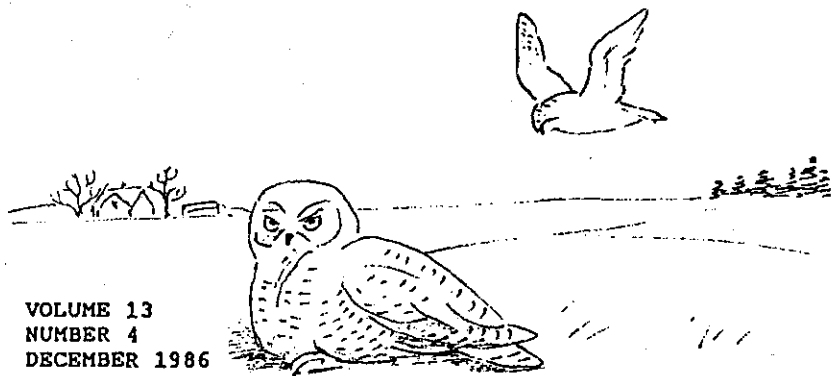


BLOMIDON NATURALISTS' SOCIETY NEWSLETTER



VOLUME 13
NUMBER 4
DECEMBER 1986

BNS Winter - Early Spring Programme

MONDAY EVENING MEETINGS: All meetings will start at 7:30 p.m. and 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. January 19 -- Mr. Peter Austin-Smith will talk about "Eagles of Nova Scotia". His presentation will include slides and films, mounted specimens and possibly a live Bald Eagle.

2. February 16 -- Dr. Julie Porter will speak on "The Great Auk and Other Sea Birds" and will supplement her slide presentation with a selection of prepared bird skins and bones of Great Auks from Funk Island.

3. March 16 -- Mr. Mark Elderkin will reveal surprising secrets of the "Night Life of Barred Owls" based on his two years of electronic surveillance of our local Barred Owl population. On display will be some of his apparatus, a few specimens of owls and samples of the food they had caught.

4. April 20 -- Professor Sherman Bleakney will describe some unusual aspects of natural history from the past and the present in a talk entitled "A Tale of Two Drifters - Australia and New Zealand".

(See inside for further information about the speakers.)

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Editors: Jean Timpa, 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.

SOCIETY NEWS

Field Trips: Unless otherwise noted, all times are given for meeting at the Gym parking lot of Acadia University. Morning trips sometimes extend into the afternoon so you may wish to bring lunch.

1. Sunday, January 11, 9:00 a.m. -- Blandford Peninsula. All day. Judy and Gordon Tufts will attempt to show us sea ducks, loons, grebes, etc.
2. Sunday, January 25, 1:00 p.m. -- Winter woods walk along the power lines west of Lumsden led by Bernard Forsythe. Bring skis, snowshoes or boots depending on the weather.
3. Sunday, February 8, 10:00 a.m. -- Raptors and other winter birds in conjunction with the Nova Scotia Bird Society. Richard Stern will lead us again this year - hopefully not in the traditional blizzard.
4. Saturday, March 7, 1:30 p.m. -- A visit to the Acadia University Biology Department Museum and Herbarium to see the research and teaching collection. Meet in Room 308, Patterson Hall.

Speakers

BNS Winter - Early Spring Programme

Mr. Peter Austin-Smith

Mr. Austin-Smith did his undergraduate and graduate studies in ornithology at Cornell University. He taught at the Biology Department at Acadia University for eight years prior to joining the Nova Scotia Department of Lands and Forests where he now holds the position of Manager of Wildlife Resources, Non-Game. His responsibilities are very diverse and include long-term monitoring studies of Piping Plover, eiders, cormorants, petrels, Osprey and Bald Eagles. The eagle management program has become international through experimental translocation of Nova Scotia eagles to New Jersey and Massachusetts.

Dr. Julie Porter

Dr. Porter has studied at Acadia University, the University of Manitoba and the University of Durham, England, where she obtained her Ph.D. Her special interest is the behavioral complexities at colonial sea bird nesting sites. Dr. Porter has studied sea bird colonies along the coasts of British Columbia, Nova Scotia, Newfoundland and Labrador and the British North Sea. She is presently a postdoctoral fellow (NSERC) at Acadia University studying sea bird colonies in Cape Breton in collaboration with the Canadian Wildlife Service.

Mr. Mark Elderkin

Mr. Elderkin is presently a graduate student at Acadia University, finishing his M.Sc. thesis on the nocturnal activity of local Barred Owls. His previous experience includes bird surveys on Bathurst Island, N.W.T.; surveys on the off-shore islands of Nova Scotia; assessment of bird predation on blueberry crops; effects of herbicides in New Brunswick on bird nesting success; and Bald Eagle studies along the Shubenacadie River. Mr. Elderkin hopes to combine his interests and capabilities in natural history, photography and journalism in his career.

Professor Sherman Bleakney

Professor Bleakney graduated from both Acadia and McGill Universities then served as Curator of Herpetology and Ichthyology at the National Museum of Canada before joining the Biology staff at Acadia University. His research interests have more recently involved the marine life of Minas Basin with special emphasis on sea slugs.

Acknowledgements

Our sincere thanks this quarter to:

Professors George Stevens of Acadia University and Steve Davis of St. Mary's University for stimulating lectures on the geology of the Cape Split area and the native peoples of Nova Scotia prior to the arrival of Europeans;

all those who contributed to our very successful Show and Tell Night;

our fall field trip leaders: Roy Bishop, Larry Bogan, David Hope-Simpson, Reg Moore and Jim Wolford;

all those who contributed to the production of this Newsletter;

Rachel Erskine for supplying refreshments for meetings and to those who serve them.



BNS Executive Changes

Our Treasurer, Martha Dodge, and Directors Jean Timpa and Larry Bogan retired from the BNS Executive this year. We wish to express our sincere thanks to them for their contributions to our Society. A hearty welcome is also extended to their successors: Judy Tufts, Treasurer, and Directors Ruth Newell and Sherman Bleakney.

SOCIETY BUSINESS

Membership and Fees

Annual membership fees in the Blomidon Naturalists Society are \$5.00 per person for adults and \$1.00 per person for those under sixteen. Each member receives four issues yearly of this Newsletter. Membership is not essential to attend either meetings or field trips; guests are always welcome at these functions.

If your name and address appear in red on the envelope of this Newsletter, please pay your fees soon if you wish to receive further Newsletters. Forward the fees along with your name, address including postal code, and telephone number to:

Mrs. Judy Tufts
P.O. Box 1313
Wolfville, N.S. BOP 1X0



BNS Newsletter Deadline - March 21, 1987

LDB

The Newsletter is a forum for the dissemination of information among Society members and all members are urged to contribute. Articles, reports, letters to the editor, poetry, sightings, trivia, jokes, etc., are all welcomed.

Trivial Tidbits of Local Natural History is selected, compiled and edited by Jim Wolford. Giving or sending Jim a written list of your observations in chronological order would greatly simplify his task. Jim's address is:

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

Last-minute observations can be called in to 542-2201, ext. 334 (leave a message).

All other contributions to the Newsletter should be sent or given to:

Jean Timpa
P.O. Box 1382
Wolfville, N.S. BOP 1X0

or to other members of the BNS executive. Please double space all contributions.

Field trip reports are included in the Newsletter to preserve a record of Society activities. Currently a few members write most of these reports. Other members are encouraged to share this responsibility. If you are willing to write one of these reports, please notify the trip leader at the beginning of the trip. Your contribution will be most appreciated.

