because they lack tissues to translocate food and water and physically support larger bodies. Some mosses are easily confused with liverworts most of which are somewhat fleshy and flattened. Mosses and liverworts can be distinguished by their fruiting bodies.

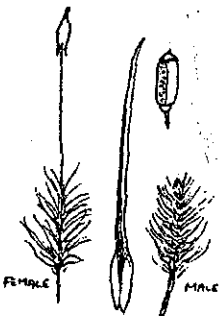
Mosses consist of a stem and leaves, either of which may be much modified. The stems may be erect (Acrocarpus mosses) or prostrate (Pleurocarpus mosses). The stems may be branched or unbranched, varying in length from almost invisible to several inches. Leaves vary from one-half inch long to so small they are difficult to see without a hand lens. Some species have such small stems and leaves that the only readily visible part is the fruiting body. The leaves of mosses are often easier to see when they are wet and spread out than when they are dry and shrivelled up.

The leaves and roots of mosses function quite differently from those of the higher plants. Higher plants absorb moisture through their roots. Mosses have only "rhizoids" or "radicles" which absorb very little water and serve mainly to hold the moss to the substrate (ground, log, rock, etc.). Sometimes radicles also grow on the stem, looking like a whitish or brownish felt-like coating called "tomentum".

In the leaves and stems of the higher plants, a substance called cutin in the outer wall cells helps to stop water and gas loss. Since the leaves of most mosses are only one cell thick and have no waterproofing, they dry out quickly. Of course, this simple structure also allows mosses to absorb moisture easily and, where moss cover is extensive, they hold back much of the rainfall allowing the water to soak into the earth instead of running off. With a few exceptions, mosses like cool, damp places or grow together in tight clumps to conserve moisture. Mosses may be short-lived but many are perennial, continuing their growth annually at the tip of the stems and branches or developing from underground stems.

Mosses reproduce either sexually or asexually. In asexual or vegetative reproduction, small organisms known as "gemmae" are produced among the leaves or at the end of slender branches. These become separated from the parent plants and develop into new plants. Other parts of parent plants may also break off and generate new plants. Some species of mosses regenerate vegetatively at a phenomenal rate.

In some moss species sexual reproduction is rare. Sexual reproduction is quite different from that in flowering plants. When moss plants are mature, they produce the organs of sexual reproduction: the "antheridium", the male organ which produces sperm, and the "archegonium", the female organ which produces eggs. In some moss genera, the



COMMON HAIR-CAP MOSS

male and female organs develop on separate plants; in others, they develop on the same plant. Although the sex organs are microscopic, in some species the antheridia (male organs) are grouped together in green, red or orange rosettes of bract-like leaves that are quite easy to see.

Water is required for fertilization to occur. After a rainfall or heavy dew, the sperm from the antheridium, attracted by a sweet secretion given off by the archegonium, swim to the egg cell in the archegonium. The sperm is guided to the egg at the base of the archegonium because the concentration of the attracting liquid is highest there. After fertilization occurs, a "sporophyte" develops, firstly within the walls of the archegonium. The sporophyte then bursts clear and usually develops a stalk known as a "seta". At the top of the seta is borne the "capsule" enclosing the "spores". When the seta is short or lacking, the capsule is hidden or almost hidden by the surrounding leaves. Special parts at the mouth of the capsule protect the spores until they are mature and ready to be scattered. (Spores differ fundamentally from seeds and should not be confused with them.)

When conditions are favourable, the spores develop into "protonema", reclining, much branched systems of indeterminate growth mostly made up of a series of single cells. From these systems grow the leafy shoots known as "gametophytes", the moss plants, which will in turn produce the sexual organs and the next generation of sporophytes.

