

BOGAN

BLOMIDON NATURALISTS' SOCIETY NEWSLETTER



12
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NUMBER 2
JUNE 1985

The BNS Newsletter is published on equinoxes and solstices.

BNS SUMMER-FALL PROGRAMME

MONDAY EVENING MEETINGS: All these meetings will start at 7:30 p.m. and will be held in room 244 of the Beveridge Arts Center at Acadia University. (Note the return to the room we used to use.)

1. September 16--Roy Bishop, Physics Department, Acadia University with tell us about the visit of Halley's Comet during 1985-86, and how best to observe it.
2. October 21--Dick Brown, Canadian Wildlife Service, will speak and give a slide presentation on icebergs. Mr. Brown is author of "The Voyage of an Iceberg".
3. November 18--Zoe Lucas will speak on Sable Island.
4. December 9--Naturalists' Night. Bring your favorite wildflower slides.

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Dues are due!

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"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

FIELD TRIPS: All times are given for meeting at the Gym Parking Lot of Acadia University, unless otherwise noted.

1. August 7, Wednesday at 9:30 p.m.-- Sky observing session: Constellations of summer, the Milky Way, Jupiter, Saturn and their moons. Bring binoculars if you have them. Astronomical Telescopes will be provided. Dress warmly. Meet at the Ridge Stile Park in Wolfville at 9:35 p.m. (If cloudy on Wednesday, meet on Thursday the 8th). Leader: Larry Bogan, 678-0446.
2. August 11, Sunday at 8:45 a.m. (or at 9:00 a.m. at Grand Pre) Observe and identify shore birds with the N.S. Bird Society. Leader: Jim Wolford.
3. August 31, Saturday--Meet on Brier Island at the Westport Cemetery at 8:00 a.m. A pelagic trip to look at sea birds and whales. In case of bad weather, the trip will be delayed to Sunday, 1 Sept.-- Leader: Richard Stern.
4. September 15, Sunday at 9 a.m. (or 10 a.m. at the store in South Maitland). A trip to Hayes cave in South Maitland to see its geology and bats. Bring a lunch, hard hat (or some sort of protective head covering), warm clothing, and rubber boots. Leader to be announced.
5. September 29, Sunday at 12:45 p.m. (or at Grand Pre at 1:00 p.m.) Late shore birds with N.S. Bird Society. Leader: Jim Wolford.
6. October 5, Saturday at 1:15 p.m. (or 1:30 at the Agriculture Center Picnic area). Our annual walk with Ken Harrison through the Kentville Ravine to collect and identify mushrooms. Bring a basket for collecting.
(note for avid mushroomers: On Sept. 21st Dr. Harrison will lead a mushroom walk as part of the 75th anniversary of the Acadia University Biology Department. This leaves Patterson Hall at 9:00 a.m.)
7. October 12, Saturday at 8:30 a.m. (or at the corner of Rt.1 and Rt.360 in S. Berwick 9:05 a.m.)-- A canoe trip on lakes of the South Mtn. to observe the Fall colors, birds, etc. We will be on Loon Lake, Aylesford Lake, or Lake Paul. Leader: Larry Bogan. (If windy or rain, the trip will be on the 13th.)

Society News

ACKNOWLEDGEMENTS

Our grateful thanks to the good souls who have volunteered many hours, much thought and effort to keep the BNS rolling along smoothly; all those who have written for this Newsletter, assisted in its production or distribution; all those who have helped bake or distribute delicious goodies at the end of our evening meetings; all those who have enthusiastically led field trips-- Bernard Forsythe, Jim Wolford, Sherman Williams, Larry Bogan, and Sam van der Kloet Tom Herman, and Sherman Bleakney; and last but certainly not least, our most informative speakers-- Scott Cunningham, Jim Jotcham and Dr. Albert Roland. There would and could not be a BNS without their contributions!

-SEPTEMBER 21-

Please mark this Saturday on you calendar now, not because it is a field trip, but because it is the day we would LOVE to receive your contribution(s) for our September BNS Newsletter. Poetry, articles short and long, technical and non-technical, field observations of only two or three sentences related to Mother Nature, are encouraged and welcomed.

Send contributions to Jean Timpa, P.O. Box 1382, Wolfville, N.S. BOP 1G0, or give them to either editor at a meeting or field trip.

BLOMIDON NATURALISTS' SOCIETY MEMBERSHIP

If you are a member and have not paid this year's dues or you wish to join our Society and receive the Newsletter regularly, contact our treasurer (home: 542-7235):

Dr. Norman McGuinness,
% School of Business, Acadia University
Wolfville, N.S. BOP 1G0

Membership dues are \$5.00 per year/person (Oct. to Oct.)

NOTES ON BOOKS AND PUBLICATIONS

The following are a couple of publication that have come out recently and may be of some interest to some of you.

