



Blomidon Naturalists Society

Spring 1997 - Volume 24 Number 1

Blomidon Naturalists Society

"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 Newsletter* is published quarterly, in January, March, June, and October, by

The Blomidon Naturalists Society

P.O. Box 127

Wolfville, NS, B0P 1X0

Editorial Board

Chair: Susan Montonen

Committee: Merritt Gibson, Nancy Nickerson, Terry Power, Sherman Williams, George Alliston, Mark Elderkin

Production: Phil Taylor

Illustrations: Mary Pratt

Advertising: Lorna Hart

Distribution: Lana Churchill, Brenda Thexton, Judy Tufts

Articles may be reprinted with permission of the author or the editor. Credit the Blomidon Naturalists Society Newsletter. Unless otherwise stated, opinions are those of the authors, not necessarily the Blomidon Naturalists Society.

Printed in Canada. For subscription information see 1997 Membership fees form in the newsletter. Please notify us at the above address if you change your address.

The Blomidon Naturalists Society is a member of the Federation of Nova Scotia Naturalists, the Nova Scotia Trails Federation, the Brier Island Ocean Study (BIOS), and an Affiliated member of the Canadian Nature Federation.

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

Visit us on the web
<http://ace.acadiau.ca/bns/home.htm>

Contents

BNS SPRING PROGRAMME, 1997.....	3
ANNOUNCEMENTS.....	4
SOCIETY BUSINESS AND NOTICES.....	5
FEDERATION OF NOVA SCOTIA NATURALISTS (FNSN).....	6
FEEDBACK ON WOLFVILLE SWIFTS & MERLINS.....	7
JIM CAMPBELL'S BARREN.....	8
ROBIE TUFTS YOUNG NATURALIST AWARD.....	9
NORTH AMERICAN MIGRATION COUNT (NAMC) MAY 10, 1997.....	10
THE NATURAL HISTORY OF BLOMIDON - PART 2.....	14
THE GEOLOGICAL DEVELOPMENT OF BLOMIDON PENINSULA.....	14
INTERESTING PLANTS OF CAPE SPLIT AND CAPE BLOMIDON.....	18
MINERALS OF THE BLOMIDON PENINSULA.....	22
NATURAL HISTORY NEWS.....	26
BNS WINTER/EARLY SPRING BIRDS 1997.....	26
TRIVIAL TIDBITS OF LOCAL NATURAL HISTORY.....	30
ANNAPOLIS VALLEY WEATHER - WINTER 1997.....	34
WHAT'S IN THE SKY?.....	36

Cover Photo by Roy Bishop

BNS SPRING PROGRAMME, 1997

MONDAY EVENING MEETINGS

Unless otherwise noted, meetings are held on the third Monday of the month and start at 7:30 p.m. at Acadia University in Room 244 of the Beveridge Arts Centre. All meetings are open to the public and BNS members are encouraged to bring friends and neighbours.

19 May. GEORGE HISELER. Archaeological Sites in Kings County. George will tell us about his studies, conducted over a number of years, of archaeological sites at Melanson, Grand Pré, Avonport, and along the Blomidon peninsula.

16 June. FRANK C. THOMAS. Day of the Mastodon. In October 1991, the skeleton of a young mastodon was unearthed in a gypsum quarry in East Milford. Frank has written a book about that animal as it lived and died some 79,000 years ago. His talk blends fiction and science into a fascinating chronicle of the life of the mastodon.

FIELD TRIPS

May 3. SPRING BIRDS - DUCKS and EARLY MIGRANTS. Judy Tufts will lead us about the shores and ponds of this area. Waterproof clothing and footwear are recommended. Meet at the Nature Centre in Wolfville at 8 am.

9 May. FROG HOP. Jeff Franklin will lead a "frog hop" in the Wolfville area. Wear warm clothing and waterproof foot-

wear. Bring a flashlight and meet at the Robie Tufts Nature Centre at 7:30 p.m. Rain or shine. This outing is a winner with young naturalists.

25 May. NATURE WALK - BLOMIDON PARK. Jim Wolford will lead a nature walk at Blomidon Park to look at spring plants, birds, N.S.'s only fairy shrimp, and more. This walk is a part of the *Parks are for People* programme. Meet at the Robie Tufts Nature Centre, Wolfville, at 9:30 a.m. or at Blomidon Park at 10 a.m. Bring rubber boots and a lunch.

ANNOUNCEMENTS



Here it is! The official Blomidon Naturalists Society crest. You can sew it on your backback, sew it on your hat or jacket, or use it as a convenient coaster when you entertain friends. There is no end to the number of things that you can do with this crest, so get one now! Available at Earthwhile Pursuits for \$5.00

Notes from the Editor

This is the promised second of two special issues about the Blomidon peninsula. The first issue was in the Autumn 1996 newsletter. Again, we can be impressed with what the area holds. The dynamic events that led to the geology, described by Robert Raeside, and to the minerals that we can find, thanks to the direction of Jack Coldwell. Ruth Newell provides details on the plants that grow in the different habitats. Thanks to the authors, and especially to Merritt Gibson who selected the topics and writers. Roy Bishop's photograph nicely sets off the special issue.

Thank you to the writers of the regular features, to Mary Pratt for her illustrations, and to Phil Taylor for production. Roy Bishop mentions in "What's in the Sky?" that Comet Hale-Bopp is leaving. We knew that, but in its short visit it has made itself quite a feature in the night sky, and I'm sorry to see it go.

Susan Montonen
542-0437
smontone@ace.acadiau.ca

The deadline for the Summer newsletter is July 7, 1997.

FEDERATION OF NOVA SCOTIA NATURALISTS

ANNUAL GENERAL MEETING

JUNE 13 - JUNE 15, 1997

THEME: GREEN SPACES IN URBAN PLACES

HOST: HALIFAX FIELD NATURALISTS

LOCATION: MOUNT ST. VINCENT UNIVERSITY

Join naturalists from across Nova Scotia for a weekend of field trips, illustrated lectures, social events, displays and more. The programme this year will focus on the efforts of groups and private individuals to recognize, protect and restore natural sites within the Halifax greater metropolitan area. So come, explore and hear the stories of the many green oases within this urban setting. A highlight of the weekend will be a trip to McNab's Island - a 1000-acre "green jewel" in Halifax harbour.

Enclosed with this Newsletter is a detailed programme of the weekend's events and a registration form. You are encouraged to register early to assure your participation in those events that most interest you.

Hope to see you there!

SOCIETY BUSINESS AND NOTICES

FEDERATION OF NOVA SCOTIA NATURALISTS (FNSN)

What is the FNSN?

The Federation of Nova Scotia Naturalists, founded in 1990, is an umbrella group comprised of naturalists organizations from across the province. We present a unified voice concerning natural history issues.

The purpose of the FNSN is to further communication and co-operation among naturalists and natural history societies in Nova Scotia. We also work toward co-ordinating efforts at the provincial level to protect the natural state of our environment.

What does the FNSN do?

Some of the issues FNSN has been involved with in recent months are:

reviewing potential projects that are province-wide in scope, would enhance our understanding and conservation of biodiversity, and could reasonably be conducted by member groups. (We would be pleased to receive your suggestions.);

along with four other conservation oriented groups from Nova Scotia, made a presentation to Prince Phillip (president emeritus of the World Wildlife Fund) regarding Nova Scotia's progress in protecting natural landscapes;

initiated a letter writing campaign by member clubs in support of reinstating Jim Campbell's Barren as a candidate protected site;

prepared and submitted a

written critique of the proposed Province of Nova Scotia Endangered Species Act;

made a presentation in Ottawa to the review committee dealing with the proposed Federal Endangered Species Act (Bill C-65);

attended hearings, reviewed, prepared and submitted an assessment of the "New Forest Strategy for Nova Scotia Discussion Paper", prepared by the Coalition of Nova Scotia Forest Interests;

reviewed and responded to a proposed strategic plan for fossil resource management in Nova Scotia;

reviewed, prepared and submitted an assessment of the discussion paper "Minerals - A new policy for Nova Scotia";

sent letters to the Premier and/or Ministers of the Nova Scotia government regarding:

1) the removal of Jim Campbell's Barren from protection;

2) the proposed sale of provincially-owned forest land;

3) the need for protection of native plants.

With funds provided by the World Wildlife Fund, the FNSN employs the Endangered Spaces Co-ordinator for the Province of Nova Scotia.

Who belongs to the FNSN?

The Federation currently has the following 11 active member clubs:

Annapolis Field Naturalists Society; Blomidon Naturalists Society; Cape Breton Naturalists Society; Chignecto Naturalists Club; Cobequid Naturalists Club; Eastern Mainland Field Naturalists; Halifax Field Naturalists; Les Amis du Plein Air; Nova Scotia Wild Flora Society; Tuskert River Environmental Protection Association; South Shore Naturalists Club

For an additional annual fee of \$5, members of any of the above groups can become a FNSN member. A member receives a quarterly newsletter and is eli-

gible to vote at the Annual General Meeting. (Please note, however, that ALL members of the member clubs are entitled and encouraged to attend the AGM.)

Who is my FNSN representative?
While the BNS currently has five members on the FNSN Board (George Alliston, Larry Bogan, Tom Herman, Ruth Newell and Jim Wolford), your official representative is George Alliston. If you have issues you believe the FNSN should be aware of, contact George (phone: 542-3651 - e-mail:alliston@ns.sympatico.ca).

FEEDBACK ON WOLFFVILLE SWIFTS & MERLINS by Jim Wolford, Wolfville

Since my article in the last edition of this BNS Newsletter (Winter, 1996), I've received some information from New Brunswick and two letters from Québec.