In the Maritimes, there are almost 400 species of moss though not all are common. Some of the common mosses are very easy to find. In the woods, growing mostly on the humus of the forest floor, are two species of red-stemmed moss. The more common is the Red-stemmed Feather or Schreber's Moss (*Pleurozium Schreberi*), a fairly sturdy creeping moss, with close pressed leaves, that grows in large masses. Almost as common, but with its leaves at right angles to its stems giving it a shaggy appearance, is the Shaggy or Rough-necked Moss (*Rhytidiadelphus triquetrus*). Shiny Moss (*Hypnum imponens*), with its leaves curled under and its metallic sheen, grows mostly on rotting logs. Two beautiful, large, lacey and fern-like mosses are found in the damper humus of the woods: Delicate Fern Moss (*Thuidium delicatulum*) and Mountain Fern or Step Moss (*Hylocomium splendens*). The Step Moss likes a dryer habitat than the Delicate Fern Moss. Each year's growth "step" can be clearly seen. Ostrich Plume Moss (*Ptilium crista-castrensis*) can also be found in the woods although it is not as common as the aforementioned species. It really does look like an ostrich plume, bright green and very shiny; it grows on rotten logs or humus. The Tree Moss (*Climacium dendroides*), which grows in very damp areas of the woods, looks like a very small tree. Two genera which are hard to tell apart, the *Polytrichums* and the *Pogonatum*s, look like small spruce trees. Perhaps the most common of these is the Haircap Moss (*Polytrichum commune*) in which the "calyptra", or top cover of the capsule, is hairy. Generally the capsules of *Polytrichums* are square-sided whereas *Pogonatum*'s are round. Both grow in a variety of habitats, wet and dry. On sandy open areas, like some areas along Highway 101, large patches of the small Burned Ground Moss (*Ceratodon purpureus*) are very noticeable, particularly in spring when the fruiting bodies are so numerous that these moss

patches appear rusty red. The White Cushion Moss (*Leucobryum glaucum*), which is found in conifer-dominated woods like the Kentville Ravine, grows in pale, whitish-green clumps. Two common Decranums, the Broom Moss (*D. scoparium*) and the Wavy Broom Moss (*D. polysetum*) have the long leaves swept to one side which is a characteristic of this genus. In *D. polysetum*, the leaf edges are wavy and the fruiting bodies grow in groups rather than singly. A number of Star Mosses (*Mniums*, *Rhizomniums*, *Plagiomniums* and *Pseudobryums*) are very common, especially in very wet habitat.

The Sphagnum (Peat) Mosses are by far the most important economically. Most of the many species of this genus grow in bogs. Three local species found in very wet areas of the woods are: Spoon-leaved Sphagnum (*S. palustre*), stout, pale to dark green or even brownish if exposed to strong sunlight, liking to have its feet in water; Prickly Sphagnum (*S. squarrosum*), also stout, green or yellowish, with its leaves sticking out at right angles to the stems and branches giving the plant a prickly look; and Star Sphagnum (*S. Girgensohnii*), finer with small branch leaves, mostly dark green. Viewed from above, its branches spread out to form a five-pointed star.



SPoon-LEAVED  
SPHAGNUM

The standard work on Nova Scotia's mosses is Robert R. Ireland's Moss Flora of the Maritimes (Botany Division, National Museum of Canada, Publications in Botany # 13, 1982), a family-bible-sized tome. Collins publishes a handy little guide, small enough to be carried in the field, called Ferns, Mosses and Lichens of Great Britain; many of the British moss species are the same as those found in Nova Scotia. All North American species are covered in How to Know the Mosses and Liverworts by Henry S. Conard (Key Nature Series, Wm. C. Brown Co.). In my opinion, the illustrations leave much to be desired. Also, the book is larger than pocket size. A new guide, Syllogeus 62, Illustrated Guide to Some Hornworts, Liverworts, and Mosses of Eastern Canada, covering many of the common species, has been issued by Robert R. Ireland (1987). It is available free from the National Museum of Natural Sciences, P.O. Box 3443, Station D, Ottawa, Ontario K1P 6P4.

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For details on a guided tour of the mosses of this area, see "Field Trips" in this issue of the Newsletter. Ed.

### Lyme Disease (The situation in Nova Scotia)

by Colin Bell (1)  
Wolfville, N.S.

In a couple of months the south west part of the province will be into tick season again. Once regarded as nothing more than a nuisance, there has been a change of attitude towards ticks in regions of North America because of the association of ticks with Lyme disease. It's reasonable for outdoor people here to ask if it's a threat in Nova

Scotia. The answers to that question are not straightforward.

#### What is Lyme disease?

Lyme disease is a bacterially induced disease that was first diagnosed, and named, in the early 1980's in Old Lyme, Connecticut. The causative agent is the spirochete *Borrelia burgdorferi*. It has developed into a problem which is not unique to New England because, in the intervening years since it was discovered, it has been confirmed in over 40 U.S. states and there is a related condition in Europe that has probably been around for centuries.