Blomidon Naturalists Society
P.O. Box 127
Wolfville, Nova Scotia B0P 1X0

Audited Financial Statements - 1985-1986

STATEMENT OF INCOME AND EXPENDITURE
September 1, 1985 - August 31, 1986

INCOME	
Membership Dues	\$749.00
Bank Interest	19.29
	<hr/>
	\$768.29
EXPENSES	
Bank service charges	\$ 2.70
Donations and speakers	125.00
Newsletter	570.05
Post Office box rent	6.74
	<hr/>
	\$704.49
EXCESS OF INCOME OVER EXPENSE	\$ 63.80

STATEMENT OF FINANCIAL POSITION

ASSETS	
Cash	\$633.86
LIABILITIES - None	
SOCIETY'S EQUITY	
Balance September 1, 1985	\$570.06
Add: excess of income over expense	63.80
	<hr/>
	\$633.86

Treasurer

Auditor's Note: I have examined the attached statements and available records, and find them in order.

Pre-numbered duplicate receipts should be issued for all income. This would facilitate checking cash receipts to bank records.

(signed)

George Fraser

Blomidon Naturalists Society
Executive -- 1986-1987

At our annual meeting in October, the following executive was elected for 1986-1987. Members are encouraged to contact them with suggestions for programmes, field trips, the Newsletter or any aspect of our Society.

President

Mr. James Wolford Home: 542-7650
c/o Biology Department Office: 542-2201 ext 391
Acadia University or 334
Wolfville, N.S. BOP 1X0

Vice President

Dr. Tom Herman Home: 542-7607
129 High Street Office: 542-2201 ext 469
Port Williams, N.S. BOP 1T0 or 334

Past President

Dr. Richard Stern Home: 678-1975
23 Pleasant Street Office: 678-4742
Kentville, N.S. B4N 1E9

Treasurer

Mrs. Judy Tufts Home: 542-7800
Box 1313
Wolfville, N.S. BOP 1X0

Secretary

Mr. Bill Thexton Home: 542-3722
Box 991, 36 Main Street
Wolfville, N.S. BOP 1X0

Directors

Dr. J. Sherman Bleakney Home: 542-3604
Box 456 Office: 542-2201 ext 311
Wolfville, N.S. BOP 1X0 or 334

Mr. Bernard Forsythe Home: 542-2427
R.R. 2
Wolfville, N.S. BOP 1X0

Mr. Ellis Gertridge Home: 542-2816
R.R. 1
Wolfville, N.S. BOP 1X0

Dr. Merritt Gibson Home: 582-7569
Box 35 Office: 542-2201 ext 250
Canning, N.S. BOP 1H0 or 334

Mrs. Ruth Newell Home: 542-2095
General Delivery
Wolfville, N.S. BOP 1X0

Mr. Gordon Tufts Home: 542-7800
Box 1313
Wolfville, N.S. BOP 1X0

FIELD TRIP REPORTS

Canoe Trip from Sheffield Mills to Canning
September 28, 1986



by Jim Wolford
Wolfville, N.S.

The idea for this trip came from Peter Hope, Chief Naturalist of Kejimikujik National Park. For most of us, for most of the four or five hours on the river, it really was a very enjoyable, relaxing and different experience.

We had a record turnout of ten people and a dog in four canoes. The Habitant River had a prostrate small tree as a partial obstruction just below our starting point. After that the river was narrow and twisting with lots of meanders, the banks and vegetation prevented any scenic views, there were frequent very shallow mud-bars, carpeted with waterweed (Elodea), and we encountered occasional "narrows" with fairly swift water (but no white water, thank goodness).

The day was sunny but quite chilly even though we were mostly out of the wind. Two of us were rather more uncomfortably cold when a canoe, the one with the canine passenger who disembarked when least expected, swamped in a very shallow river-bend. After a brief delay, we all carried on, mostly just slowly drifting in the current. At the end of the trip, we all got a bit of exercise paddling in the widened approach to the Canning aboiteau.

The trip was rather uneventful for most of us but a few of my notes included: stinging nettles abundant along the bank; white morning-glories in bloom; pretty asters; oodles of tiny tan insects (probably planthoppers) all along the river on the water's surface (from the bank vegetation?); lots of adult caddisflies and darner dragonflies; one flock of Canada geese flying over us; a pair of mallards, presumably domestic as they didn't flush when we passed them; a few ring-necked pheasants (one of which nearly gave me a heart attack when it flushed); and only one muskrat seen but frequent signs of them.



Delaps Cove Wilderness Trails
October 5, 1986

by Judy Tufts *
Wolfville, N.S.

The morning was heavily overcast and threatening but no rain was encountered; it became sunny in late afternoon. The Bay of Fundy coast was cold with onshore winds. Lovely fall colours were in evidence. Twenty people in seven cars participated.

Along the way some saw a few white-tailed deer and there was a recently killed red fox (pup?) on the road near Lawrencetown. Also seen were several American kestrels and northern flickers, one sharp-shinned hawk and two northern harriers.

The total walk is about 10 km. The Delaps Cove Wilderness Trail is 3.6 km along the old east-west highway which is now a gravel woods road that was very wet and muddy this fall. Charles Trail at the end of the main trail is a 1.7 km loop with several views of the Fundy coast. The 1.1 km Bohaker Trail loop goes to the coast and along it to a pretty 13-15 metre waterfall at the mouth of the Bohaker Brook.

Along the main trail we noted several plants still in flower: aster, goldenrod, heal-all, knapweed, raspberry, eyebright, boneset and harebell. Also found were a yew with a ripe berry on it, a holly bush with lots of nearly ripe berries and the biggest (perhaps six metres tall) alternate-leaved dogwood any of us had ever seen.

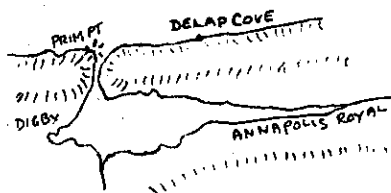
Birds were quite sparse: one solitary vireo, two hermit thrushes, three species of warblers (one black-and-white, two black-throated green and several yellow-rumped), two ruby-crowned kinglets, one golden-crowned kinglet, both boreal and black-capped chickadees, common ravens and a drumming ruffed grouse. At the Fundy look-offs all three species of scoters were seen (surf, black, and white-winged) along with one common loon, two red-throated loons (one adult and one immature), two cormorants, several elders and three northern gannets (one adult and two juveniles). The gannets dove from high in the air shortly after we spotted them.

Many ripening cranberries and lots of creeping juniper were also found along the Fundy shore. In the coniferous woods along Charles Trail, there was an abundance of mushrooms though not much species diversity. In several places it was easy to see partial or nearly complete fairy rings.

There is a stone foundation of a house that dates back to the early 1800's when freed slaves from the U.S. settled beside Charles Brook. They also built stone walls which we saw in two places.

At least two participants expressed some interest in seeing what these trails have to offer at other seasons. It is hoped that a Maritime Breeding Bird Atlas trip can be arranged for late June or early July; this area is in one of the few priority squares in the Valley Region not yet claimed.

* written from excerpts from Jim Wolford's journal



Local Geology and Fossils
October 12, 1986

by Jim Wolford
Wolfville, N.S.

We had about a dozen people in the morning and a somewhat different dozen in the afternoon. The morning session was a driving and walking tour. An information sheet from Jack Colwell (Geology, Acadia University) provided the itinerary and identified the strata to be observed and David Hope-Simpson provided expertise and inspiration.

First we looked at Halifax Slate (500 million years old) under highway 101 along Gaspereau Avenue in Wolfville. Then we drove to White Rock and walked to the "Swinging Bridge" which, alas, is no longer as described by the name. Along the trail is an outcrop of White Rock Quartzite (425 million years old) and a small outcrop of slate.

Then we drove along the Deep Hollow Road to Horton District High School which is on a former delta of the Black River formed before the Gaspereau River "captured" the Black River. We continued north across the dykelands of our end of the Annapolis-Cornwallis Valley ("The Valley").

We stopped in the Blomidon area at Huston's Beach, where a walk along the beach showed a deposited delta of sand plus exposed silt-stone or shales of Blomidon Shale (200 million years old). Some dark rocks there are exotic i.e. are pieces of quartzite from somewhere toward Halifax; with the quartzite were pieces of lava which represent North Mountain Basalt (190 million years old).