Harold Forsyth has been corresponding with Friends of the Chimney Swift in Fredericton, a site of very large shows of roosting swifts since the early 1900s. The current chimney used is on the Incutech Building on the campus of University of New Brunswick. Accompanying their brochure was a letter of Nov. 21, 1996, from Dick Grant, stating: "For the past two years a merlin has been scattering the flock just at the time when the birds were congregating for the dive into the flue....." At this time, I don't know any more detail.

David Sergeant, of Hudson

Heights, Québec, was a visiting participant in this winter's annual count of eagles and other raptors in eastern Kings County. He was shown a copy of my article, and he sent letters of feedback in February and in April.

In his first letter, David simply states his opinion (shared by a few others in informal conversations with me) that predation upon swifts by merlins is normal and natural, as with many other predator-prey interactions, and that Nature should be allowed to take its course.

His second letter concerns a well-known swallow roost at Pembroke, Ontario: "I have found a parallel with merlins and swallows in Pembroke, Ontario, as told by Clive Goodwin in A Bird Finding Guide to Ontario (Re-

vised Edition, 1995, Univ. of Toronto Press), p. 285: 'Pembroke, [is] a city of some 14,000 residents on the Ottawa River... Starting in 1983 it became famous as the site of the largest swallow roost ever recorded in Ontario. The roost was estimated at 150,000 birds, and included all 6 eastern species, plus the Merlins which this huge concentration attracted. The birds occupied a grove of willows at the confluence of the Muskrat and Ottawa Rivers, with peak numbers about 15 minutes before sunset in late July through mid-August... The roost is currently no longer active....'" The account above

doesn't indicate if it was predation by merlins that caused the roost to be abandoned.

I'm writing this in mid-April of 1997. In the past few days I've seen two merlins: one was at Grand Pré with a dead sparrow in its talons, but the other was a female that was acting territorial (i.e., vocalizing) in the cemetery along Gaspereau Avenue in Wolfville. I invite anyone out there who wants to share either opinions or information to please contact me (542-7650 or Site 1, Comp. 61, RR3, Wolfville, N.S. B0P 1X0).

JIM CAMPBELL'S BARREN

Letters and Petitions

As most of you already know, on December 3, 1996, the Nova Scotia Cabinet announced its unilateral decision to remove from protected status Jim Campbell's Barren in the Cape Breton Highlands. This was done despite an exhaustive review and public consultation process, involving over 2000 Nova Scotians, which recommended that the Barren and 30 other ecologically significant sites be protected. Cabinet's action has demonstrated that, until protected by legislation, none of these sites is secure.

The public outcry against Cabinet's unilateral action has been unprecedented. Conservation-oriented groups throughout the province have

banded together to urge the government to reinstate Jim Campbell's Barren to protected status and to move quickly to legislate the protection of all 31 sites. As part of this effort the Federation of Nova Scotia Naturalists has asked its constituent clubs to encourage their membership to write the Premier, the Minister of Natural Resources and their MLA's to express their concerns. The BNS Conservation Committee is requesting those BNS members concerned with the preservation of natural areas, if you have not already done so, to join in this letter writing campaign. The Conservation Committee has prepared a package including background information, a list of points you might wish to consider and a letter written by one of our

members. You can obtain a copy of this package at Earthwhile Pursuits in Wolfville, at our May meeting, or by contacting a member of the Conservation committee (George Alliston, 542-3651; Larry Bogan, 678-0446; Lorna Hart, 542-4470; Tom Herman, 678-0383; Jim Wolford, 542-7650).

In addition to a letter writing campaign, the Atlantic Salmon Federation (ASF) is circulating a petition. Their objective is to obtain 10,000 signatures requesting that Jim Campbell's Barren be returned to protected status. If 10,000 signatures are obtained, this would be one hundred times

the number of signatures obtained on form letters by the lobby groups responsible for having the Barren removed from protection. ASF intends to submit this petition to government early in June.

The Federation of Nova Scotia Naturalists and the BNS Conservation Committee support this petition and will make copies available at BNS meetings. Copies can also be signed in Wolfville at Earthwhile Pursuits, EOS and the Wolfville Library.

Thank you for your support.

BNS Conservation Committee

ROBIE TUFTS YOUNG NATURALIST AWARD

by Sherman Williams

Since 1984, the Blomidon Naturalists Society has honoured the memory of Robie Tufts by seeking out and giving recognition to promising young naturalists.

At the January 1997 meeting, the newest recipient of the Robie Tufts Young Naturalists Award, Justin Alden Bishop, was introduced to the Society. Justin is a 12 year old, Grade 7 student, at Cornwallis District School. He lives on the Bay of Fundy shore, near Baxter's Harbour. His parents are Sheila and Alden Bishop and he has a younger sister, Jana.

His Fundy Shore home is the perfect location to pursue an interest in nature. He can easily hear the crash of the Fundy waves; a brief walk through the trees brings you to a full view of

the Bay looking out to Isle Haute, Cape D'Or and a great view of Cape Split.

Justin's interest in nature really began to grow back when he was 5 or 6; he would be with his family when they went on Sunday trips to observe the Bald Eagles in Sheffield Mills. Something about the sight of the big birds created an interest in him that has grown over the years.

When entering his room, one is immediately aware, from his photo collections, books, and sculptures that he has a great interest in eagles. Over the last few years he has collected newspaper clippings, photographs and notes and placed them in his scrapbooks.

His interest in nature, however, extends beyond bald eagles. He keeps bird feeders, he has made a nature hiking trail and has an interest in plants. He has worked with insects. When his uncle, Lance Bishop, was a student at Acadia, Justin would help him check his meat traps for collecting live beetles, take soil samples, and check mouse droppings for diet studies. He does, however, have his limits. During a conversation regarding a CBC program where Vicki Gabereau interviewed a young naturalist who had an interest in insects, especially edible ones, Justin's thoughtful response was, "That's interesting, but I can't see actually eating bugs as part of my life in the near future."

Since becoming our newest Robie Tufts Young Naturalist, Justin was an official participant in the January Bald Eagle Count.

**NORTH AMERICAN
MIGRATION COUNT
(NAMC)
MAY 10, 1997**

**by Judy Tufts, NAMC Provincial
Coordinator**

Now is the time to be seriously thinking of our next Spring count for NAMC in this province, which will take place on the second Saturday in the month of May - the 10th. Many of our northward-migrating neotropical bird species will be back, visible once again in the midst of looking for suitable habitats to raise new families. We need to be out in

These are just a few of the things discovered about Justin showing him to be a budding young naturalist, well aware of the natural world around him, and very deserving of the Robie Tufts Young Naturalists Award.

During the January meeting, Justin was presented with a certificate, a one year paid membership in the society which includes a subscription to the BNS newsletter, and a book, *Field Guide to the Birds of North America*. We congratulate Justin and wish him well as he continues his adventures in natural history.

We would like to thank Jennifer Wright, a former Robie Tufts Young Naturalists Award recipient, who, for the last few years, has designed and prepared the award certificate.

field, woods and mountain, along river, pond and ocean edge, searching for those species; counting the birds to see what effect 'migration' has had upon their numbers and their distribution. This should be of great concern for all of us. Please take time to consider participating in this very worthwhile project. NO FEE is involved.

It is important that all those wishing to participate contact local coordinators or area reps to prevent overlaps of areas being surveyed and to help the coverage to be as widespread and thorough as possible. If you are interested

in 'counting' locally in the Hants/Kings/Annapolis counties, please contact one of the following in the appropriate county.

Annapolis

Rebecca Ellis (Bear River)
1-902-467-3470

Gini Proulx (Clementsvale)
1-902-467-3235

Hants - east

Rosalyn McPhee (Shubenacadie) 1-902-758-2617

Hants - west

Jane McConnell (Falmouth)
1-902-798-3267

Bev Shanks (Ellershouse)
1-902-798-2617

Kings

Sheila L. Hulford (Kingston)
1-902-765-4023

Judy Tufts (Wolfville & County-Coordinator) 1-902-542-7800

Should you wish to 'count' in other counties, or have any queries concerning this project, please contact Judy Tufts. Please remember there will not be a Fall Count in 1997, unless someone else takes it on and coordinates it.

Corrections to Sept 1996 NAMC report - BNS Newsletter Winter 1996: The following should read: Northern Gannet - 145; Herring Gull - 9149; Greater Black-back Gull - 4668

Omissions: Great Egret - 1; Leach's Storm-Petrel - 1

ATLANTIC BIRD OBSERVATORY - SEAL ISLAND & BON PORTAGE, NOVA SCOTIA

Migration Monitoring 1997 Season

We are looking for volunteers to help band birds on Seal and Bon Portage Islands, southwestern Nova Scotia. Volunteers are needed for 1 or 2 week periods (or longer if possible) for our spring banding session MAY 1 to MID-JUNE, and our fall session beginning in AUGUST to the beginning of NOVEMBER.

We are able to provide food, accommodation, and boat trips to and from the Islands.

For more information please contact RINA NICHOLS
telephone: 902-585-1295
fax: 902-585-1059, or
e-mail: rina.nichols@acadiau.ca
post: Biology Department, Acadia University, Wolfville, Nova Scotia, B0P 1X0

CLEAN ANNAPOLIS RIVER PROJECT (CARP)

The Clean Annapolis River Project (CARP) is a charitable, community-owned organization created to work with communities and organizations to foster the conservation, restoration and sustainable use of the freshwater and marine ecosystems of southwestern Nova Scotia's Annapolis River and its watershed. Our mandate is to carry on research, education and action programs that will provide the basis for

sound environment decisions that affect the Annapolis River and its watershed, and the health of the natural and human community.