#### What are the symptoms?

This is a disease that cannot be described neatly; the manifestations vary enormously with the individual. A classic case would proceed in three phases. Phase 1 usually is noticed within days of an infected tick bite. Recent statistics suggest that about 60 percent of victims develop a red skin rash (significantly bigger than the common "reaction" to a tick bite). Most victims complain of general flu-like malaise - fever, chills, headaches, stiff muscles and fatigue. Phase 2 can occur weeks to months after the initial infection and is characterized by various neurological problems. These can include violent headaches, nerve inflammations, Bell's palsy and, in a few cases, cardiac irregularities. In about 60 percent of patients, the disease progresses into Phase 3 and the conditions can be chronic. Arthritis, especially in the knees, is common and sometimes complications such as encephalitis are seen.

#### How is it diagnosed?

The clinical confirmation of Lyme disease is exceedingly difficult. In the early days after the disease was first identified, the presence of antibodies to *B. burgdorferi* in the blood sera of patients was assumed to be the definitive test. It quickly became evident that there were problems with this blood test because the antibody concentrations varied enormously with the phase of the disease. The Center for Disease Control in Atlanta then performed a quality control study on many clinics across the U.S. and found that in some regions the false negatives rose to 60 percent. Similarly disconcerting findings have arisen on false positives. The present blood tests are clearly unreliable. To counter this, most physicians place great emphasis on recent clinical information supplied by the patient. Of course, now that it appears that the characteristic rash only occurs in 60 percent of the victims, even this approach is difficult. A trend that is developing in many U.S. states is that if a patient has been out in the bush in an area where the deer tick (*Ixodes dammini*) is endemic, and shows typical Phase 1 symptoms, then a precautionary dose of antibiotics is administered.

#### What role do the ticks play?

Lyme disease is a condition that resides mostly in wild mammal populations. To affect humans it has to be introduced into the human blood stream; most authorities agree that deer ticks constitute the most effective vector. Deer ticks are not routinely encountered in Nova Scotia, so perhaps we



have nothing to fear in this province? Perhaps we have not looked closely enough for them. In recent years, two minor surveys conducted by Dr. Harold Specht, from the Kentville Agricultural Centre, did uncover a handful of deer ticks, particularly in Digby County. On the mainland of North America, there is a healthy indigenous population as far north as Acadia Park in Maine.

Another relevant consideration is the data on infestation rates of migratory birds in the New England states; some species are as heavily infested with deer ticks as small mammal populations. At the time of the northward spring migration, the birds would be carrying the larvae of the deer tick. A research paper dealing with the long-range transmission of deer ticks on birds has been published for the central flyway through Wisconsin. The figures, at first glance, seem reassuringly low; one percent of all the birds netted were infested with deer ticks and 22 percent of those deer ticks were infected with *B. burgdorferi*. A total of 0.22 percent of all migrating birds carrying Lyme disease might seem like a figure we could ignore, but how many millions of birds enter this province every spring? Remember, in Wisconsin, 2,200 of every million birds were infected.

All the above focuses on the deer tick but, as all naturalists know, the major tick in Nova Scotia is the dog tick or wood tick (*Dermacentor variabilis*). Laboratory studies on this tick indicate it does not carry Lyme disease as efficiently as the deer tick. One study demonstrated that when the dog tick metamorphoses from the larva to the nymph, the borrelia are lost. During the larval phase, borrelia were also shed at a rapid rate. Still there are some disquieting aspects about the dog tick situation. Lyme disease is endemic to regions where the dog tick is the primary tick. In Canada, Manitoba is a classic example. Five cases of Lyme disease have been reported in southern Manitoba where dog ticks are abundant and deer ticks are not reported.

There are undoubtedly more twists to the transmission routes of this disease than we are presently aware of. Mosquitoes have been ruled out as vectors but tabanid flies are under suspicion. Another paper raised the spectre of a faecal route, principally through waterfowl, and one laboratory study detected the spread of the disease in contained mice where insects could not have been a factor; urine was the suspected agent.