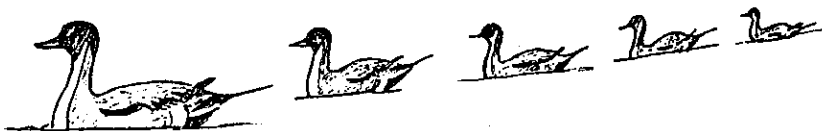
We had lunch there and then drove to the Bar-S Ranch (northeast of Brooklyn, Hants County) where Reg Moore (Geology, Acadia University) was waiting to show us the exposed strata and fossils along the River Herbert. We began in the forest near the river and then walked north and west along the road looking at the following strata which are all members of the Windsor Group Limestones of Lower Carboniferous or Mississippian age (345-310 million years old):

- (a) Herbert River Limestone;
- (b) Avon Limestone;
- (c) Meander River Limestone (now covered by vegetation);
- (d) Wallace Point Limestone; and
- (e) Kennetcook Limestone.

The Avon outcrop was rich in fossils of brachiopods (shellfish a bit like clams) and other life and Reg showed us layered traces of blue-green algae (stromatolite formations). The Kennetcook outcrop was loaded with fossils partly from an interesting dome above the road. Reg told us that this dome was a reefoid structure but unlike reefs of today in that the organisms were unable to withstand any wave-action i.e. were adapted only for calm water. The foot of this dome was littered with fossils of brachiopods, bryozoans, stems of sea lilies (crinoids) and solitary corals.

A bit further up the road was an exposure of the Watering Brook formation with gypsum strata separated by thick layers of silt all slanted and part of an anticline. The gypsum here was extremely crumbly, disintegrating as we handled it.

Thanks very much to David Hope-Simpson and Reg Moore for giving up parts of their Thanksgiving weekend for us.



Late Autumn Birding
October 19, 1986

by Judy Tufts
Wolfville, N.S.

A downy woodpecker, unconcerned with our presence, alighted on a nearby tree trunk and began its search for food as six participants gathered with leader Jim Wolford at the Grand Pre parking lot. It was decided that, due to so few "late" shorebirds being seen in the Grand Pre area, we would check out local ponds in the Canard/Canning area instead, looking for some of the interesting waterfowl that visit Kings County each fall.

The afternoon was a most pleasant one, cool but sunny; many of the leaves still clinging to the deciduous trees were of golden or coppery-bronze hues, past their prime but still pleasing to the eye, as we set forth travelling through Port Williams on our way to the west end of Church Street. Here at Kidston's farm pond we found three yellowlegs and one common snipe. It was disappointing that there was no sign of the hooded mergansers or scaup that had been seen here previously. The presence of machinery and workers in the adjoining apple orchard may have had some bearing on this.

Next we visited Canard Pond - an adult red-tailed hawk and a northern harrier being seen along the way - where we observed one ring-necked duck, five scaup (lesser?) and at least ten northern pintail, six of which were beautiful males, among the many green-winged teal, American black ducks and mallards gathered at the northeast end of the pond. The highlight of this visit occurred when five of the handsome male pintails "sailed" past the other ducks looking very much like a flotilla formation, a straight line, one behind the other.

Our last stop was at Harris's Pond, Canning. The call of a hairy woodpecker greeted us as we made our way to the pond which we found to be full of ducks and gulls. Among more green-winged teal, American black ducks and mallards, we counted, and greatly admired, at least a dozen feeding American wigeon. One northern shoveler was discovered preening/dozing along the reed edge and several ring-billed gulls were found among the inevitable gathering of gulls. Small flocks of twittering red-winged blackbirds flitted through the dying bulrushes, pausing here and there to alight and feed briefly before moving on in restless wanderings.

Another pleasurable field trip ended but as luck would have it the day's sightings had not ended for the Tufts. We travelled over the Canning Aboiteau pausing south of the Habitant River to check for birds in or along the river on either side of the Aboiteau. Imagine our delight when first we spotted a male hooded merganser in full breeding plumage; we had only seen them in eclipse plumage before. Being nearly mesmerized with the beauty of this male hooded merganser, we almost failed to notice an immature little blue heron quietly feeding at the edge of the riverbank. Imagine our surprise at this unusual vision of grace and beauty not to mention its being well away from its usual haunts of the southern and southeastern U.S.A. We were elated to see it. I am happy to report that within a day or two the Thextons, Bernard Forsythe, Merritt Gibson and Jim Wolford had all observed a little blue heron in this general area and for most of them it was also a "lifer".

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Clear Sky Observations
November 3, 1986

by Larry Bogan
Cambridge Station, N.S.

The skies were clear as six of us stood huddled in the cool evening and surveyed the magnificence of the heavens with binoculars and five-inch refractor and six-inch reflector telescopes. We started at 8:00 p.m. and stayed until 9:30 p.m.

Roy Bishop and I were able to show our guests quite a few components of our galaxy and solar system. The list includes Jupiter and its four bright moons, Mars, the beautiful double cluster in Perseus, the gaseous Dumbell Nebula, the planetary nebula, "the Ring", in Lyra, and the super-nova remnant, "the Crab", in Taurus. Normally we do not show faint nebulous objects but with the excellent skies we were able to see the dim wispy filaments of the Veil Nebula in Cygnus and the mottled Helix Nebula in Aquarius.

We were able to see other galaxies such as the pair M-81 and M-82 in Ursa Major, 3.6 megaparsecs away, and the closer Andromeda Galaxy, our neighbour at 0.73 megaparsecs. (1 megaparsec = 30 million trillion kilometers = 3.26 million light years.) The shapes of these galaxies were apparent in the telescopes although individual stars could not be discerned. It is always fascinating to know the light that we see from these galaxies has taken millions of years to reach us. We are in essence looking back in time!

The Taurids meteor shower occurred that evening but this shower is far less bright than others throughout the year so only a few were seen. In addition, we had some aurora lighting up the skies over the lights of Wolfville. The aurora was not too active but subtle veils of light were seen coming and going.

All in all this was an excellent observing session except for the 4 deg. C. temperatures.

 NATURE REPORTS

TRIVIAL TIDBITS
 of Local Natural History

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

<u>Date</u> (1986)		<u>Obs</u>
Aug 22	-an immature peregrine falcon chasing pigeons at Port Williams	CKC
Sep 27	-hundreds of storm-petrels, probably Leach's, at Canso Causeway	EM
Sep 28	-3 Lapland longspurs at Cadden Beach (near Port Joli)	SF
	-lots of dead or injured young gaspereau in Black River system at White Rock (& in Lumsden Reservoir?) and at least 130 common mergansers and 5 hooded mergansers taking advantage of the damage	JGT BBT JSB BLF
Oct 1	-3 vesper sparrows on Wolfville Ridge	SF
Oct 3	-6 vesper sparrows at Black River	BLF
	-83 % solar eclipse in afternoon	many
	-2 black-and-brown woollybear caterpillars in Wolfville	JW
	-1 Wilson's warbler and 2 swamp sparrows in Canning	MG
Oct 4	-a yellowjacket hornet still visiting flowers in Wolfville	JW
	-a black-backed (three-toed) woodpecker near White Rock	BLF
	-a raccoon in Wolfville	MT, JW
Oct 5	-a ruffed grouse drumming along Delaps Cove Trail; 3 northern gannets diving off Delaps Cove; several fairy rings of mushrooms	BNS
Oct 5&6	-a yellow-headed blackbird in Canard Valley	JSB, MG
Oct 8	-24 killdeer at Starr's Point	JGT
	-a common yellowthroat in Canning	JW
Oct 9	-an American robin with white spectacles at Sheffield Mills	JW
	-a painted turtle basking in Wolfville	JW
Oct 11	-300+ double-crested cormorants flying west in big "V" at Port Williams	BLF
	-a barn swallow at Canard Poultry Pond	JGT
	-a red fox attacked sheep and then a large calf at Starr's Point	DJ
Oct 12	-flock of 16+ black-capped chickadees left a woodlot at Blomidon	TTH BNS
	-a few darner and skimmer dragonflies active	TTH
Oct 14	-16 American wigeon at Canard Poultry Pond (still present there 2 weeks later)	JGT et al JW
	-5 hooded mergansers in pond NW of Port Williams	JGT
Oct 14	-cats catching lots of young meadow jumping mice at Canning	MG
	-a ruffed grouse flew into a window at Wolfville School (and was delicious!)	JET