In partnership with Wildlife Habitat Canada, Eastern Habitat Joint Venture, Nova Scotia Department of Natural Resources, Acadia Centre for Estuarine Research, and Nova Scotia Museums, CARP is developing a community-based private stewardship program for the protection of wetlands within the Annapolis Valley Area. Karin Robertson, the project leader, supported by a Project Team, will work with community groups, schools, and landowners to identify, evaluate, monitor and protect wetlands.

We are looking forward to working with local landowners, schools groups and community groups on this exciting project. If the Blomidon Naturalist Society or any of its members are interested in becoming involved in the wetlands stewardship project please contact Karin Robertson at (902)532-7533 or (902)678-1253 or email: shawbold@fox.nstn.ca

WHAT DO YOU CALL THAT PLANT?

by Deannie Sullivan-Fraser

Who could forget "Snotty var" the descriptive Newfoundland popular name for Balsam, *Abies balsamea*, guaranteed to stick to your memory after just one hearing. This great name started me on a study where I am collecting our local plant names, names that

don't make it into our floral manuals and therefore aren't being passed on to the next generation.

Names like "Buzzies" for Burdock, *Arctium spp.*, from Rosemary Eaton of the Cole Harbour Heritage Farm. She says the buzzies get stuck in the animal's fur. Wolfgang Maase tells me that these burs, which stick better than crazy glue, have the popular name Priester-Läuse or Priest's lice in German. Perhaps someone reading this may have heard that term used here in our German population?

Sometimes the name is similar to the plant's common name, Stephanie Robertson tells me that folks in the Pictou area refer to Butter and Eggs, *Linaria vulgaris* as "Scrambled eggs"; when the wind blows through their masses it scrambles their colors.

The use of a plant can give rise to its name. Acadians on the French Shore call Cat-tails, *Typha spp.*, "Flambeau" as children would light the heads on fire in fall and use them as torches. Cinnamon Fern, *Osmunda cinnamomea*, offers a quick snack and has been given the names, "Indian Meat" and "Cheese Fern" and possibly Wild Banana, although this name could be referring to Interrupted fern - can anyone elaborate?

The Acadians in Chezzetcook used a plant which creeps over the granite and has a white berry, for a tonic in spring. No one yet can tell me which plant or how to spell it - sounds like "Peu-

monaire". Or the plant that belongs to the name "Never Die", a weed that a Pugwash farmer just can't get out of his fields.

If you can solve or confirm these or know of any other local names or can put me in touch with someone who may have some information, please contact me either by E-mail at AF436@chebucto.ns.ca or by writing to Deannie Sullivan-Fraser at 61 B Hazelhurst St in Dartmouth, NS B2Y 3N1. 902-466-6891. Please send relevant info - where the name was used and any stories which may accompany it are of particular interest.

Thank you.



Strawberry Blossom - Late October, by G. Greenough



FEEDS 'N NEEDS

1111 KARS STREET
PORT WILLIAMS
NOVA SCOTIA

Port Williams
542-6015/6016

Windsor
798-3100

Berwick
538-8901

IN SUPPORT OF:

THE BLOMIDON NATURALIST SOCIETY



SUPPLIERS OF:

Striped & Black
Sunflower Seed
Sunflower Chips
Niger Seed
Millet Seed
Wildbird Mixes
Peanuts
Hummingbird Feeders

■ Product Lines Include ■

HARDWARE - CLOTHING - BOOTS

GARDENING SUPPLIES -
BEDDING PLANTS -
EVERGREENS

AS WELL AS A COMPLETE LINE
OF PET & WILDBIRD SUPPLIES



THE NATURAL HISTORY OF BLOMIDON - PART 2

THE GEOLOGICAL DEVELOPMENT OF THE BLOMIDON PENINSULA

by Robert Raeside, Department of Geology, Acadia University

The Blomidon Peninsula stands out today as the impressive buttress at the eastern end of the North Mountain, where the ridge ends abruptly at the high siltstone cliffs of Cape Blomidon. Strictly, however, the North Mountain is neither a mountain nor a ridge, but a 200 km long broken escarpment, with a steep face toward the south and a gentler slope into the bay to the north. The whole structure of the Blomidon Peninsula - the position of the cliff-lines, the curved hook of the peninsula, and the broad Scots Bay - is controlled by the underlying geology and reflects the movements of the Earth shaping this portion of Nova Scotia.

The rocks of the North Mountain and the Annapolis-Cornwallis Valley are among the youngest parts of Nova Scotia, dating back only to the late Triassic and early Jurassic periods, about 240 to 200 million years ago. To understand the setting of their formation it is necessary to look further back in time, to the time when Nova Scotia was assembled from fragments of North America and Africa during the Acadian Orogeny, 370 million years ago. When these two large continents collided with each other in the Devonian period, the intervening ocean floor was subducted beneath the continents, producing chains of volcanoes along most of the length of the future Appalachian and Caledonian Mountains. In the region that would become Nova Scotia, however, the collision was more sideways, as a result of the shape of the ancient continental margins. Part of Africa slid past part of North America, along a great transcurrent fault, much in the way the Pacific plate today slides past the North American plate along the San Andreas Fault in California.

The collision of the continents pushed up a high mountain range, which over the next 100 million years was gradually worn away by the forces of weathering and erosion. In Nova Scotia, the trace of the plate boundaries can still be seen as the Cobequid-Chedabucto fault system, along a line from Guysborough past Truro to Cape Chignecto, and along the south coast of New Brunswick. Today this fault is largely buried beneath younger Triassic rocks (like Cape Blomidon), but its presence is important in understanding why the Triassic rocks were deposited there in the first place.

Through much of this story Nova Scotia lay at the centre of the super-continent Pangea, thousands of kilometres from the deep ocean. As Pangea gradually drifted northward, the area that was to become eastern Canada moved from the desert latitudes of the southern hemisphere

across the equator to the desert latitudes of the northern hemisphere. This track is recorded by the changing rock types through time, from desert sandstone and salt lakes in the Devonian period, to tropical forest soils in the Carboniferous period, and again desert sandstone in the Permian and Triassic periods. It is these Triassic desert sedimentary rocks that make up Cape Blomidon.

About 250 million years ago the supercontinent began to fragment. At first rifting was confined to areas to the south, where South America rifted away from southern Africa. Later, rifting began farther north, and North America began to pull away from Africa and Europe. The weakest crust in a supercontinent is the preferred site of separation, and in the case of Pangea this was the old line along which continents had collided in the Devonian period. However, the exact location of the split may not be the precise line of the original collision, but a parallel line nearby. In the case of eastern Canada, the weakest point was along the Cobequid-Chedabucto fault system, and once again movement was predominantly transcurrent as southern Nova Scotia slid eastward past northern Nova Scotia. As a result, the crust sagged, and basins began to form at the site of the future Bay of Fundy.

At first the basins were above sea level and the sediment that accumulated was a boulder scree or a coarse gravelly conglomerate, washed off the surrounding uplands. Today this is exposed only on the northern side of the Minas Basin at Lower Economy and Parrsboro. These are the cliff-bottom conglomerates and breccias that contain hundreds of thousands of bones of early dinosaurs made famous by Paul Olsen. They were small scavenging animals that lived among the boulders, sheltering from the hot sun, awaiting their next meal. As the uplands were worn away, the resulting sediment became finer, and the basal layers of conglomerate are covered by sandstone - the Wolfville Formation. This sandstone was deposited in a braidplain environment - wide, shallow rivers, like today's South Platte River in Nebraska which is well described by the adage as 'too thin to plough, but too thick to drink'. In the Fundy area the rivers drained mainly from the South Mountain into wide, ephemeral, freshwater lakes. In the desert climate of the Triassic, the lakes filled up only after brief intense downpours. At these times river flow was extreme, washing coarse gravel along the bed, and flushing huge quantities of sand into the lake bed. When the lakes evaporated, sand was whipped around by northeasterly Harmattan-type desert winds into dunes, but the gravelly channels can still be seen today along the foreshore at Kingsport - spoon-shaped bowls of conglomerate, several metres across, scattered through the sandstone. Up to 360 m of sandstone and conglomerate accumulated in the Wolfville-Kentville-Canning area, nearly ten times that fills the basin near Grand Manan Island.

As southern Nova Scotia slowly slid eastward, the Fundy Basin widened, the land sank lower, and the rimming uplands were worn down. Sediment became finer - sand gave way to silt and mud deposited in playa-lake environments, laying down the strata now known as the Blomidon Formation. These rocks are well exposed along the Blomidon shore at Houstons Beach where red and purple mudstone and siltstone can be seen. Some lighter layers are caliche soils - limy evaporative soils formed by prolonged evaporation of groundwater. The Blomidon Shale is generally about 300 m thick in the Blomidon Peninsula area, but thickens to 1100 m offshore.

About 202 million years ago, the continental crust was stretched to its thinnest. The upper mantle swelled up from underneath, heating the lower crust, and lowering the pressure on the mantle rocks themselves. As a result the upper mantle began to melt, producing large volumes of basaltic magma which ascended up the pre-existing fractures and fault zones to erupt as the North Mountain Basalt. The lava flow is about 100 m thick in the Blomidon area, although nearly 1000 m of basalt underlie the Bay of Fundy east of Grand Manan Island, the centre of accumulation. These eruptions were probably fissure-type eruptions, with no single eruptive centre, and are matched by several other volcanic sequences along the eastern seaboard to North Carolina.