"The Gaspereau Valley of Kings County, Nova Scotia"
(A Map Folio with Text) by Hugh Millward - St. Mary's
University 1985 - Atlantic Region Geographical Studies
#4- approx. \$10

- This is in a large folio format and contains a
geographical study of the Gaspereau Valley. At local
bookstores.

"The Hayes Cave Site, South Maitland, N.S."

Ed. Linda Morris, January 1985

Curatorial Report #50, Nova Scotia Museum

- We recently had a field trip to this unique site, and
this report gives the history, geology, biology, and
physiography of this bit of Crown Land.

- Available from the Nova Scotia Museum. Copies are in
the hands of various members of the BNS and faculty at
Acadia University.

MARITIME BREEDING BIRD ATLAS

A group of voluteer field workers is being organized to
collect data on breeding birds in the Maritime Provinces.
Over the next five years (1986-1990) this will be compiled
into an atlas of maps showing the distribution of birds that
breed in our area. Many of you have received the first issue
of the Maritime Breeding Bird Atlas Newsletter explaining the
program. If you wish more information or wish to help,
contact the address given below.

EMPLOYMENT OPPORTUNITY:

The Maritime Breeding Bird Atlas is looking for a
COORDINATOR to oversee the day-to-day operation of the Atlas
project. The ideal candidate will have demonstrated abilities
in most or all of the following fields:

- project planning and organization
- birding

- oral and written communication
- working with volunteer groups
- computer programming

The Project will last five to six years, and this position will be full time for at least the first 18 months. The location is Halifax. Access to a car is required. Applications will be accepted until August 31, 1985. Send your resume to:

The Maritime Bird Atlas Trust
c/o Natural History Section
Nova Scotia Museum
1747 Summer Street, Halifax, N.S. B3H 3A6

Hiring for this position is contingent upon the successful outcome of funding negotiations.

FIELD TRIP REPORTS

OWLS, WOODCOCK, AND AMPHIBIANS

by Bernard Forsythe
Wolfville, N.S.

We set out in five cars at 6:30 p.m. on a cool, clear evening with no wind. Wind had caused us to postpone the trip for a week. On the Grand Pre dyke we saw Snipe, Killdeer, N. Harrier, Savanna Sparrow and Great Blue Heron. At dusk a short-eared owl put in an appearance, but no courtship flights were seen this trip.

The next stop was Greenfield where we briefly heard a Snipe winnowing, and heard the nasal ground call of the Woodcock but not its flight sounds. We proceeded to a known Saw-whet owl site where one was heard tooting in the distance. It moved around so that we were not able to get very close. Most of the party did manage to hear some of its notes. I tried my Barred Owl call and in no time we had one near the road and giving us excellent calls. The Barred owl is by far Kings County's most common breeding raptor. We stopped near a Horned Owl nest containing one young, but they were quiet at the time.

In between the stops, several mammals were sighted along the edge of the road; we counted a porcupine, a racoon and three deer. The last stop was at one of Jim Wolford's salamander ponds. Although some of our night creatures did not perform very well, we did end up with a good variety and had an enjoyable evening.

BIRDING WITH THE BIRD SOCIETY

by Jim Wolford
Wolfville, N.S.

Despite a very welcome, sunny and fairly-warm day, our caravan was down from last year's 21 cars to a more manageable 13. As has become usual, we began at Grand Pre and Boot Island, where we saw a few brant and red-throated loons. Then we stopped in Wolfville to see and hear willets, followed by visits to a pond at Starr's Point and a look into the Canard River Valley. The Canard Canada geese were down to only 75, and we saw a pair of pintails and an early barn swallow.

Again this year we had lunch at the Gibson homestead in Canning, where we tried valiantly to make a dent in the gallons of fish chowder and 13 assorted pies! Then behind the house we were treated to good views of two singing palm warblers, in addition to the Gibsons' usual variety of woodpeckers, grosbeaks, purple finches, etc.

Upon resuming our pond-to-pond caravan, we found a freshly dumped egg of a grackle or blue jay. Visits to a pond in Canning and then Canard Poultry Pond produced a relatively low number (5) of duck species, plus greater yellowlegs, a big flock of at least 150 tree swallows, and numerous basking painted turtles.

Finally we visited Cyril Coldwell's farm at Gaspereau, where captive great horned owls (hand-reared, 4 years old) were tending nest; the brooding female sheltered two downy young. Also we enjoyed views of ravens in two's and three's flying acrobatically and seemingly indulging in courtship activities. At least two ravens had sticks in their beaks and were seen to drop and deftly retrieve them in the air.

The birding was fairly uneventful, but we enjoyed the sunny day. Thanks once again to Wilma and Merritt Gibson, and also to Brenda Thexton for organizing a kitchen-cleanup crew.