Oct 15	-large tan cup fungi growing on backing of a rolled-up carpet in Wolfville yard	GF
mid-Oct	-fruit husks found under American chestnut trees in Kentville	KH
Oct 16	-a red fox came within 10 feet of GT at Starr's Point	JGT
Oct 18	-a western kingbird, a northern mockingbird, and a meadowlark at Cadden Beach	SF,RN
Oct 18-19	-at Brier Island, a red-shouldered hawk, a peregrine falcon, a family of 5 eastern bluebirds, a lark sparrow, a fox sparrow	RBS
Oct 19	-at least 11 northern pintails and 7 scaup at Canard Poultry Pond	JGT,JW
	-2 hooded mergansers at Canning aboiteau	JGT
Oct 19-20	-an immature little blue heron at Canning	JGT
		MG,BBT,BLF
Oct 20	-124 pectoral sandpipers and 300 green-winged teal at Sheffield Mills	JGT
Oct 21	-a Cooper's hawk studied closely at Cadden Beach	SF
Oct 22	-500 Canada geese flying high and southward, and a long single line of about 500 cormorants flying south over Kingsport	DT
	-a northern mockingbird in Canning	MG
	-30 common snipe at Canning	JGT
Oct 26	-a meadowlark at Wolfville sewage ponds	ML
Oct 27	-a few coyotes are seen regularly, and lots of white-tailed deer, but no ring-necked pheasants (coincidence?) on North Mountain	GC
Oct 28	-two nomally rock-loving lichens (<u>Lasallia</u> and <u>Actinogyra</u>) found on a branch of high-bush cranberry near Halifax	KTTC,ZL
	-redpolls at Cheverie	KTTC
	-a red-headed woodpecker in Wolfville	PCS
Oct 29	-4 hooded mergansers NE of Kentville	JGT
Nov 1	-pine grosbeaks and a white-winged crossbill at Cape Split	RBS
	-a short-eared owl at Grand Pre	RN
Nov 2	-a merlin at Grand Pre	RBS
Nov 3	-a turkey vulture soared over Greenwich	BLF,HF
	-aurora borealis (northern lights) visible	BNS
Nov 5	-a red-bellied woodpecker in Halifax	PDB
	-redpolls seen in Wolfville and Port Williams	LC,BLF
	-a northern shrike and a black-backed woodpecker near White Rock	BLF
	-a northern mockingbird near Cheverie	BBT
Nov 6	-an Iceland gull at Sunken Lake	BLF
Nov 8	-4 white-rumped sandpipers at Grand Pre	BLF
	-12 white-rumped sandpipers at Sheffield Mills	JW
Nov 9	-a northern wheatear at feeder at Avonport	EU
	-a pine siskin in Wolfville	JSB
	-a great horned owl calling at Cheverie	KTTC
	-a red fox in an open muddy field at Grand Pre	BLF
Nov 10	-500 shorebirds (plovers and sandpipers) at Cheverie	KTTC
	-4 pine grosbeaks at Greenwich	JGT
Nov 11	-a barred owl calling on Wolfville Ridge	JGT
Nov 12	-2 buffleheads and 75 mourning doves at Lower Canard	JGT
Nov 12-16	-a brown creeper in Wolfville	JSB
Nov 13	-a great blue heron at Melanson	JGT
	-6 snow geese at Grand Pre	EM

- Nov 15 -an unidentified immature night-heron at Grand Pre JGT
- mid-Nov -a sharp-shinned hawk attacked a crow, which lost some feathers but survived, at Cheverie BEM
- large predaceous diving beetles in a pond at Grand Pre MB
- Nov 16 -30 Bohemian waxwings in Wolfville GT
- 100 red-throated loons in a flock, flying south at Porter's Point (and same group flying north over Wolfville?) RBS JGT
- 5 purple finches in Wolfville JSB
- 5 lesser scaup at Port Williams sewage ponds JW
- a woodpecker (probably hairy) drumming in Wolfville JW
- Nov 17 -12 male red-winged blackbirds at Cheverie GR
- Nov 18 -a red-bellied woodpecker and western kingbird in Halifax CS,AV,JW
- Nov 19 -a northern shrike in Wolfville BBT
- Nov 20 -40 Bohemian waxwings with 12 cedar waxwings in Wolfville - pine grosbeaks also present PCS
- Nov 20-30 -a fox sparrow in Wolfville JSB
- Nov 22 -45 Bohemian waxwings in Canning MG
- Nov 23 -50+ dunlins, 1 red knot, 1 white-rumped sandpiper & 10 sanderlings at Cheverie (dunlins still there Nov 27) KTTT,JGT
KTTT
- Nov 26 -700 Canada geese at Kingsport sanctuary DT
- Nov 28 -now there are two tan European starlings with white wings at Grand Pre BBT
- 50 Bohemian waxwings at Kingsport JGT
- a peregrine falcon at Cadden Beach SF
- Nov 29 -press and radio reports of a little brown bat infected with rabies near Parrsboro
- pine grosbeaks on Wolfville Ridge JGT
- Nov 30 -a barred owl catching mice at Cheverie KTTT
- a probable snowy owl at Grand Pre SM
- 110 Bohemian waxwings, a northern mockingbird and a brown creeper in Canning BBT,MT,JW
- a large falcon chasing a ring-necked pheasant at Grand Pre BLF
- a northern cardinal seen east of Gaspereau BLF
- Dec 2 -Halley's Comet just visible by telescope RB,SW
- Dec 3-4 -a Ross's gull in Canso Strait IAM et al
- Dec 7 -100 redpolls at Grand Pre BBT
- Dec 10-14 -a northern oriole in west Wolfville JGT,BLF
- Dec 12 -a great blue heron at Cheverie KTTT
- a red-tailed hawk came into a Brooklyn yard and stole a red squirrel from a cat! IM



- Dec 13 -an American kestrel at Sheffield Mills MG
- Dec 14 -a northern flicker at Kingsport GF
- a great blue heron at Digby wharf PS
- Dec 14-16 -40+ mourning doves in Wolfville JSB
- Dec 15 -a redpoll in Wolfville with goldfinches JW
- Dec 17-18 -Jupiter and Mars very close together

Dec 20	-Wolfville Christmas Bird Count - a few highlights:	
	a dovekie	JP
	a belted kingfisher	BLF
	22,000 crows at Boot Island roost	
	15,000 European starlings at Port Williams bridge	
	a common yellowthroat	JW
	a chipping sparrow	BLF
	a northern cardinal, 2 muskrats, lots of	
	<u>snow fleas</u>	BLF
	& 8 flamingos (<u>Phoenicopterus ruber ornamentalis</u>)	
Dec 21	-6 common grackles and 3 red-winged blackbirds	
	at Melanson (still there as of Jan 2)	CKC
Dec 24	-1 snowy owl, Grand Pre dykes	FL
Dec 27	-2 snowy owls, Grand Pre dykes	BLF et al
1987		
Jan 1	-3 pileated woodpeckers together, west side of	
	Lumsden Pond	BY
	-1 dark phase gyrfalcon, Grand Pre dykes	BBT
Jan 2	-1 snowy owl, Starr's Point (is this # 3?)	BM

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Thank you all.

Bird Nesting Survey -- 1986 Highlights

by Bernard Forsythe
Wolfville, N.S.