Where thick lava flows were erupted, the upper and lower edges cooled quickly, producing a brittle, glassy layer, commonly with abundant zeolite minerals in ancient gas bubbles in the lava. The centres of the flow cooled more slowly, possibly taking hundreds of years to reach surface temperatures. As they cooled the rock shrank, and vertical joints opened, splitting the basalt into a series of polygonal vertical columns. Columnar jointing is well exposed today along the Steward Mountain Road, and at Ross Creek. Water percolating down these joints and fissures carried sand and mud with it. As the water was heated, it erupted as hot springs and geysers, carrying the sand and mud up with it, only to be washed down again. These muddy and sandy layers are easily visible west of Ross Creek as a series of sandstone 'veins' which today appear to cut across the basalt.

During the eruption of the North Mountain, southern Nova Scotia continued to slide eastward, pulled by the supercontinent rifting processes. Narrow veins of quartz and chalcedony, exposed on the shores of Bennett Bay, Broad Cove and Scots Bay, fill cracks that split open during the extensional process, and all lie in an east-northeast orientation, perpendicular to the direction of this pull. The main rifting, however, was occurring well to the east of Nova Scotia, where eventually the supercontinent split apart, along the edge of the continental shelf, and new ocean floor of the young Atlantic Ocean was erupted. In total, southern Nova Scotia slipped eastward away from North America by only about 70 km. The resulting Fundy Basin is not a

simple graben like the Great Rift Valley of East Africa. Rather it formed by movement on a series of subhorizontal faults, resulting in a shingled pattern of faults in the underlying crust. The main effect of this on the basin is that nowhere did the land surface ever sink below sea level. All the rocks that were deposited or erupted were laid down in terrestrial or lacustrine environments. Even after the eruption of the North Mountain Basalt, the environment was that of a desert lake.

The youngest rocks exposed in the Blomidon Peninsula are the limestone and chert of the Scots Bay Formation. These rocks are exposed on-land only in a few coves between Scots Bay village and Bennett Bay, and never exceed 10 m in thickness. Offshore, however, the unit thickens to approximately 2500 m near Grand Manan Island. These rocks were deposited in lacustrine environments. The bottom layer is a weathered basaltic fossil soil, buried by shallow water shale, lake-margin mud and silt, clean, deeper water limestone, and shoreline beach sandstone. The 'Scots Bay Lake' was probably a more perennial feature than the earlier desert sandy lakes. Woody plants grew around its shores, and some of these are preserved as silicified and tufa-coated logs. Commonly the woody cores of tufa-coated logs rotted away, leaving hollow cylinders of limy tufa. Cherty nodular patches in the limestone are probably replacement masses of silica focused around rotting tree roots and siliceous hot springs.

The record of deposition stops at about 196 million years ago, at the eroded top of the Scots Bay Formation. Even at this time, sediments were deposited under fresh water. Not until 30 million years later did North America and Africa separate far enough to allow the sea to rise into the Bay of Fundy. Although sea level was high all over the world at this time, the main reason that the Bay of Fundy was flooded was because as the ocean opened, the warm, swollen mid-ocean ridge moved farther away from Nova Scotia and as the new edge of the continent cooled, shrinking in thickness, and sinking to lower altitudes. Basins formed during the rifting process, and filled by eolian and lacustrine sedimentary rocks and basalt sank below sea level. Today only the gently north-tilted edge is visible, underlying the Annapolis-Cornwallis Valley and North Mountain, the Bay of Fundy and the Minas Basin. The North Mountain, the most obvious topographic phenomenon, is a product of the differential weathering and erosion rates of basalt and the underlying shale. Even the prominent hooked shape of the Blomidon Peninsula and Cape Split represents merely a broad open warp in the stratigraphy - an almost insignificant ripple in an otherwise layer-cake style stack of sandstone, siltstone, lava, and limestone.

RARE OR OTHERWISE INTERESTING PLANTS OF CAPE SPLIT AND CAPE BLOMIDON

by Ruth Newell

When one lists the rare or otherwise interesting plants of the Blomidon Peninsula by habitat, one notices immediately that the maple/birch/beech hardwood component of both Cape Split and Cape Blomidon harbours the greatest number of these plants. Spring ephemerals represent one component of this hardwood flora. Endless carpets of spring wildflowers are responsible for drawing naturalists, photographers, etc. out to Cape Split every May and June. This display is without doubt, truly worth the hike. Perhaps what is not as widely known is that a similar display of Spring wildflowers can be viewed along the trails of Cape Blomidon Provincial Park. Some of the showy, spring-flowering plants that may be seen along the trails and paths of

both Capes are: Dutchman's Breeches (*Dicentra cucullaria*), Spring Beauty (*Claytonia caroliniana*), Dog-tooth Violet (*Erythronium americanum*), Purple Trillium (*Trillium erectum*) and Toothwort (*D. diphylla*).



Dutchman's Breeches

A rare plant found in rich hardwoods on Cape Blomidon, but which is missing from the flora of Cape Split is Wild Leek (*Allium tricoccum*). This plant is unusual in that its leaves appear in early Spring, usually in large, luxurious carpets, but by the time its flowers appear in early summer, the leaves are no longer present.

Flowering slightly later than the plants just mentioned, are the four attractive plant species: Solomon's Seal (*Polygonatum pubescens*), False Solomon's Seal (*Smilacina racemosa*), Green Twisted-stalk (*Streptopus amplexifolius*) and Rosy Twisted-stalk (*S. roseus*). All four share a similar growth form consisting of an arching stalk with sessile, ovate, parallel-veined leaves occurring along its length. All but one species (the False Solomon's Seal) have their flowers bell-shaped and hanging beneath the leaves either singly or in pairs. Because the flowers are somewhat hidden by the leaves, the beauty of these plants originates from their graceful arching growth habit. Specific recognition is rendered considerably easier when flowers are present because it is the flowers which display the more obvious differences between



Wild Leek

these four species. All four belong to the Lily Family and occur as single, scattered individuals or in small clumps within the hardwood habitats of the Blomidon Peninsula.

In the government document entitled *Habitats and Plant Communities of the Blomidon Provincial Park - Cape Split Area, Kings County, Nova Scotia*, the author, Art Lynds, compares the hardwoods of Cape Split with those of Cape Blomidon. One observation he makes is that the former locale has a much more luxuriant fern growth. He attributes this to a foggier and hence moister climate.

The Cape Split hardwoods do indeed provide a wonderful opportunity to view a great variety of ferns. Perhaps the fern that most people are familiar with is the Ostrich Fern (*Matteucia struthiopteris*). This is the edible "Fiddlehead Fern", so popular in the Spring. One usually associates this fern with river floodplains but it also can be found in rich, damp, shady habitats as found in the hardwood section of Cape Split. In addition to Ostrich Fern, these hardwoods provide a home for a large number of other fern species including, several species of Wood Fern (*Dryopteris spp.*) and their associated hybrids, Christmas Fern (*Polystichum acrostichoides*), Braun's Holly Fern (*P. braunii*), Silver Spleenwort (*Athyrium thelypteroides*), Lady Fern (*A. filix-femina*), Oak Fern (*Gymnocarpium dryopteris*), Beech Fern (*Phegopteris connectilis*), and various fern-related plants such as Clubmosses and Grapeferns.

In addition to the showy carpets of Spring wildflowers and the conspicuous fern element, there are other plants worthy of note to be found in these rich hardwoods. These are the rarities that are often overlooked because of their lack of showy flowers and/or their scarcity of



False Solomon's Seal

numbers. Three rare grasses occur in the hardwoods of the Blomidon Peninsula. These are Northeastern Mannagrass (*Glyceria melicaria*), Tall Millet Grass (*Milium effusum*) and False Melic (*Schizachne purpurascens*). Three species of Sweet Cicely (members of the carrot family with fern-like foliage and clusters of small, white flowers), occur on the peninsula, two of which (*Osmorhiza longistylis* and *O. chilensis*) are relatively rare in the province. In addition several species of some of our rarer violets have also been reported from this area.

Before leaving the hardwood component of Cape Split and Cape Blomidon, I would like to make mention of the trees themselves. The predominant trees are sugar maple, yellow birch and beech. There are many majestic specimens of great age to be seen along the trails. The trees of Cape Blomidon are reported (Lynds, 1987) to be of greater maturity than those of Cape Split with correspondingly larger trees and ground vegetation of a truer climatic nature.



Manna Grass

Another habitat of the Blomidon Peninsula which harbours a significant number of rare and interesting species are the coastal cliffs and forested talus slopes. Here, of course, one must proceed with tremendous caution. There are unstable cliff footings, falling rocks and incoming tides to consider at all times. Springtime is especially hazardous as frost loosens exposed sections of the cliffs making them particularly unstable and prone to breaking away from the cliff face. Perhaps the most tantalizing rare plant species in this particular habitat, is the tiny, elusive orchid, White Adder's-Mouth (*Malaxis monophylla* var. *brachypoda*). Known from only two other sites in the province, this was reported from a cliff at Cape Blomidon

in 1956 by D. H. Webster. To my knowledge, this plant has not been observed on the Blomidon Peninsula since. Other cliff dwellers of interest include White Alpine Saxifrage (*Saxifraga aizoon*), a plant that is very rare in Nova Scotia particularly on the mainland, as well as Rock-cress (*Arabis drummondii*) and Draba (*Draba hirta*), both rare plants of cliffs and talus slopes of the head of the Bay of Fundy and northern Cape Breton. Pearlwort, (*Sagina nodosa*), Cardamine (*Cardamine parviflora*) and Roseroot (*Sedum rosea*) are other unusual plants to



Roseroot

watch for in cliff crevices and crannies. Several rare grasses have been collected from cliff faces, crevices and ledges. These include Slender Wedge-grass (*Sphenopholis intermedia*), *Poa glaucantha* (a relative of the Kentucky Bluegrass) and *Trisetum spicatum* var. *pilosiglume*. Judging from herbarium records, cliffs in the vicinity of Amethyst Cove, appear to be particularly rich in terms of rare species.