BLOMIDON PARK FIELD TRIP

-May 12-

by Larry Bogan
Cambridge, N.S.

The day was cloudy and cool as about 15 persons were guided around the trails of Blomidon by our leader, Sherman Williams. The park was closed and quiet, as we entered the woods and large patches of wild leek and purple trillium. Unfortunately, the spring had been later than usual and only a few of the trillium and some spring beauty were in blossom. There were fewer birds on Blomidon than seen in the Valley.

On the trail out along the bluffs we got several good perspectives of the Minas Basin and the surrounding landmarks. We found an owl pellet made of the bones and hair of a small rodent. At Indian Springs we measured one very large red spruce as being 2.5 metres in circumference (0.8 meter diameter). All along the walk we saw extensive damage to the trees by porcupine. At the park entrance many of the small trees planted for landscaping had been killed by their gnawing.

On the way back those in the front were fortunate enough to see a young black bear speeding among the trees. At the end of the trail we heard and some saw a winter wren. The total distance around the loop trail had been over 7 kilometers.

AMHERST POINT BIRD SANCTUARY FIELD TRIP

by Jim Wolford
and Larry Bogan

Five cars arrived at the parking lot of the Amherst Point Bird Sanctuary at 10:30 a.m. on May 26 during a steady drizzle. Slowly, about 15 persons emerged to don rain coats, parka, boots, and plastic garbage bags. Those in the latter garb produced a memorable sight. Let this be a lesson to the entire membership about being prepared, especially when we go so far from our fair Valley.

The sanctuary is a fabulous collection of hills, small ponds, woods, and fresh water marsh woven with foot tails. The birds were singing but preferred to stay under cover, however we managed to see swallows, bobolinks, boreal chickadees, yellow and yellow throated warblers, swamp sparrows, red wings, kingbirds, blue winged teal, and others.

Lunches were consumed in the warm, dry cars in the parking lot where we saw a Cape May warbler that attracted our attention and entertained us with its darting flights from the top of nearby spruces.

The most rewarding part of the day occurred in the afternoon under cloudy but dry skies at the side of the impounded marshes. With the aid of several telescopes we observed pintail ducks, american wigeon, ring-neck ducks, mallards, black ducks, common gallinule, american coot, northern shoveler, a ruddy duck and a couple of gadwalls. Meanwhile the pied-bill grebes and sora rails were providing background sounds with their calls.

We had two non-birding highlights. First, a red fox was hunting along the dyke toward us; when it became aware of our presence, it quickly turned tail and raced a long way to get out of our sight. Just as memorable, but considerably less esthetic, were the hordes of midges (non-biting flies) that were covering the herbs and bushes along the dyke. As we walked along, clouds of them were disturbed and then landed on us! The large number of swallows were not making a noticeable dent in their numbers. The flies were a nuisance but at least were not seeking our blood, too!

CANOE TRIP

by Larry Bogan
Cambridge, N.S.

Three canoes, holding six persons, put into Black River Lake just below Methal's Dam in the morning of June 9. The sky was grey but there was no wind and the water surface was glass smooth. As we paddled out toward the nearby archipelago of islands, an adult eagle flew by. The water was relatively high, and allowed us to canoe around and between all the islands on the map. After sighting two pairs of common loons diving and swimming, we noticed the eagle sitting on a tall, dead tree on the second island staring at us. It soon

flew off but it or another was seen later, patiently resting in a tall white pine on the same island.

We paddled along the southwest side of the lake between the islands and the shore. This is the best kind of outdoor experience, moving smoothly, quietly, among the nearby habitats looking for life. There were many peeping, tail-wagging spotted sandpipers on rocks and flying swiftly over the water.

For lunch we met at the large island near the Dam that had been used for mammal studies. By this time the sun was out and warming us and the rocks we sat on. We explored the island which had a heavily moss-covered, rocky understory. Tom Herman explained to us how the island had been laid out in sections for population studies of small mammals. After the indigenous mice had been trapped, mice from Isle Haute were introduced to study their population dynamics. Unfortunately the Isle Haute mice did not survive well on the island for unknown reasons. We looked unsuccessfully for some porcupine dens that had existed on the island, but found many traces of small mammals digging and tunneling in the moss. Myrtle warblers, ruby crown kinglets, whitethroats, and other birds were heard and/or seen on the island.

As we canoed back to the cars, a flotilla of at least a dozen canoes entered the lake looking for another dozen that had put in earlier. The wind was coming up and as we left the lake, we realized that we had the best part of the day in a pleasant habitat.

POPLAR GROVE FIELD TRIP-June 16

by Jim Wolford
Wolfville, N.S.