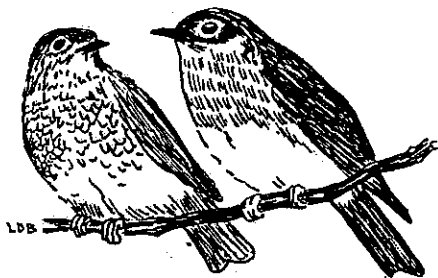


Many of the nests that I find and record each year are those of the same species of birds whose nests I have found in previous years. However, each year brings a few surprises to make the game interesting and this season had its share of "new" nesting species.

One nest that created a lot of interest was that of a pair of Merlins that fledged four young in a old crow's nest next to a cottage at Avonport Beach. Pam Mathews first reported the adults scolding in early May and the nesting cycle was followed until the young fledged at the end of July. To my knowledge this was the first nest of Merlins

found in our area of Nova Scotia. Adult Merlins are extremely noisy around their nest and the cottage owners are to be commended for putting up with their continuous racket all summer. One note of interest was that the male of the pair had brown immature plumage, indicating that this was his first nesting attempt.

Two other "new" species for my nest records were a Common Snipe at Methals Lake and a Ring-necked Duck at Black River. Another find of note this summer was two pairs of Cliff Swallows nesting under the eaves of a garage in a farm-yard at Canaan. Cliff Swallows are making a comeback in Digby and Annapolis Counties and hopefully should soon be established in greater numbers in Kings County. Some of the new highway bridges are providing excellent places for them to build their jug-like mud houses. As usual Brown-headed Cowbirds had a good year. Their eggs or young were found in eight songbird nests.



I have saved the best record for last: the first known Eastern Bluebird nests in the Valley in 30 years! In April I observed a pair of these delightful birds in a pasture near Sunken Lake. I put up a nest box after receiving permission from the landowner; the pair stayed near the nest box for almost three weeks and then disappeared. In mid-June I observed a pair of Eastern Bluebirds (which I assumed to be the same pair) about one mile from my nest box at a flooded beaver pond in a wooded area. They were nesting in an old woodpecker cavity in one of the many long-dead stumps standing in two feet of water. Although this did not look like bluebird habitat I suppose they must have used similar sites before the forests of North America were cut. On July 4 Cyril Coldwell and I found two or possibly three newly fledged young Eastern Bluebirds with their parents, feeding along a road next to farm fields about one-half mile from the nest site. Now they were in true bluebird country! On July 11 there was a young Brown-headed Cowbird begging to be fed with the young Bluebirds. Occasionally Brown-headed Cowbirds will lay in a cavity nest; however, I suspect that in this case a newly fledged Cowbird from some other nest joined this family. Several other birders also reported seeing a Cowbird with these Bluebirds. The adult male Eastern Bluebird and one of the young stayed on White Rock Mountain until early October.

In 1986 a pair of Eastern Bluebirds nested in a nest box on a lawn in Kingston and Larry Bogan found a female feeding a newly fledged young at Coldbrook in August.

In 1986 I submitted a total of 85 nest cards representing 41 bird species.

The Downy Rattlesnake Plantain in Nova Scotia

by Bernard Forsythe
Wolfville, N.S.

While checking an owl nest box in May 1986, I noticed a patch of beautifully marked leaves in a wooded area on Melanson Mountain. I recognized these leaves as belonging to one of the Goodyera orchids commonly called rattlesnake plantains. Their leaves form rosettes like the true plantains and are evergreen. They are veined with white in a snakeskin-like pattern. But which species of Goodyera? My orchid field guide suggested Goodyera pubescens, downy rattlesnake plantain. However, the range shown for this species was south and west of the State of Maine. There was no mention of this species in Roland and Smith's The Flora of Nova Scotia. In J.F. Donly's The Orchids of Nova Scotia this species was listed as hypothetical based on leaves found during the winter in Queens County. His account of this find was most interesting but too long to relate here. He did not observe this species in bloom in Nova Scotia.

Armed with slides I had taken of the rosettes, I went to the Herbarium at Acadia University where Ruth Newell compared the slides to their specimens of Goodyera. The slides matched their specimens of downy rattlesnake plantain from Ontario. To our great surprise, when we looked at the collection of Goodyera tessellata from Nova Scotia, there was one specimen that looked very much like my plant. This specimen had been collected in the ravine behind the Kentville Agriculture Centre in the late 1970's. Later I checked the ravine and found similar specimens still growing there. Could it have been misidentified? Because an open blossom was needed for positive identification, it was necessary to wait until late summer when the Goodyera's bloom.

Waiting was not easy. At least once a week I could be found looking for the first open flower on my new plants. I was able to take a series of slides as the flower spikes slowly grew to about 16 inches, twice the height of the more common tessellated or checkered rattlesnake plantain. Finally, on August 16, the first blossom had opened and all parts of the flower matched perfectly with the downy rattlesnake plantain in my field guide. What a thrill! There was now no doubt that this orchid occurs in Nova Scotia. Later I took several slides when the many-flowered spikes were in full bloom; the white flowers combine with the leaf pattern to make a very attractive plant. At this time I checked the plants at the Agriculture Centre ravine. These plants produced no flower spikes this year although I found several old spikes from past seasons. Apparently they do not bloom every season.

This year, in Kings County, I found several other species of orchids which were new to me. From two years of photographing, my slide collection of this family now includes about 30 species.

There is a lot yet to be learned about the status of our wild plants. All it takes is a field guide and a little leg work. A camera and a desire to get another slide better than the last one also leads to exciting finds. So let's get out and see who will find the next new plant for Nova Scotia.

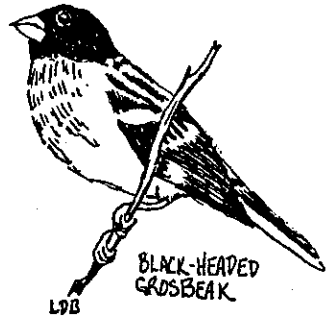
More on the Archeological Dig at Melanson

by Ellis Gertridge
Gaspereau, N.S.

A note from Dr. Ronald Nash of St. Francis Xavier University gave the results of Carbon-14 dating of samples taken at or near the archeological dig at Melanson. (See "Archeological Workshop" by Ellis Gertridge in Blomidon Naturalists Society Newsletter, Volume 13, Number 3, September 1986 - ed.)

The older sample taken by George MacDonald in 1965 from Basil Smith's farm (near the dyke) measured 1760 ± 60 B.P. (Before Present) or approximately 190 A.D.

The two samples from Coldwell's Potato Patch were dated at 790 ± 60 B.P. and 560 ± 60 B.P. suggesting that this site was first occupied between 1160 A.D. and 1390 A.D. It is believed that the site continued to be occupied until the Europeans entered the area.



ARTICLES

Birding in British Columbia

by Judy Tufts
Wolfville, N.S.

Birders often wonder what birding delights await them when they visit new places. Take the trip Gordon and I made to British Columbia in July 1986. Home base was in Langley less than an hour's drive from downtown Vancouver and conveniently central to many of the best birding areas in B.C. Armed with binoculars, viewing scope, raingear for the unpredictable B.C. weather, a copy of A Bird-finding Guide to Canada, edited by J.C. Finlay (Hurtig Publ.)*, and various local maps, we hoped to see quite a few western species.

Almost immediately we discovered that the Nicomekl Creek in Langley offered us tantalizing subjects: Black and Vaux's Swifts, Violet-green Swallows, Willow Flycatchers and Brewer's Blackbirds. White-crowned Sparrows were seen feeding their young and a Green Heron sat up in a tree! We were most impressed.

Further forays into Campbell Valley Regional Park, southeast of Langley, introduced us to Chestnut-backed Chickadees, Black-headed Grosbeaks (with a song reminiscent of the Rose-breasted), Marsh Wrens flitting around marsh reeds and the western "spotted" version of the Rufous-sided Towhee.