A habitat that one might not think would be very interesting botanically, actually turns out to be rather intriguing, is the open field or meadow. A number of these exist on top of the Cape Blomidon end of the Blomidon Peninsula. Here, surprisingly, we do find the odd rarity or, in the case of the Spiked Lobelia (*Lobelia spicata*), a whole field of them. This blue-flowered plant is reported from only two other locations in the province of Nova Scotia, but here within the confines of Blomidon Provincial Park, it is considered almost a weed because of its abundance. Another plant that is considered rare in the province but reported as local on top of Cape Blomidon, is the Northern Bedstraw (*Galium boreale* var. *intermedium*). This is a slender, herbaceous plant with leaves occurring in whorls and dense, terminal clusters of small, white flowers. It can be found near the edges of the woods growing amidst grasses. The Foxglove Beardtongue (*Penstemon digitalis*) was collected from a field on top of Cape Blomidon in 1936 and this remains, as far as I know, the only record for the province. This at one time was considered to be a nonnative plant here, however, current thinking suggests that Nova Scotia represents the northeastern end of this plants' natural range. It would be an interesting project to determine whether or not this plant still exists on Cape Blomidon. No collections other than those stemming from the original report have ever made their way into any of the province's herbaria. This plant somewhat resembles the well known true Foxglove so popular in gardens, albeit on a slightly smaller scale.

One habitat that appears to be relatively bereft of rare plants are the coniferous forest stands. Perhaps this is just as well since this is the habitat which is most subject to logging.

We are indeed fortunate to have an area like the Blomidon Peninsula which offers so many recreational opportunities plus significant natural history features, so close at hand.

Reference:

Lynds, Art. 1987. *Habitats and Plant Communities of the Blomidon Provincial Park - Cape Split Area, Kings County, Nova Scotia*. Nova Scotia Department of Education and Department of Lands and Forests.



Spiked Lobelia

MINERALS OF THE BLOMIDON PENINSULA

by Jack Colwell

The minerals to be found in the cliffs and shoreline of the Blomidon Peninsula and along the Fundy coast of Nova Scotia have attracted collectors and mineralogists for more than 150 years and the constant erosion by the sea ensures that new sites are exposed every year.

The most widely known minerals found here are amethyst and agate, both of which are varieties of the common mineral quartz, but it is the minerals of the zeolite group for which the area is more famous among mineralogists. Don't expect to polish the zeolites in a tumbler as you would with amethyst and agate because they are softer and much too fragile. Instead look for crystal clusters that deserve display space on a shelf.

These minerals are found in the lava flows of the North Mountain basalt. They were deposited by hot (about 100 to 200°C) water that travelled through the flows after they were extruded and solidified. The hot water altered and partially dissolved the volcanic glass and the minerals of the basalt, and redeposited the material in the gas bubbles (vesicles) at the tops and bottoms of flows, in larger cavities and as veins in fractures that cut across the flows. The most common occurrence is in the so-called amygdaloidal basalt, which is the name given to the rock with the light-coloured mineral - filled vesicles known as amygdules. Because it is almost impossible to tell some of the minerals apart unless you can see crystal shapes you will need to find a place where the amygdules are not completely filled and crystal faces are visible.

If you look at many amygdules and cavities you will find that there is often a general sequence of minerals from the outside to the centre although the particular minerals involved vary widely, and it is not unusual to find different cavities in the same rock with different mineral fillings.

The outside of amygdules and smaller cavities is typically coated with a fine grained mineral that ranges in colour from black to a green that is often mistaken at first for the copper carbonate, malachite. (Malachite, associated with native copper, does occur, but rarely.) Chemical analyses indicate that the material is a hydrous iron - magnesium silicate similar to the micaceous mineral chlorite, and the names chlorophaeite or celadonite have been applied.

Quartz varieties

The next layer is often "agate". The material that is commonly called agate is a microcrystalline type of quartz, in contrast to amethyst and

ordinary crystal quartz which have clearly visible crystals. The proper general term for the microcrystalline variety is chalcedony, and the term agate should really be reserved for chalcedony with alternating bands of different colour and sometimes different porosity, or with irregular distribution of colours. In a few cases the chalcedony seems to have replaced original zeolite crystals and one finds lighter bladed shapes in a mass of the mineral. It is usually quite easy to distinguish chalcedony from other minerals, because it, like crystalline quartz, is harder than glass and a knife blade, whereas the zeolites and other minerals are softer. Look on a weathered surface and you will find that chalcedony veins are a little higher than the surrounding rock due to this hardness and resistance to erosion. Chalcedony was a favourite among the aboriginal peoples for arrowheads, and chippings have indicated the location of several "arrowhead factories" along the shore.

Chalcedony comes in a wide range of colours including dark bluish-gray, green, brown, red (jasper), yellow and white. A good place to get an idea of the variety is the Scots Bay beach. You can also find some large bell-shaped filled cavities in the outcrops north of the beach. The chalcedony here is mostly bluish-grey, and generally lacking any banding. Look for narrow vertical veins as well.

If amethyst or uncoloured crystalline quartz is present in a cavity or vein it will be inside the chalcedony, and the transition from micro- to macrocrystalline quartz is sharp. The purplish colour of amethyst has generally been ascribed to the presence of minute amounts of iron, but more recent work has indicated that it is due to partial absorption of light due to structural defects in the quartz crystals.

Zeolites

The zeolite minerals are also often found inside a rim of chalcedony, but other cavities have only zeolite inside the green-black chlorophaeite coating.

The zeolites are a group of minerals with very similar chemical compositions, being hydrated silicates of aluminum and one or more of the alkalis, normally sodium or potassium, or alkaline earths, normally calcium. As such they are essentially like feldspars with water added. The structures are relatively very open and zeolites, mainly synthetic, find use as molecular sieves, catalysts, adsorbing agents (kitty litter) and for ion exchange as in water softeners.

More than twenty zeolite minerals have been reported from Nova Scotia, although not all have been noted from the Blomidon Peninsula. The community of Morden, west of the Peninsula, is the world type locality for mordenite. Most of the physical properties such as hardness and specific gravity are so similar that it is difficult to tell the zeolites apart and it takes a combination of laboratory tests to be sure

of the identification. However, even the novice can narrow the possibilities to one or a few minerals by using crystal shape.

Stilbite, the official mineral of Nova Scotia, is usually the most abundant zeolite. It ranges in colour from white through beige to orange. It occurs as individual bladed crystals or as clusters of blades. The latter have been described as "sheaf-like" because they are reminiscent of a sheaf of grain. Some clusters look like a bow tie. In both cases the thin blades in the cluster are usually apparent.

Heulandite is common as well. Although it differs only slightly in chemical composition from stilbite, the appearance of crystals is quite distinct. They have been described as "coffin-shaped", being similar to the style of coffins that are wider in the middle, but the crystals in this area are almost always pointed and "diamond shaped" is a more appropriate description. The diamond shaped faces usually have an obvious pearly lustre. The colour ranges from colourless to white to orange. Amygdules filled with heulandite cannot be distinguished from those filled with stilbite.

Natrolite is the most common of a group of zeolites typified by radiating fibrous to needle-like crystal aggregates. In rare cases one can find a complete spherical mass of radiating crystals. The individual crystals are usually large enough to be seen - colourless and glassy, with a square section when viewed from the end in the case of natrolite, whereas others in the group such as scolecite, mesolite or thomsonite typically have finer fibrous crystals.

Chabazite has been found on the Cape Blomidon side of the peninsula, but not on the Scots Bay side. Its most common occurrence is at Wasson's Bluff, on the north shore of Minas Channel. The crystals may look at first like cubes but are actually rhombohedrons with interfacial angles of 85 degrees. The salmon-coloured variety found here was known as acadialite.

Analcite, or analcime is generally not considered to be a zeolite although it has similar chemical composition and occurrence. The crystals are clear to opaque white trapezohedrons, ideally composed of 24 trapezium-shaped faces and quite easily distinguished from the other minerals.

Other minerals

Apophyllite is a hydrated silicate similar to the zeolites. It can be confused with other white zeolites, but is distinctive when in pale green cubic looking (actually tetragonal) crystals.

Calcite is uncommon in the North Mountain basalt, compared to similar rocks in New Jersey. There is a vein of coarse calcite, distinguished

by its obvious rhombohedral cleavage, bordered by brownish stilbite crystals in a cove about 100 m along the shore from the point where the Cape Split trail first turns up the hill.

Magnetite is occasionally found as grains and veins in massive basalt. It is black, metallic and strongly attracts a magnet.