#### What is the treatment?

Fortunately the treatment for Lyme disease is straightforward, providing the disease is caught in the first phase. The borrelia are very sensitive to common antibiotics, such as penicillin, tetracyclin and erythromycin, and show no signs of developing resistance. Early administration of these antibiotics is the key. Later complications, certainly in the second and third phase of the disease, are harder to treat.

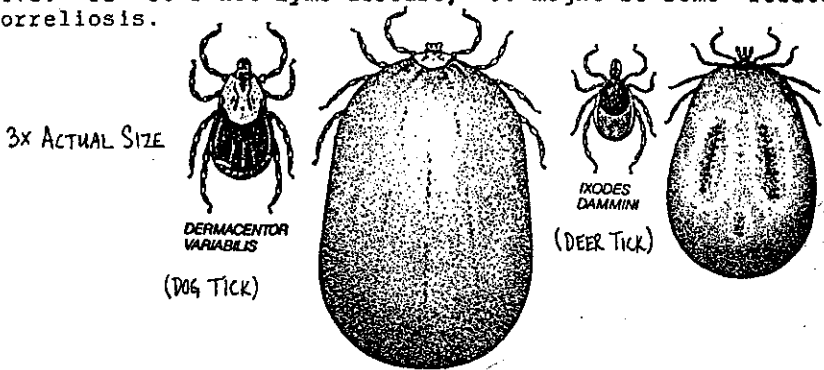
#### What is happening in Canada?

Canadian records from 1977 to May 1989 show that 30 cases have been reported, 25 in Ontario and five in Manitoba. Sixteen of these cases were reported in 1988 so, as in

the U.S., the disease appears to be on the increase.

In Nova Scotia, only two patients have been reported as having Lyme disease. One of these patients was diagnosed and treated in Massachusetts but, regrettably, authorities in Nova Scotia have been unable to get the medical records so they cannot confirm the case. The second case was diagnosed in Nova Scotia but the patient had recently arrived here on a yachting trip along the eastern seaboard.

Could it be that the disease stops at the U.S. border? There are troubling observations; patients are presenting themselves to the Victoria General Hospital in Halifax with symptoms akin to Lyme disease. Blood serologies for Lyme, and every other related disease or condition, prove negative. If it's not Lyme disease, it might be some related borreliosis.



#### What can a naturalist do?

I believe a renewed respect is warranted for ticks in Nova Scotia until we can determine what the risk is. The prevention of tick bites is the best strategy. Cover the legs when in tick habitat (2) and check yourself regularly for ticks - remember, once they alight, invariably on the legs, they like to migrate to warm, moist places before they engorge. To remove an embedded tick, always carry a small pair of forceps and work the tips as far forward as possible onto the head of the tick before you pull. I like to carry a small vial to keep the tick in just in case I develop a rash or flu-like symptoms. A piece of dampened cotton wool in the vial will keep the tick alive for several weeks. If you think the tick looks unusual in any way, send it to Dr. Harold Specht, Kentville Agricultural Centre, Kentville, N.S. B4N 1J5. To mail a tick, just tape it to a piece of cardboard. Harold and I are particularly interested in ticks found in the fall because at this time of year they are rarely dog ticks.

I am a keen paddler and hiker and this business does not dampen my enthusiasm for going to Kejimikujik; but I do check my legs more often than I used to!

- 1 Dr. Colin Bell is a microbial ecologist and assistant professor in the Department of Biology, Acadia University.
- 2 According to Harold Specht: old fields, brushy areas and edges between fields and woods. Dog ticks are found in the same habitat as mice on which some of the immature phases of dog tick feed. Although local infestations of dog ticks do occur, they are quite uncommon in the Valley. Ed.

## In Search of a Third Oak

by George E. Forsyth  
Port Williams, N.S.

Last fall, while studying the flora of Nova Scotia with Sam Vander Kloet at Acadia University, I was assigned the task of comparing the fruiting bodies of three species of the same genus. Despite the fact that until last fall only two species of oak (*Quercus*) had been confirmed in the literature as native or naturalized in the area, I decided to study this genus.

*Quercus borealis* Michx. f., the native Red Oak, is common throughout Nova Scotia and *Q. robur* L., the European Oak, has been planted as an ornamental and has naturalized in many areas, especially about towns and cities. My interest in local history provided me with my third species.