Northwest of Vancouver near Horseshoe Bay lies a pretty coastal forest park which abounds with steep trails criss-

crossing through mature stands of hemlock and red cedar. Lighthouse Park looks out over English Bay, University Hill on which the University of British Columbia is located, and Vancouver itself. Here in the shade of the forest we found Steller's Jay, Blue Grouse, Varied Thrush, and MacGillivray's, Townsend's and Wilson's Warblers. On two separate visits to this park we were spellbound by a Winter Wren performing his musical trills while standing on a fallen dead tree, looking very proud of himself. He seemed oblivious to our presence so intent was he on perfecting his song.

A visit to the Reifel Refuge on Westham Island in the mouth of the Fraser River proved to be rather quiet. The best time to view birds here is during fall migration from late August to October. The variety and abundance of food from the river attracts millions of migrant waterfowl and shorebirds to this area each year.

We did see resident Canada Geese and Mallards here and were intrigued with a young Sandhill Crane, a Refuge "pet" who wanders freely about with an eye open for visitors' hand-outs especially grain and unsalted peanuts. Three years ago six Sandhill Crane eggs were brought from Idaho, successfully hatched and the six young birds were raised in Reifel Refuge, banded and released. One of them returned and has stayed; he apparently enjoys human contact.

But the most spectacular birding occurred during four days spent in the Okanagan Valley at Lake Vasseux, a recognized Canadian birding "hot-spot". The Okanagan Valley is really a semi-arid desert surrounded by cliffs and grassland slopes leading up to Montane forests of Douglas-fir and Ponderosa Pine. Due to a chain of lakes and river systems, widened in the 1950's, running along the Valley floor, irrigation of crops is possible from May to October. One sees sprinklers constantly rotating everywhere - fields, orchards, gardens. It is fascinating and offers quite a different concept of the "lush" Okanagan. Nevertheless this valley is well-known for its delicious fruits and vegetables. Rainfall and snowfall each average a mere ten inches annually and temperatures soar on summer afternoons making bird-finding expeditions a little uncomfortable. Early morning, late afternoon and evening proved to be excellent times for birding. Because of the diversity of habitats, the variety of birds is superb around Lake Vasseux. It is a major breeding ground for Canada Geese.

From the cliffs northeast of Lake Vasseux we heard songs of the Canyon and Rock Wrens but were unable to locate the birds themselves. Lewis's Woodpeckers and Clark's Nutcrackers flitted through the Ponderosa Pines below while Western Meadowlarks and Lark Sparrows sang from their grassland feeding ground and White-throated Swifts flew overhead. California bighorn sheep have been introduced to the area and occasionally we would hear the rattle of cascading stones and would look up the cliff face to see these majestic sheep climbing nimbly along narrow trails. Once Gordon also noted a yellow-bellied marmot climbing up too. Another morning Gordon disturbed a rattlesnake; thankfully it disappeared under some rocks. However, in another area we visited looking for the Brewer's Sparrow which loves sage-brush, a local resident discouraged us from continuing by telling us we were in "rattler country"! We

decided a stay in hospital recovering from snake bite would be no way to end our vacation and soon left.

A nearby road led us to Western and Mountain Bluebirds within twenty minutes of each other (what luck) but in separate valleys. We surprised a Common Nighthawk sleeping on a limb of a pine tree near a farm and saw a Western Kingbird. The provincial camp site at Okanagan Falls has resident California Quail, timid but very beautiful, and Western Wood-Pewees are abundant too.

Driving into the hills above Lake Vasseux brought us into contact with Pygmy Nuthatch, Cassin's Finch, Lazuli Bunting and Townsend's Solitaire among the conifers. Another journey took us to an active hummingbird feeder where we were able to identify only two Black-chinned Hummingbirds among the several visitors. Later we saw a Rufous Hummingbird elsewhere.



Enquiries and contact with some kind and helpful birders from the Vancouver area resulted in some guided trips around Sea and Iona Islands near the Vancouver Airport. Bushtits and introduced Crested Mynas were seen followed by hundreds of Western Sandpipers busily feeding on tidal marshes near the sewage treatment and settling ponds. A Ruddy Duck, Long-billed Dowitchers, Gadwalls, Northern Shovelers, Canada Geese and Green-winged Teal were found in a neighbouring pond. A Common Barn-Owl was viewed in a farmer's barn close by.

An overnight visit to Victoria provided us with some fascinating observations. Black Turnstones were seen sunning themselves at the Tsawassen Ferry Terminal as we left for Vancouver Island. Once there we were off to Saanich to the airport perimeter searching for the introduced Eurasian Skylark - we were lucky - and then headed down to Victoria's Clover Point near Beacon Hill Park. Here we found Rhinoceros Auklets, Marbled Murrelets and Pigeon Guillemots offshore, all the "expected" western alcids.

The following morning on our way to Clover Point again, we realized that some luggage had been left behind. While it was retrieved, I with scope in hand, was left at the Point. Gordon remarked, "See what you can find while I'm gone.". Little did anyone know how ironic that remark was to be. Luck was indeed with me for there was a very knowledgeable local birder there with his scope too. He said he often spent an hour or two checking out the area before heading to work in the city. He said there were often some interesting strays and, as if to prove the point, he showed me a Little Gull sitting with two Bonaparte's Gulls (ideal for comparison). We were able to get quite close to them before the fog descended once again; when it lifted the Little Gull

had flown. I was then shown a pair of Mew Gulls sitting on some floating driftwood and a Heermann's Gull sitting among Glaucous-winged and California Gulls. My head was reeling with excitement and I could hardly wait to show Gordon these species. Time seemed interminable, the other birder had to leave for work and I waited, checking for more unusual strays. A pair of American Black Oystercatchers picked their way through the seaweed on the rocks while the fog drifted in.

"Time (and bird) waits for no man"; when Gordon returned he found one very excited woman and no evidence of the most unusual sightings - much to his disappointment and mine. (No, it wasn't a figment of my imagination!) However, as we searched and searched again, he found a pair of Harlequin Ducks preening themselves on the outer rocks, the American Black Oystercatchers and some Pelagic Cormorants. That helped.

A weekend spent in a ski cabin in the Whistler Mountain area produced a vivid pair of Western Tanagers, Oregon Juncos, more Black Swifts coming in to roost for the night and the amusing sight of Steller's Jays helping themselves to dog-food pellets from the abandoned dog dish belonging to the family pet. Sometimes they managed three pellets in one beakful before flying off with their prizes. One afternoon as we descended Whistler Mountain by gondola, we saw a mother black bear with two young cubs feeding. What a view up there! Another area - a walk around a lake - produced an immature Red-breasted Sapsucker.

We were thrilled when Steve Cannings, a notable Penticton birder, most generously invited us along to view the first recorded nest in Canada of the Gray Flycatcher. One of his sons had found the nest in Ponderosa Pine woods. The nest contained one young bird being attended by both parents simultaneously, a most unusual sight. Steve was taking photo-records of this very rare flycatcher for a book his son will soon publish about birds of the Okanagan.

One final place offered unusual sights - Manning Provincial Park on Highway # 3 between Hope and Penticton. On the southern side of the highway in the park we found a Red-naped Sapsucker, the newly recognized North American species, Sphyrapicus nuchalis, formerly classified as a western variation of the Yellow-bellied Sapsucker. On the northern side one can drive to the top of a 7200-foot mountain to see alpine meadows with the prettiest of flowers, look out over mountain ranges and feel "on top of the world" or look downwards several hundred feet to watch hoary marmots sunning themselves outside their burrows. The marmots have long grey-black shaggy fur for their long eight-month hibernation. Stopping halfway down at another look-off, we were met by inquisitive flocks of Clark's Nutcrackers looking for hand-outs just like Gray Jays.

So you see our holiday was enjoyable and rewarding. Of the 140 species of birds identified during this trip, 57 were species we had not seen previously. We had the added enjoyment of being with some of our family while we explored new regions within British Columbia, discovering how vast and diverse Canada really is.