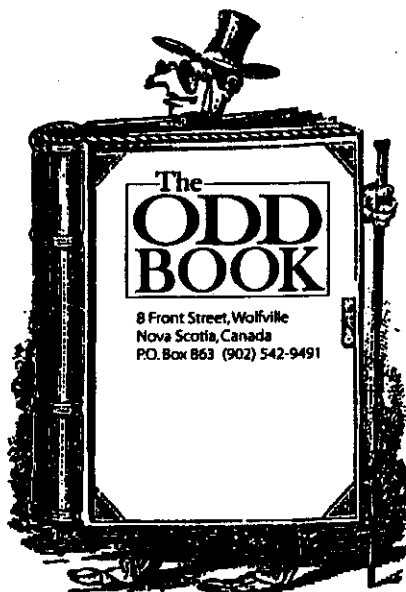
Gypsum occurs in veins in the Blomidon Formation which underlies the basalt and pieces of the white fibrous variety known as satin spar, usually with some reddish hematite stain, can be found on the beach around Cape Blomidon.

Mineral collecting

Anyone collecting minerals around the Blomidon peninsula will need to be aware of the tide times as some of the sites are not accessible at high tide and return routes may be cut off before high tide. Overhanging cliffs are dangerous, especially in the spring.

Safety glasses are particularly important when hammering chalcedony and other quartz varieties.

Good hunting!!



Interesting Out of Print Books

*List of books on bee-keeping available.
\$2.00, refundable with order.*

NATURAL HISTORY NEWS

BNS WINTER/EARLY SPRING BIRDS 1997

by Richard Stern
40 MacDonald Park Road
Kentville, NS B4N 4M1
902-678-1975
rstern@fox.nstn.ca

The avian winter was marked by mild temperatures and lack of snow, with plenty of wild food available, until April 1st, when a heavy snowfall coincided with the arrival of many Robins.

CANADA GOOSE -- There were about 4-500 near Chipman Corner, north of Kentville in mid-Jan (SW). JCT noticed that was one was fitted with a neck-band, and was able to find out from the CWS that this had been applied in New Jersey in the early 1990's. Several other flocks of 4-600 have been noted in the area too. However, numbers started to build up as the winter progressed, so that BBT and DT noted 2,000+ at Canning Aboiteau on March 31, and there were two separate flocks of around 2000 nearby on the 29th (MAG, JWW).

SNOW GOOSE -- DM saw two flying north over her property near Bridgetown 9 March.

DUCKS -- BBT and DT noted 30-40 **MALLARD** plus a **NORTHERN PINTAIL** in a grain field along Belcher St. March 25. A couple of early **GREEN-WINGED TEAL** were at the Canning Aboiteau March 31.

BALD EAGLE -- The annual count, from 10 a.m. to 11 a.m. on 26 Jan. this year (16 field parties of 34 observers) totaled a record high of 525 birds in the area, of which about half were of immature birds - a healthy sign of a growing population. The following weekend visitors from far and near outnumbered the birds by a long way, at the annual Sheffield Mills eagle weekend, where they (the birds, that is) certainly put on a good showing. By mid-March, nesting activity was obvious at the Greenwich, Melanson and White Rock sites (BLF).

RED-TAILED HAWK -- All winter a familiar sight by the roadside all over the Valley, 60 were counted in 1 hour on the day of the Eagle Count in East Kings Co. The usual albino was back in the Saxon St. area on several occasions, for the 8th winter. A different partial albino was in east Wolfville Jan. 26 (BBT). A bird has been seen nest-building on the Acadia University Hall building!

ROUGH-LEGGED HAWK -- Numbers around open dykelands etc. started to build up again by mid-March, as over-wintering birds may have been joined by

BLOMIDON NURSERIES

**HIGHWAY 1
at EXIT 11 of
HIGHWAY 101
-- GREENWICH --
Tel. (902) 542-2295
FAX: 542-1123**

- ORGANIC SPRAYS AND FERTILIZERS
- RARE AND UNUSUAL TREES AND SHRUBS
- EXCELLENT SUPPLY OF SHRUB ROSES



Some of our stock of fruit and berry producing ornamentals that are attractive to wildlife are:

Winterberry	Paxistima
Evergreen Holly	Pearlbush
Bearberry	Bigleaf Wintercreeper
Wayfaring Tree	Flowering Crab
Firethorn	Mountain Ash
Cotoneaster	Serviceberry
Hawthorne	Honeysuckles
Oregon Grape	Privet
Daphne	Bayberry
Elderberry	Highbush Cranberry

birds coming north again. Several have been around Grand Pré, Lower Canard and Martock, etc. (RBS).

FALCONS -- The odd **MERLIN** has been seen, e.g. in Kentville chasing pigeons, and in Wolfville. GF saw an **AMERICAN KESTREL**, unusual in winter, near Somerset Jan. 16.

KILLDEER -- The first noted back this spring was on March 28 near Grand Pré (JWW) and three on the Wolfville Dyke, March 31 (JT).

GRAY PARTRIDGE -- Still just about hanging on, 15 were at Middle Dyke Rd. on March 9 (JWW) and three were at the corner of Church St. and Starr's Point Road (PBM) on 9th.

OWLS -- JWT reported two **SHORT-EARED OWLS** at the east end of the Grand Pré dyke at the end of Jan., and they were still there a few days later. However, on the night of 2 Feb., SS found one freshly killed on the road close by. But there were five along the dyke at the east end on March 15 (BLF). BLF's pair of **BARRED OWLS** continues to eat dead small livestock and are again paired up, behind his house on Wolfville Ridge, and laid their earliest ever egg on March 14. One perched on RBS's feeder in Kentville the night of Feb. 21 (? after mice or squirrels). BLF has also had a pair of **GREAT HORNED OWLS** prospecting his artificial platform near Walbrook, and he and AAM heard a **NORTHERN SAW-WHET**

OWL hooting nearby on the early date of Feb.10. BLF and RBS got good looks at one by flashlight at Peck Meadow 25 March. SB-N found a roost of 12 **LONG-EARED OWLS** not far from Canning in late Feb., and surmised that they had probably been present all winter. This is the first report for a long time of this hard-to-find species, in our area. Only one was left, though, by mid-March, so they have presumably dispersed.

NORTHERN FLICKER -- Several people have seen them, and they seem to be more common than before as over-wintering birds.

PILEATED WOODPECKER -- Several have been seen, often in very urban areas.

WINTER WREN -- RW has seen one on and off during the winter around the White Rock bridge, and it was still there March 16.

AMERICAN ROBIN -- Several largish flocks seem to have been around for the winter, e.g. PT and SM's 250-300 Robins in the orchard along Gaspereau River Road (between Gaspereau and Slater Rd, by the huge Elm tree) 9 Feb. evening. They were feeding, then leaving in groups of 25 or so -- flying to roost, they suspected. However, large numbers of fresh-looking birds seemed to arrive in the area around the end of March, and were seen all over the place searching for berries and other suitable food when 25+ cm. of snow unexpectedly covered

the ground and the worms on April Fool's day.

NORTHERN MOCKINGBIRD -- One has been visiting a feeder near St. Joseph's church, Kentville, most of the winter (RBS), and BBT have had one coming to their yard in east Wolfville too. Since Monday, March 17th, one has been visiting feeders regularly in the Westwood Drive area of Wolfville. A second may have been heard singing. It is believed that there was a mockingbird nest in the same area last year (MA).

BOHEMIAN WAXWING -- The flocks in the area this winter have so far arrived later, and have been less abundant, than last. Reasonable numbers have only started turning up in mid-Feb. A few **CEDAR WAXWINGS** were with a flock in Wolfville in mid-March.

NORTHERN SHRIKE -- This has not been a good "irruptive winter" for this species, but MU saw one near Young's Cove, Annapolis Co. on 16 Feb.

WARBLERS -- One of the **ORANGE-CROWNED**, in the Port Williams "Dusky flycatcher" orchard, was still alive in early Feb. (BLF), but there was no sign on 8 March (RBS). A nice bright **PINE WARBLER** was present in a hedgerow on the west side of the Research Station, Kentville, 16 Feb. (RBS).

NORTHERN CARDINAL -- PCS had 5 (!) visit his feeders in Wolfville 11 Jan. The male in Greenwich was still there Jan. 13

(RBS), and GT saw one in Wolfville Jan. 19. G and JH have had a pair at their feeder in Wolfville all winter, and all last summer.

EASTERN TOWHEE -- The bird visiting a Lower Canard feeder in Dec. met a sad fate. "A lady neighbor of the Regans on Church St., Canard, where the bird was coming to the feeder, took the 'injured' Towhee to Acadia U. where it was examined and found to be 'not in great shape' but was not suffering from malnutrition either - they felt its behaviour during its time in the ornithology lab did not indicate that the injury was causing its problems but something else - it died in the night. Now Natural Resources are going to try to have an autopsy done because there is thought of the possibility of poison being involved." - JCT.

SONG SPARROW -- There are always a few around during the winter, but surely GF's bird in full song on Jan. 14 is unprecedented!

FOX SPARROW -- Several observers noted the arrival of this attractive Spring migrant over the last 2-3 days of March, mostly at feeders, e.g. Kingston (MU), Blomidon (RBS) and Wolfville (BBT).

BALTIMORE ORIOLE -- A female was at a suet feeder by the Kentville Research Station Feb.8 (RBS). It had a very pale belly, which raised the possibility of Bullock's, from the west, but there is considerable plumage overlap.

EASTERN MEADOWLARK -- The bird at north Grand Pré noted in Dec. was still present mid-Jan. JCT provides a good account. "I saw it around 11.00 am Saturday Jan 11/97, as it flew over my car from around driveway of #351 Long Is. Rd. (west), to land on the south side of road and began eating weed seeds there slowing walking or with short bursts of flights to westwards along the weedy verge as I watched for about ten mins. with my window scope. Bird is in breeding plumage, hard not to identify with its brightness of yellow throat and underparts and well marked breast band. [Bird is a little jumpy about being scrutinized even in a car]. Cheek patch is grayish, no sign of yellow from throat extending up into cheeks that I could see, lots of white in evidence in its outer-tail feathers- I noted that it often 'flicked' its tail as it walked which I found most interesting."