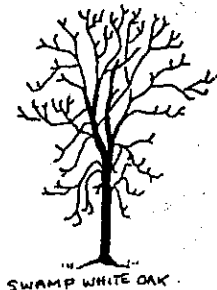


RED  
OAK

In approximately 1760, a group of about 200 families settled Horton Township, south of the Cornwallis River, in Kings County. Among them were the Forsyths and Bishops. Timothy Bishop, his father, mother, three brothers, sister, aunt and many "in-laws" settled some of the lands still farmed today. Ebenezer Bishop, one of Timothy's twelve children, born in 1784, completed his home "Thornedge" in Greenwich in 1831. It is still standing, now owned by William J. Hetteema, immediately west of Noggins Corner Farm. Across the road from his house, Ebenezer built a school (since burned) that his daughters ran as "Ashburn Seminary", a finishing school for young ladies. On the lawns about this school, he set out White Ash trees, *Fraxinus americana* L. and some sapling "white oaks" that he brought from New Hampshire. Since Ebenezer died in 1846 and he probably planted the trees after his home was built, the "white oaks" were probably planted about 1840.

These trees, probably with the help of Blue Jays, have seeded themselves on the north facing slope of the Greenwich Ridge; they were my third species of *Quercus*. I had known of their existence for a number of years and, since there was a reference to them in my copy of The Native Trees of Canada (1946), I assumed everyone else did. However, this was the only reference I could find and probably referred to Ebenezer's planted trees. This reference has been omitted from all subsequent editions of The Native Trees of Canada.

These "white oaks" are actually *Quercus bicolor* Willd., Swamp White Oak, that are native to Canada only in the extreme southern areas of Ontario. They are characterized by shallow-lobed leaves with rounded teeth. The leaves are shiny dark green above and pale green and downy below (thus the species name). The acorn is distinctive, being borne on a long stem and with a small fringe on the edge of the cup. The tree itself is very rugged looking with the lower branches drooping, the top branches upright and the intermediate



SWAMP WHITE OAK

bark with extreme peeling scales. As the common name implies, the trees grow in moist areas.

In Greenwich I have found about 25 individual trees in an area southeast of the parent trees. They range in size from very young, 0.5 m (2 ft.) trees to older 10 m (30 ft.) trees. This October one tree on the edge of the Tannery pond set acorns. It will be interesting to see if the species spreads faster as subsequent generations begin to produce acorns.

This is a good example of the limitations placed on the distribution of plants because of their means of seed dispersal. Possibly, at some point in Nova Scotia's history, *Quercus bicolor* did grow here but the trees were subsequently destroyed by glaciation. Probably, this species has not returned because of the slow method of seed dispersal. Since it now grows in southern Ontario and Greenwich, the climate cannot be a limiting factor. The Gulf of Maine and the Bay of Fundy provide an effective barrier as, possibly, does the harsher climate of Northern Maine and New Brunswick. In Greenwich Blue Jays have probably distributed the acorns but Blue Jays don't often carry acorns across the Gulf of Maine!

If the Blue Jay's flight with acorns is limited to about one and one-half kilometers (one mile), each successive productive tree will increase the potential advance of this species by that amount. But a tree is 30 years old before it produces acorns. At this rate, it will take almost two hundred years for *Quercus bicolor* to spread from Greenwich to Kentville! If the dispersal of *Quercus bicolor* is left to the Blue Jays alone, we can expect it to reach Annapolis County by the year 2990.



### Skunks in Canning Merritt Attention

by George Alliston  
West Brooklyn, N.S.

In mid-February, Ken and Carolyn Clark of Canning arranged to have repairs done to their barn. While tearing up the barn floor, the workmen discovered six sleepy, and not very happy, skunks. This prompted an immediate evacuation of the barn by the workmen who were, in short order, followed by the troop of skunks. The skunks circled the Clark house several times, apparently looking for shelter. Finding the Clarks rather inhospitable, the skunks decided to take their business elsewhere and three of them paraded across the street to Merritt Gibson's property. Merritt (who is Chairman of the Biology Department at Acadia University, Chairman of the Canning Village Commission, and author of several books on local Acadia natural history) was preparing to leave for a busy day at Acadia when he saw the threesome heading for his stable. Rapidly deciding that his commitment to natural history and conservation stopped somewhere short of providing housing for skunks, Merritt raced to the stable to thwart the entry of the aromatic trio. But to no avail -- two of the skunks were already inside! Using a long-handled shovel (but not long enough), Merritt ultimately was successful in moving the two intruders back outside; but not

before the skunks had registered with the Chairman of the Canning Village Commission, in the most emphatic way, their displeasure with their treatment in that village!