* Jim Welford contributed significantly to the Nova Scotia section of this book.

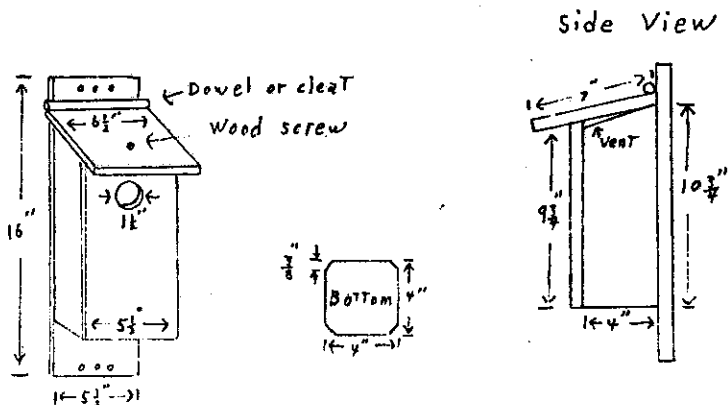
Encouraging Eastern Bluebird Nesting

by Bernard Forsythe
Wolfville, N.S.

Let's hope that the discovery of Eastern Bluebird nests and young in Kings County during 1986 indicates the permanent return of this species to the Valley. I would encourage all of you to assist them in becoming reestablished. "Bluebird trails" (i.e. nest boxes placed 100 yards or more apart along set routes) have greatly helped their reestablishment elsewhere in North America. Anyone interested in setting up a "trail" should be encouraged to do so but, for the less ambitious, placing just one or two nest boxes could be helpful. A commitment must be made to monitor the boxes to keep out any European Starlings or House Sparrows attempting to use them. As these two species were the major cause of the Eastern Bluebird's disappearance, letting them nest in the boxes would be worse than not putting up boxes at all. Other species, such as Tree Swallows or chickadees, should be allowed to use the boxes since these species are protected by law as well as being delightful to have in your nest box. Two nest boxes placed fairly close together would permit Eastern Bluebirds and Tree Swallows to nest in the same area since, if separate nesting cavities are available, these species show little interspecific aggression.

The nest box opening is important; it should be exactly one and one-half inches in diameter. The size and shape of the nest box can vary somewhat as Eastern Bluebirds are not that fussy. The location of the nest box is important. Eastern Bluebirds like open areas with a few scattered trees or wires to perch on. Short grass areas such as pastures, farm fields or large lawns are ideal. Place the nest boxes about five or six feet above the ground on posts or on tree trunks below the branches. Nest boxes should not be placed near buildings because they are more likely to be occupied by European Starlings or House Sparrows. If you want to place a box on another person's property, ask permission.

One bluebird nest box plan is presented below. Use either rough or planed boards, one-half to three-quarters of an inch thick. The opening must be one and one-half inches in diameter.



There are many other designs that would be accepted by bluebirds. Several books are available with helpful hints and designs of bluebird nest boxes and most bookstores have or can order one for you. The nest boxes can be decorated to make them more attractive to humans without upsetting the birds. Cavity-nesting birds will accept almost any nest site they can find in the appropriate habitat.

The Eastern Bluebird will probably never become common in Nova Scotia since we are at the edge of its historic range. Any help we give this species by providing nesting places will be of great value in allowing the few that are around to gain a foothold and add their beauty and charm to our summers.

Cool Summers and Volcanos

by Larry Bogan

Cambridge Station, N.S.

The weather in 1986 was not good. While northeastern North America, including Nova Scotia, was cool and wet, the U.S. southeast was unusually dry. Although we expect year-to-year variations in the weather, sometimes the deviations from the average are large and hence difficult to accept and we can justifiably complain. To whom I don't know.

Let's consider the period April through November which corresponds to the period when the average monthly temperature is above freezing. A comparison of four weather parameters (1986 vs. 30-year averages) measured at the Kentville Agriculture Centre follows:

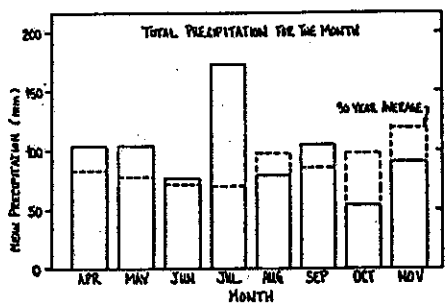
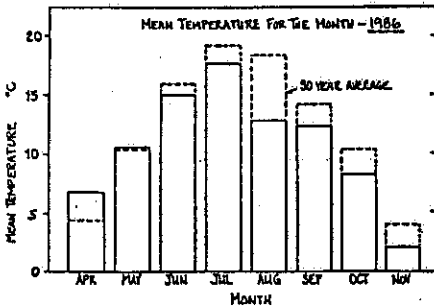
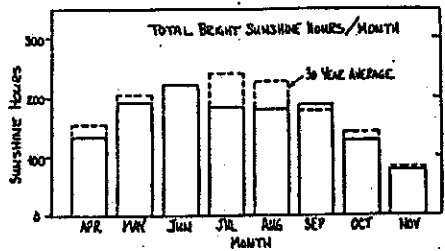
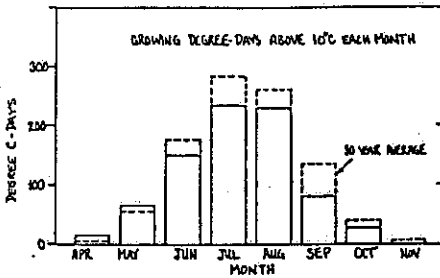
	1986	30-year average	% diff
average temperature (deg C)	11.3	12.1	n.r.
growing C-degree-days	805	965	-16.6
precipitation in mm	763	702	+11.5
sunshine hours	1290	1428	-9.7

n.r. not relevant

The accompanying graphs present a month-by-month comparison of the 1986 weather parameters with the 30-year averages. In general most months of the period had lower temperatures, higher rainfall, and fewer sunshine hours than the 30-year average. Only May was very slightly warmer than average and August, October and November were drier than average. Only June and September were average or slightly sunnier than average. Atmospheric Environment Service records indicated that 1986 was the coolest summer in 24 years.

What accounts for these large variations? Why can't the great heat engine of the Earth keep going steadily? Can we get some clues from other unusual years?

You have probably read of the "Year of the Mice" (1815) described in excerpts from the Nova Scotian reprinted in our June 1984 Newsletter. The very next year was also a remarkable and disastrous year. I will summarize briefly. In 1815, after a cold late spring, the mouse population exploded in northern Nova Scotia, destroying grain crops and damaging



hay and potato crops extensively. The next year the mouse population had crashed; however, the weather was terrible. Major storms dropped snow on Nova Scotia on June 4 and 17 and cold, blustery weather followed. Ice one-quarter of an inch thick was reported on standing water on July 4 and other reports said it was one-half inch thick sometime in August. There were two weeks of warm weather in early September but then winter returned and snow squalls started in October. December was the finest and warmest month of the whole year; it appeared that the seasonal cycle had been reversed. Needless to say, it was a disastrous year for crops. In 1816 not only Nova Scotia but all eastern North America and western Europe had a cold summer. A good description of this phenomenon is recorded in Scientific American (June 1969) in "The Year without a Summer" by Henry and Elizabeth Stommel. Weather records in New Haven, Connecticut, showed that the average temperature for June 1816 was 60.5 deg F (15.8 deg C) compared to a "normal" average temperature of about 67 deg F (19.4 deg C). That summer is the coldest on record for New Haven. However, the records show that June 22-24 and August 17-20 were periods with average temperatures above 75 deg F (24 deg C), so there were some warm days. The average temperatures for the whole summer over eastern North America were 2 to 4.5 deg F (1 to 2.5 deg C) lower than previous summers. June 1815 was slightly cooler than average and June 1817 was almost as cold as in 1816. By 1818 had the weather returned to "normal".