PINE GROSBEAK -- A flock of up to 15 has been in evidence at the lower end of the Research Station, Kentville, in early Feb. (RBS), and BLF saw some in Wolfville in mid-March.

"WINTER FINCHES" -- Most noticeable this year by their absence, there have been almost **NO PINE SISKINS, PURPLE FINCHES, REDPOLLS, CROSSBILLS** etc. in evidence most of the winter. Apparently numbers have been high in, e. g. Quebec and northern New Brunswick, so perhaps the food supply there meant that they didn't need to travel farther east. In contrast,

though, **NORTHERN JUNCOS** seemed even more abundant than ever in our area this winter.

HOUSE FINCH -- Still a rarity in these parts, a female was visiting GF's feeder in Port Williams in early Jan. and a pair visited a feeder in Falmouth March 1 and 2 (JmcC and PK).

EVENING GROSBEAK -- Generally conspicuous by their absence this winter, an exception has been at IR's feeder in New Ross, where a small flock has been present on and off all winter. Early on they were mostly females, later to be replaced mostly by males.

MA-Margaret Alliston
SB-N-Soren Bondrup-Nielson
GF-George Forsyth
G and JH-Gail and Jack Herbin
PK-Peggy Kochanoff
PBM -Pat and Bill Martell
AAM-Angus MacLean
SM- Susan Montonen
DM -Donna Morrison
JmcC-Jane McConnell

IR-Ian Ross
SS-Sheila Shepherd
PCS-Peter Smith
RBS-Richard Stern
BBT-Bill and Brenda Thexton
DT-Diane Thorpe
GT-Gerry Trueman
JT-Jean Timpa
JWT-Jim Taylor
PT-Phil Taylor
JCT-Judy Tufts
MU -Malcolm Uhlman
RW-Rick Whitman
SW-Sherman Williams
JWW-Jim Wolford

FOR SALE - A used Kowa TSN-2 spotting scope with 30x wide angle eyepiece. The body of the scope clearly shows its extensive use in the field, but the optics are first class and in excellent condition. Excellent for birding and astronomy. Selling because I've upgraded. Would be \$590 US from ABA (\$830Can). Asking \$350 (Can - of course).

If interested call me at 678-1975 or 678-4742 or e-mail me.

TRIVIAL TIDBITS OF LOCAL NATURAL HISTORY

selected and compiled by Jim Wolford, Site 1, Comp. 61, RR3, Wolfville, NS, B0P 1X0
542-7650

These reports are mostly from early January through early April, 1997.

I'm tired of saying this to all of you who read this column, but I need some input. I'm so desperate that in this edition there are several reports lifted from The Kentville Advertiser newspaper. I

don't mean to imply that the observations in that newspaper are somehow second-rate. What I'm saying is that, in an organization as large as ours, containing lots of observant people, there should be many more of us actually reporting things.

And speaking up at our regular

meetings is not good enough. Our sightings and impressions should be reported in a written way for our readers-at-large who don't get to all of our meetings (as well as for posterity?).

TIDES AND SKIES

Jan. 9, 10, 11; Feb. 8,9,10; Mar. 9,10,11; Apr. 7,8,9 - impressively **high spring tides** - those in January did some damage, especially at Hall's Harbour (dates taken from four separate editions of BNS's Nature Notes) (KA).

Jan. 14 - **Sun-dogs** seen (one bright spot of light on each side of the Sun) (GF et. al.) (caused by ice-crystals high in the atmosphere, says RB).

Mar. 23-24 - sky cooperated very nicely for the **nearly total Lunar eclipse**, which was beautiful for those of us who stayed up for it (JW et al.).

ARACHNIDS

Mar. 28 - two **spiders** seen spinning webs at doorways in Wolfville (JT).

INSECTS

Jan. 29 - a black/brown/black

woolly-bear caterpillar of an isabella moth (*Pyrrharctia isabella*) found at Grand Pré on a sunny and very cold day (approx. -10°C) (JW).

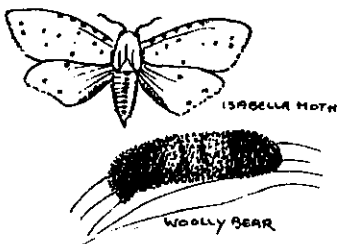
Feb. 2 - a small hairy **caterpillar**, probably of a **tussock moth**, found on the snow in a back yard along Wolfville Ridge: half an inch long, black, with a double 'light' (possibly pale green or yellow) stripe down each side.... feet (?) were reddish-brown, and there were little tufts (pencils?) of hair in alternating rows of light (slaty grey) and dark (black) down its back and sides -- darker lines of tufts went down the central back and between the 'light' stripes - with longer hairy 'pencils' in front and rear (JGT). (my field guides failed in finding a possible match - JW)

Feb. 19 - several small **flies (midges?)** seen flying in one spot, in a mating swarm? of males?, at Grand Pré, on a calm day of above-freezing temperatures (JW).

Feb. 27 and again on Mar. 25 - single adult **mud-dauber wasp**, almost certainly newly emerged, found inside the Biology Building, Acadia Univ. (AW,JW).

MAMMALS

Jan. 17 - "Walking into Acadia gym, I saw what I first thought was a wounded crow. I stopped, looked -- it was three feet from the entrance and six feet from me -- (as it crossed the pavement, walking slowly, I saw) it was a huge black rat (PM).



Mat. 21,22,24 - one or two flying squirrels at feeders on Wolfville Ridge - usually seen at about 8:30 p.m. AST -- eating cracked corn and sunflower seeds -- seemed smallish? (JGT).



Apt. 5 - a chipmunk active, with full cheek-pouches, at Avonport (SW).

Feb. 17 - a muskrat seen swimming in a ditch beside Wolfville Nursing Home - its mouth was filled with vegetation (GT).

Jan. 25 - in the north end of Berwick, a large beaver attracted a crowd of curious people and then an animal-control officer, who noosed it, loaded it into his truck, and released it into the Cornwallis River not far from town (BB,PM,KA).



Feb. 15 - talk about being in the right place at the right time, and alert, too! -- Barry Yoell was reading in his sun-room at Lumsden Reservoir, and spotted a large, dark animal moving through the snow in his woods -- a FISHER - "large (approx. one m. long, 25 cm.tall), dark brown thick furry tail about one-third of (body) length, squat head and neck, loping along, with no drag of tail or belly (in snow).... tracks showed 4 or possibly 5 toes, no claws, tracks about 3 cm. round, with elongation from the heel (BY). (Sighting for approx. 20 seconds at 30-90 metres.) Mark Elderkin evaluated the tracks on Feb. 16 and thought they were indeed from a fisher. He also told BY and JW that he knows of several reports for fishers in Kings County in the past decade or so. Hopefully, JW photographed the pattern of the tracks on Feb. 16.

Feb. 26 - ".....quite a surprise about 10:30 in the morning....Upon looking out the living room window facing Main Street here in Hants Border, my eyes blinked in disbelief. There was a skiff of snow on the ground and, lo and behold, directly beneath the window was a large fuzzy skunk!"(AB, KA).

Jan. 19 - a raccoon seen walking down a street in Wolfville at 7 p.m. - the temperature was minus 18 C. at the time! (JH).

Apr. 1 - a raccoon seen on Hillside Avenue in Wolfville (JT).

February - a large **black bear** (which should have been hibernating) was seen twice along the New Ross Road at Aldersville, near the southern boundary of Kings County (GK, fide IR).

Jan. 24 - a very beautiful **red fox** was seen running across ice on a pond at Grand Pré (JGT).

Feb. 28 - a **red fox** was seen at close range as it walked along a driveway, north of Canning (EM).

Mar. 7,14,17: - three sightings of a **red fox** with a 'clipped terrier' look in the Greenwich area, on Dyke Road, and off Cherry Lane. (BM).

early Feb. - a group of **coyotes** (probably 3 or 4) heard several times along the New Ross Road, about 4 km. north of the Kings County boundary (IR).

January? - a **seal** was seen "cavorting about" at Avonport Beach (LTO,AB,KA).

Jan. 10 - a very interesting report on radio of a group of **humpback whales**, usually 3 to 10, that have been overwintering inshore in northern Newfoundland for several years and nicknamed 'the Christmas whales' -- they have been seen several times coopera-

tively herding fish (arctic cod or capelin) up against cliffs or even the town wharf at Triton (ST,QQ,CBC).

Feb. 9 - four "magnificent, healthy" **white-tailed deer** seen feeding casually in a field on the side of a road at Hants Border (AB,AC,KA).

Mar. 28 - a **white-tailed deer** seen along Main Street in east Wofville at night (CGC).

TRIVIA CONTRIBUTORS

KA - The Kentville Advertiser
AB - Annie Bird
BB - Bob Bishop
RB - Roy Bishop
AC - Anne Carey
CBC - CBC Radio
CGC - Claudia & Graham Cheeeman
ME - Mark Elderkin
GF - George Forsyth
JH - John Horton
GK - Gardiner Keddy
BM - Beverly J. MacIntosh
EM - Eleanor Mason
PM - Pat Martell
PMi - Patty Mintz
LTO - Lola & Tom Ogden
QQ - Quirks & Quarks (CBC Radio)
IR - Ian Ross
BBT - Brenda & Bill Thexton
GT - Gerry Trueman
JT - Jean Timpa
JGT - Judy & Gordon Tufts
ST - Sean Todd (Memorial Univ. Nfld.)
AW - Anne Woolaver
JW - Jim Wolford
SW - Sherman Williams
BY - Barry Yoell



ANNAPOLIS VALLEY WEATHER - WINTER 1997

by Larry Bogan

Precipitation deviated dramatically from the norms for the period with March being the unusual month of the period. March was cold rainy and snowy. If you remember my last report for the Fall of 1996, the period of September, November, and December was also a rainy period with 44% more rain than usual and no snow. Let's hope this trend does not continue into the spring. The graph of depth of snow on the ground shows the freeze-thaw cycles we had in January and February leading to the cold period in March that allowed snow to accumulate. We all remember the snow continued into April with the April-fools day snow storm.