It wasn't hard to trace Merritt's movements in the biology building that day. Students huddled at the back of Merritt's classroom; faculty and staff kept their doors closed and conducted their business with Merritt by phone. Visiting dignitaries, confined to Merritt's office for their meetings, were less fortunate. Their tearful exits from his office were probably more a result of the chemical, than the emotional, nature of the meetings.

Many baths later, Merritt has lost his aromatic aura but some clothing and his stable still bear testimony to this incident. It's hard to believe that a mere ten years ago the sighting of a single skunk in this area would have received considerable attention by members of our Society.

### Notes on the Winter of 1989-90

by Larry Bogan  
Cambridge Station

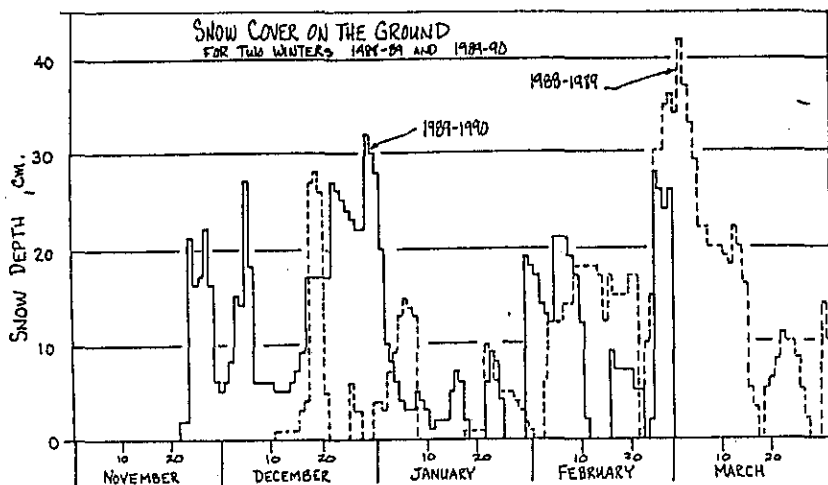
The snow cover from year to year is interesting to compare. Below is a graph of the depth of snow on the ground during the present winter and the 1988-89 winter. Both winters had several ups and downs in cover depth but the distributions are different. This year we had our heaviest and consistent cover early in the winter, while last year it occurred in February and March.

January and February along with November 1989, were warmer than average but not quite warm enough to fully offset the very cold December of 1989. When you add up the heating degree days for those four months, the total is 2467 which is slightly larger than the average for 30 years (2422).

You will note from the table below that December and January were drier than normal while February was "wet". One rainfall on the 23rd and 24th of February dropped 42 mm on the Valley and contributed most to the wet month. That amount is what is usually expected for the whole month. Overall the two months had below-average snowfall and precipitation.

#### Weather Statistics from the Agricultural Centre Kentville, Nova Scotia (30 year averages reported in parentheses)

Month	Mean T C	Rain mm	Snow cm	Precip mm	Heating DegreeD C-days	Bright Sunshine hrs
Jan	-1.8 (-5.0)	48 (65)	50 (72)	99 (136)	604 (713)	79 (73)
Feb	-4.3 (-5.2)	71 (42)	62 (65)	124 (107)	604 (656)	110 (98)
Sum	N/A	119 (107)	112 (137)	223 (253)	1208 (1369)	189 (171)



## A Spring Comet

by Roy Bishop  
Avonport, NS

A bright comet comes along about once a decade. In the half century I have been visiting this planet I have seen five: Comet Arend-Roland and Comet Mrkos, both in 1957, Comet Ikeya-Seki in 1965, Comet Bennett in 1970, and Comet West in 1976. Comet Kohoutek in 1974 and Halley's Comet in 1985 received more publicity, but neither was the equal of these other five. Ikeya-Seki was the largest comet I have seen, and West was the brightest; however, few people saw either because there was little publicity and both comets were in the morning sky.