Corn was the hardest hit crop in 1816; one-half the usual yield was obtained. In 1817 the price of wheat was double its long-term average.

There were many theories concerning the cause of this abnormal weather, but the one that seems most reasonable is a volcano eruption in Indonesia. In April of 1815, Mount Tambora ejected over 100 cubic kilometres of dust, ash and lava. The height of the mountain was reduced by 1280 metres

(4,200 feet) and the ash cloud was so dense that Madura, 450 km to the west, was in near darkness for three days. Within hours of the eruption 10,000 people were killed by the ash and dust and 82,000 more died of starvation after Tambora's debris destroyed their crops. This eruption produced more atmospheric dust than any eruption since 1600. The dust encircled the Earth in the high stratosphere for several years and reduced the amount of sunlight reaching the ground.

By comparison, the Mount St. Helens eruption (1980) in Washington state produced only one cubic kilometre of ash and dust. The much-written-about eruption of Krakatoa (Indonesia, 1883) that also seemed to have affected the weather in North America, ejected slightly over ten cubic kilometres of debris. In the compilation by the Smithsonian Institution entitled Volcanos of the World, Tambora is identified as the only volcano with a VEI (Volcano Eruption Index) of 7. There are sixteen volcanos along with Krakatoa that have a VEI of 6 while all others in historic times are rated 5 or less. Mount St. Helens has a VEI of 5. Whereas the Mount St. Helens eruption had very little effect on the weather (but produced some red sunsets), Krakatoa cooled off the northern hemisphere and Tambora affected the climate for one or two years.

Climatologists have correlated volcanic dust abundance in the atmosphere with the recorded cool periods and have established that the dust does cause a cooling of the lower atmosphere, hence producing a dip in the average surface temperature. However the magnitude of these decreases usually remains within the "normal" range of year-to-year fluctuations. Tambora's impact appears to have been larger than one would predict and may have come at a time when there was a cooling trend.

An interesting addendum to this comes from geological evidence of another eruption in Indonesia 75,000 years ago. Mount Toba released an estimated 1000 to 2000 cubic kilometres of debris, possibly causing one of the "cold-snaps" indicated in pollen records from this era.

No spectacular volcanic eruptions have occurred to explain our cool, wet summer. Changes in Pacific ocean currents and phenomena such as El Nino also have dramatic effects on the climate around the world as was seen in 1982. Undoubtedly there are other parts of the world's heat engine that go awry and cause fluctuations such as we saw this year.

Scientific Names

by Merritt Gibson
Canning, N.S.

Perhaps you have noticed that the common name of a plant or animal is usually followed by its scientific name. The scientific name is printed in italics (or underlined if italic type is not available) and is composed of Latin words or latinized words derived from Greek and other languages. While common names for most birds and mammals are well known and widely accepted, those for many organisms are less well known and often of local use only. Many plants and animals do not have common names. Scientific names, on the other hand, are understood by biologists everywhere.

When you are learning about a new plant or animal you should try to become familiar with its scientific name. The scientific name at first may appear to be unpronounceable. However, divide it into syllables, give it a try, and don't worry about it! Look up the meaning of the name. The name or the root from which it is derived can be found in many good dictionaries and encyclopedias. Many scientific names describe the organism, others describe its habitat or a peculiar habit, and a few honour a recognized person. An understanding of the scientific name will often help you become familiar with both the name and the organism.

This is the time of year when all BNS'ers should visit Sheffield Mills or Melanson to look for Haliaeetus leucocephalus. In winter we have one of the largest populations of these birds in northeastern North America. Halos is a Greek word meaning "the sea", and is sometimes used to describe "a fisherman" or "a deep-sea fisherman". Aetos is "an eagle"; leuco means "white", and cephalus refers to "the head". As we watch these birds sailing along the seashore or patrolling a river, the names "white-headed eagle" or "white-headed fisherman" seem more descriptive than Bald Eagle.

A common visitor to our gardens and bird feeders is Cyanocitta cristata, with its blues and whites providing a colourful contrast against the evergreen trees. Cyano means "blue", citta is "a chatterer", and cristata means "crested". The "blue-crested chatterer" is certainly a good name for the Blue Jay, as well as for some baseball fans.

The Ovenbird is often seen scratching through the leaf litter in fairly dense woods. It is a brown bird with an orange crown and has the habit of wagging its tail up and down. This habit is so characteristic that the Ovenbird is sometimes called "Wagtail". Its scientific name is Seiurus aurocapillus. Seio means "to move to and fro", oura is "the tail", aureus means "golden", and capillaris refers to "the hair of the head". The "golden-haired wagtail" is a good description of the Ovenbird.

As you walk along the grassy shores of a stream or lake you may hear a series of deep, nasal "clunks" followed, as you approach, by a loud, sharp note as a startled Green Frog leaps from the grass into the water. The scientific name for the Green Frog is Rana clamitans - clamitans, appropriately, means "shouter" or "exclaimer".



Many scientific names describe the habitat in which the organism lives. The Common Periwinkle is abundant along the coast of Nova Scotia. Its scientific name is Littorina littorea, from the Greek littoris which means "seashore". The Rough Periwinkle lives on the upper beach. Its name is Littorina saxatilis - saxatilis means "living among rocks". The Spotted Sandpiper is Actitis macularia - Actitis means "a dweller on the seashore"; macularia means "spotted". The

Wood Frog is Rana sylvatica - sylvatica means "growing among trees". The Brook Trout is Salvelinus fontinalis - fontinalis means "a dweller in springs and fountains" and is used with reference to the Trout's preference for the cooler, well-oxygenated waters of the pools that lie below falls and rapids.

Sometimes the common name is as interesting as the scientific one. The Northern Quahog (pronounced "ko-hawg") is a clam that is common in the warmer waters around Nova Scotia, such as those along the Northumberland Strait and St. Mary's Bay in Digby County. The inner surface of the shell is white and some have a dark purplish tinge. The word "quahog" comes from the Algonquin name "poquahock" which means "dark shell". Its scientific name is Mercenaria mercenaria. Merces means "to hire" or "to pay". The Algonquins used quahog shells for money or wampum and the darker shells had the greater value.

Many plants and animals are named after people. Wilson's Warbler is Wilsonia pusilla and is named after Alexander Wilson, a Scottish ornithologist who moved to the United States and became known as "the Father of American Ornithology". The subspecies of Swainson's Thrush that is present in Nova Scotia is Catharus ustulatus swainsoni. It is named after W. Swainson F.R.S., a zoologist who travelled extensively through South America, Africa and New Zealand. The person in whose honour an organism is named must be someone in a position of importance. This obviously is the case for the little, brown mushroom which is found during September growing in the moss and leaf litter of pine woods and which is known as Cortinarius olivaceopictus gibsonii!

The scientific name has two or three parts. The first is the genus name. It is always spelt with a capital letter. The genus groups a number of related species. For example, several shorebirds belong to the genus Calidris, a name that means "a speckled shorebird". These include Calidris alba, the Sanderling (alba means "white" with reference to its whitish plumage in autumn); Calidris minutilla, the Least Sandpiper (minutilla means "very small"); and Calidris pusilla, the Semipalmated Sandpiper (pusilla means "tiny"). The generic name, therefore, helps you recognize closely related species.

The second name is the species name and the third name, when it is used, is the subspecies. Subspecies are breeding populations of a species that have become separated geographically and that have evolved differences in colour or size.

The animal which has one of the longest, if not the longest, name is Strongylocentrotus droebachiensis. This animal is common along the coast of Nova Scotia and bleached shells are popularly collected to be used for decorations. Sometimes you step on one as you walk bare-footed along the beach. At such times, a loud Strongylocentrotus droebachiensis would be an expletive preferred to those often heard. Do you know this animal?

References: Gotch, A.F. 1981. Birds - Their Latin Names Explained. The Camelot Press, Ltd., Southampton.

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