Temperatures: January and February had nearly average mean temperatures but March was 2-1/2 degrees below normal. February was slightly cooler than normal and the whole period was almost 3/4 degree below average. I've include the heating degree days in the table above. These numbers enable you to estimate your heating bill for the season. The value is the diffence in the mean temperature for the date and 18 C. The sum of all the heating degree days for the season was only 3% greater than and average January-February-March.

Precipitation: We had a very rainy winter with 60% more rain than we expected while snowfall was 60% of expected fall. January and February had a total of 47 cm of snow while the normal fall is 135 cm. As most people remember, we had a 'open' winter with little snow. In terms of total precipitation January was about normal, February was dry and March was very wet. Despite the fact that February was 'dry' in terms of total precipitation, it had more rain than the 35 year average. March had more rain and more snow than usually and total precipitation was 50% over normal.



EOS FINE FOODS

10 FRONT ST. WOLFVILLE, N.S.
542-7103

COME IN AND EXPLORE



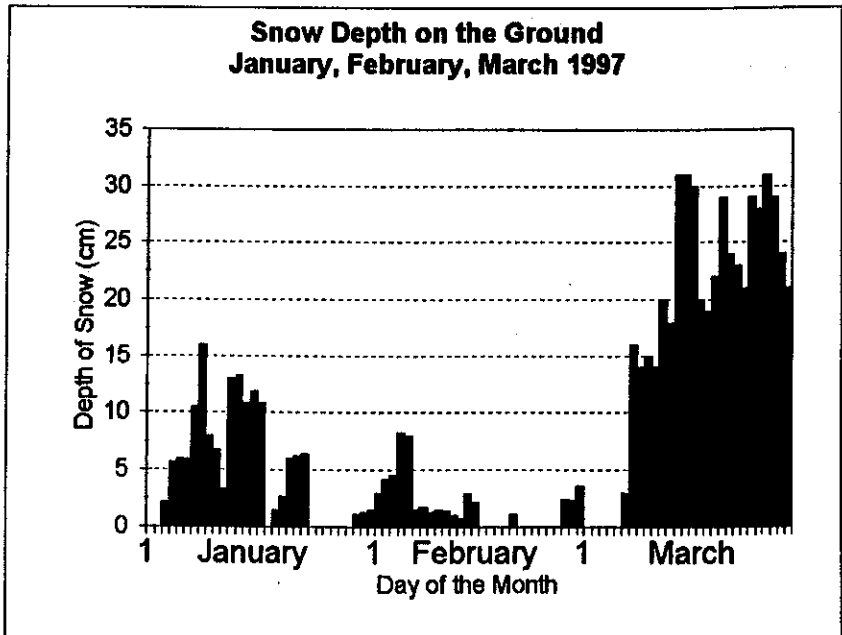
WE CARRY BULK.
NATURAL SPECIAL
DIET FOODS
AND MORE!



Sunshine Hours: All three months had below average bright sunshine hours this year and the period had only 85% of expected sunny days. Over the last five years the average bright sunshine hours of the first three months of the year has been 294 which is better than this year but still only 94% of the 35 year average. I am getting discouraged. In the last few years of following the weather statistics, it seems that we very seldom get months that are sunnier than the average of the previous 35 years. This is reflected in this winter's statistics and in the averages for the last five years.

**Monthly Averages of Weather Statistics
for Kentville Agriculture Research Centre, Autumn 1996**

	Mean Temp (°C)	Heat Degree Days	Rain Fall (mm)	Snow Fall (cm)	Total Precip (mm)	Bright Sunshine Hours
Jan 97 (35 yr)	-5.4 -5.4	726.4 716.5	95.9 64.2	35.4 70.2	130.0 132.5	61.5 72.2
Feb 97 (35 yr)	-5.1 -5.5	645.5 697.3	70.3 42.2	11.9 64.6	81.0 104.0	73.8 102.0
Mar 97 (35 yr)	-3.6 -1.1	668.7 591.8	95.1 56.0	57.8 44.5	151.0 101.6	131.2 134.8
Period (35 yr)	4.7 -4.0	2040 1987	261 162	105 179	362 338	267 313



WHAT'S IN THE SKY?

by Roy Bishop

Comet Hale-Bopp leaves

Comet Hale-Bopp, the brightest comet to be conveniently placed in a moonless evening sky in more than 80 years, put on a spectacular show during late March and early April (for observers far from the light pollution of towns and cities). Although now fading, the comet will still easily be visible to the unaided eye during the first week of May, low in the western sky as evening twilight ends (about 10 pm). However, both Moonlight and twilight interfere after May 8, and by mid-May Hale-Bopp will no longer be visible from the latitude of Canada. It drops south of the plane of the Solar System and begins a 2000-year trek back away from the Sun, out to the far end of its elliptical orbit.

Mars recedes

As reported in the last Newsletter, Mars was at opposition (closest to Earth) in March. Earth in its faster orbit is now leaving Mars behind, and the pale-orange planet is now slowly fading and dropping lower in the western evening sky.

Jupiter approaches

Jupiter, the largest planet, rises in the southeastern night sky about 2:30 am in mid-May, 12:30 am in mid-June, and by about 10:30 pm in mid-July. Jupiter is unmistakable. It resembles a very bright, slightly yellowish star, but unlike a star, does not twinkle. Steadily-held binoculars will show its disk plus two or three of its four large satellites -- like stars lined up close to Jupiter. In a small telescope, all four satellites are easy to see along with cloud bands in Jupiter's thick atmosphere.

Venus reappears

Venus moves out from behind the Sun as summer approaches, appearing as a bright white "star" very low in the western evening twilight. Venus is the most frequent cause of UFO reports. Indeed, for those making such reports Venus IS a UFO (Unidentified Flying Object)!

Blomidon Naturalists Society 1997 Membership Fees

Each member receives four issues yearly of the BNS 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. Members may also join the Federation of Nova Scotia Naturalists through the BNS and will receive their quarterly newsletter; the membership is not tax-deductible.

Please enclose a cheque or money order payable to "Blomidon Naturalists Society" and forward to:

Harold Forsyth
RR #2, Wolfville, NS. B0P 1X0

Number	Membership Classification	Price	Total
_____	Individual Adult	\$12.00	\$ _____
_____	Family	\$15.00	\$ _____
_____	Individual Junior (under 16 years)	\$1.00	\$ _____
_____	Federation of NS Naturalists Membership	\$5.00	\$ _____
_____	Tax-deductible donation		\$ _____
		Total	\$ _____

Name: _____
 Address: _____
 _____ Postal Code: _____
 Phone: _____

Type of membership Individual Adult
 Individual Junior
 Family (Number of people)

Join the Federation of NS Naturalists? Yes No
 Is this is a gift subscription? Yes No

Memberships are due on the 1st of January each year

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

Information	Source	Office	Home	
Rocks & Fossils	Geology Dept. Acadia U.	542-2201		
Fish	NS Dept. of Natural Resources	679-6091		
Flora - General	Fungi	Ruth Newell Darryl Grund	542-2201 542-2201	542-2095 542-9214
		Nancy Nickerson	679-5333	542-9332
	Lichens	Karen Casselman	424-7370	633-2837
	Seaweeds	Darryl Grund	542-2201	542-9214
	Mosses & Ferns	John Pickwell		681-8281
Birds - General		Bernard Forsythe		542-2427
		Richard Stern	678-4742	678-1975
		Gordon & Judy Tufts		542-7800
		Jim Wolford	542-2201	542-7650
		Jean Timpa		542-5678
Hawks & Owls	Bernard Forsythe		542-2427	
Falcons & Eagles	Peter Austin-Smith		542-2109	
Mammals	Tom Herman	542-2201	678-0383	
Amphibians & Reptiles	Sherman Bleakney		542-3604	
	Jim Wolford	542-2201	542-7650	
Seashore & Marine Life	Sherman Bleakney		542-3604	
	Jim Wolford	542-2201	542-7650	
	Michael Brylinsky	542-2201	582-7954	
Indian Prehistory & Archeology	Ellis Gertridge		542-2816	
	James Legge		542-3530	
Astronomy	Roy Bishop		542-3992	
	Sherman Williams	542-3598	542-5104	
	Larry Bogan		678-0446	

April 1997						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

May 1997						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3 Spring- birds
4	5	6 N e w Moon	7	8	9 Frog Hop	10 NAMC
11	12	13	14	15	16	17
18	19 BNS meeting 7:30pm	20	21	22 Full Moon	23	24
25 Nature Walk - Blomidon Park	26	27	28	29	30	31

June 1997						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5 N e w Moon	6	7
8	9	10	11	12	13 F N S N AGM	14 F N S N AGM
15 F N S N AGM	16 BNS Meeting - 7:30pm	17	18	19	20 Full Moon	21 5:20 am SUMMER
22	23	24	25	26	27	28
29	30					