The next spectacular comet is overdue. Last autumn on December 6, a New Zealand amateur astronomer, Rodney Austin, found a faint comet deep in the southern sky. It has been designated Comet Austin (1989c1), the 29th comet to be discovered in 1989. It may turn out to be the next "Great Comet". It *could* be a relative "dud" like Kohoutek, but evidence to date indicates that it may be the best comet since West, 14 years ago.

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Comet Austin is presently approaching from the southern side of the Solar System. It will go closer to the Sun than the planet Mercury early in April and then pass four times closer to us than the Sun in late May as it begins its long journey back out to the cold regions far beyond the outer planets. If it visited the Sun in the past, it must have been long before mankind kept written records, for the comet's path is still indistinguishable from a parabola. It could be a "new" comet, making its first close pass by the Sun.

My first view of Comet Austin was on February 25 from the Gulf coast of Florida: it was a faint fuzzy glow, visible only with a telescope. From Canada Austin will be difficult to see through March and early April as it drifts northward near the western horizon in the evening twilight. However, during the last week of April it will vault into a dark east-north-eastern pre-dawn sky, passing near M31, the Andromeda Galaxy (a line of sight alignment only!). During the first week of May it should be a fine sight in the eastern sky about 4 am. It should be *easily* visible to the unaided eye from a dark sky site, but binoculars will provide the most spectacular view.

Moonlight will interfere from about May 7 to 18, but during the last part of May Comet Austin will be well-placed in the dark, early morning sky as it moves southwestward from night-to-night across the summer Milky Way.

What is a comet? Its core or nucleus is a mountain-sized dirty iceberg. There are believed to be millions of such dusty hunks of ice orbiting the Sun, most being far beyond the orbits of the planets. These fragments are likely remnants of the material from which our Sun and its planets formed about 5 billion years ago. Every year a few pass through the inner Solar System. The ones which come close to the Sun (like Austin) lose gas and dust as the Sun's heat bakes their surface. For several weeks evaporating clouds of this material form a bright, fuzzy head around the nucleus. The outer parts of this cloud, called the "coma", are blown away by the Sun's radiation to form an immense glowing tail of dust particles and ionized gases.

This may be a spectacle that occurs only rarely in a lifetime. Locate your binoculars and check your alarm clock. The early morning skies for several weeks beginning in late April may be graced with a truly "Great Comet"!

**Sources for Local Natural History Information**  
(Compiled by Blomidon Naturalists Society)

<u>Information</u>	<u>Source</u>	<u>Office</u>	<u>Home</u>
Rocks & Fossils	Geol. Dept., Acadia Univ.	542-2201	
Fish	N.S. Dept. of Lands & Forests	678-8921	
Flora - General	Ruth Newell	542-2201	542-2095
Flora - Trees	Merritt Gibson	542-2201	582-7569
Flora - Fungi	Darryl Grund	542-2201	542-9214
Flora - Lichens	Nancy Nickerson	678-2171	542-9332
Flora - Seaweeds	Karen Casselman		633-2837
Flora - Mosses & Ferns	Darryl Grund	542-2201	542-9214
Birds - General	John Pickwell		678-8281
	Bernard Forsythe		542-2427
	Richard Stern	678-4742	678-1975
	Peter C. Smith	542-2201	542-5998
	Gordon & Judy Tufts		542-7800
	Jim Wolford	542-2201	542-7650
Birds - Hawks & Owls	Jean Timpa		542-5678
	Bernard Forsythe		542-2427
Birds - Falcons & Eagles	Cyrl Coldwell	542-2201	542-2854
Amphibians & Reptiles	Peter Austin-Smith	678-8921	542-2109
	Sherman Bleakney	542-2201	542-3604
	Jim Wolford	542-2201	542-7650
Seashore & Marine Life	Sherman Bleakney	542-2201	542-3604
	Jim Wolford	542-2201	542-7650
Indian Prehistory & Archaeological Sites	Graham Daborn	542-2201	542-5373
Astronomy	Michael Bkylinsky	542-2201	582-7954
	Ellis Gettridge		542-2816
	James Lege		542-3530
	Roy Bishop	542-2201	542-3992
	Larry Bogan	542-2201	678-0446
	Sherman Williams	542-3598	542-5104



BLOMIDON NATURALISTS SOCIETY  
1989 - 1990 Membership Fees

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Each member receives four issues yearly of this Newsletter.  
The Blomidon Naturalists Society is a registered charity.  
Receipts for income tax purposes will be issued for all  
donations. The membership fee itself is not tax-deductible.  
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Please enclose a cheque or money order payable to "Blomidon  
Naturalists Society" and forward to:

Mrs. Judy Tufts  
Treasurer, Blomidon Naturalists Society  
P.O. Box 1313  
Wolfville, N.S. B0P 1X0

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<u>Number</u>	<u>Membership Classification</u>	<u>Price</u>	<u>Total</u>
_____	Individual Adult	\$10.00	\$ _____
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_____	Individual Junior (less than 16 years old)	\$1.00	\$ _____
	Tax-deductible Donation		\$ _____
		<b>TOTAL</b>	\$ _____

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Membership Type (please check one):

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Highbursh Cranberry

Mountain Ash

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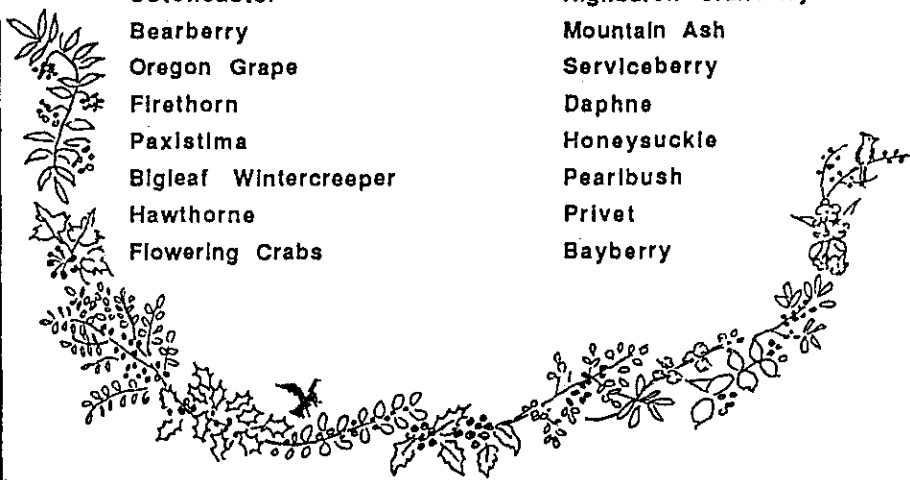
Daphne

Honeysuckle

Pearlbush

Privet

Bayberry



# BLOMIDON NATURALISTS SOCIETY

## RAFFLE

Proceeds from the raffle to be used to repair the Wolfville "Chimney Swift" chimney and to construct a nature interpretation centre at its base (for details see article in this Newsletter).

Prizes with a total value of more than \$1000 are as follows:

PRIZE	SPONSORED BY	VALUE
1st Weekend for 2 at Barrington Inn, Hfx, theatre tickets and limo service to/from city	Uniglobe Fundy Travel Delta Barrington Wood's Limousine Service	\$460
2nd Whale watching trip with overnight and meals for 2	Carl Haycock, BIOS Brier Island Lodge	\$200
3rd Painting - Red Fox by	John Pickwell	\$200
4th Binoculars - Bushnell 8 x 40	Camera Corner	\$120
5th Book - Birds of Canada	The Box of Delights	\$40
6th Backpack - Camp Trails	Wilderness Outfitters	\$33
7th Fishing Tackle Box	Cleves' Sporting Goods	\$22

**DRAWS** for these prizes will be made at our monthly meeting on **May 21, 1990.**

We hope that you can help your Society by selling the 20 enclosed (\$1.00) raffle tickets\*. Tickets stubs and cheques (payable to the Blomidon Naturalists Society Swift Project) should be forwarded to:

**BNS Swift Project**  
P.O. Box 127  
Wolfville, N.S. BOP 1X0

To obtain more tickets call 542-3722 or 542-5983.

**The BNS extends its sincere thanks to the businesses, organizations and individuals listed above that have so generously sponsored these prizes.**

\*Please return unused tickets to the above address as soon as possible.