About 18 of us caravanned into the gypsum country on a beautiful sunny morning. We walked into our favorite spot by way of a very wet, muddy track through a jungle of alders. At least one trekker became badly mired along the way. Our excuse for this year's route was that Sam van der Kloet and I had found (and left) a nice deer antler there on the previous day. The antler showed evidence of small rodents having gnawed on it as a source of minerals. Various birds were singing, including a yellow-bellied flycatcher and Cape May warbler, and a red-breasted nuthatch had fledged young. Among many

flower, purple or water avens had to be "keyed out" with the help of Newcomb's Wildflower Guide, which I highly recommend as the best field guide for flowers.

Our "hot spot" had oodles of the yellow lady's-slippers at the ideal stage of showiness. Again we encountered motor-bikers in the area, but this year they had no bouquets of orchids. I told our group that we all had an assignment this year: to fan our and search for the smaller and much rarer ram's-head lady's-slipper. No sooner had I said that when Bernard Forsythe climbed the steepest hillside there and immediately found us lots of healthy-looking clumps of them, a few still in bloom (the best dates for this orchid seem to be early June).

One small mystery that we've noticed also in other places and in other years: something, or someone, is eating or picking, the lady's-slippers flowers off the top of the stems. This is widespread, so that I personally suspect something natural, perhaps deer?

KINGSPORT INTERTIDAL FLATS FORAY
7 July 1985

by Sherman Bleakney
Wolfville, N.S.

Low clouds and drizzle lowered the enthusiasm of many Blomidon naturalist, that Sunday morn, and even our expected visitors from the Halifax naturalist club never materialized from the mists of Minas. However, our hard-core contingent of true-blue field trippers was augmented by unexpected guests: the Bogans of Chattanooga, Tenn. and a van load of agriculturalists from Lebanon, Cuba, Nicaragua, Guatemala, and Venezuela courtesy of Tom Haliburton, Truro. Although not fully prepared for a mud flat hike in the rain, many of our visitors were very sporting and plunged in and enjoyed themselves (and the raw blue mussels *Mytilus edulis*) for nearly 2 hours.

We first noted the results of establishment and encroachment of a bed of marsh grass across what had been a sandy bathing beach 25-30 years ago. Countless mud snails coated the rich ooze just beyond the grassy area. The same process is now taking place inexorably on the north side of the wharf.

We then dug into the seeming barren sands and muds and innumerable Corophium crustaceans, fine red worms, and larger jawed worms were revealed. It is these creatures that are the prime food items of the numerous fish and birds that live here as well as those fish schools and bird flocks that feed here only during their migration.

We then examined the sandstone outcrops and their tide pools and noted in particular the grey coating of millions of barnacles (sort of sessile "crabs" with their heads cemented to the rock and their legs waving above them). Beneath the rock islands was a beard of green sea lettuce and brown colonies of hydroid animals. The barnacles coated the mussel beds as well, and even the backs of tiny snails. Little hermit crabs were really abundant, and shells of the interesting, warm-water, southern Lady Crab and Spider Crab were found. There were snail egg cases and adults, tide pool "eels" (rock gunnell), algae, sponges, bryozoans, shrimps, hydroids, rock drilling clams, eider ducks, and so on, each cog in a complex biotic clockwork set to a 12 hour and 25 minute rhythm that provides yummy mud for astronomical numbers of voracious little tummies.

NATURE REPORTS

WET WEATHER

By Larry Bogan
Cambridge, N.S.

Wet! I am sure that any of you would describe early summer this year with that word.

How wet? The weather records at the Kentville Agricultural Center show that May had twice the average precipitation for the month, while June had more than three times the average. We got 382 mm of precipitation versus the usual 161 mm during those two months. In May some of that precipitation was 22.2 cm of snow, 2/3 of which fell on the 3rd of May while the rest fell on the night of the 8th. What is normal for May? 1.6 cm!

Surprisingly, the number of bright sunshine hours was normal in May as was the average temperature. June was cloudier than normal with about 3/4 the sun we normally get, and as a result the average temperature was 0.8 C lower.

But don't forget the Spring. March and April were actually 'better' than average. They were sunny, with 26% more sunny hours than average. March had normal precipitation and April was 'dry' (3/4 the usual precipitation) but with twice the usual snowfall.

On the April summary of weather from Ed Read at the Research Station, there is a reminder of the dry weather we have had during the October 1984 to April 1985 period. The 30 year mean for precipitation between October and April is 772 mm while we got only 520 mm. That is a deficit of 252 mm for the winter and spring. May and June has replaced most of that deficit with its 221 mm excess. I guess everything evens out in the end.

TRIVIAL TIDBITS
OF LOCAL NATURAL HISTORY NO. 6
compiled by Jim Wolford

What	Where	When	Who
65 seals	Ice flows P.E.I.	3 Apr	BBT
15 kg striped bass	Annapolis River	3 Apr	-
Great cormorant	Lumsden Reservoir	5 Apr	BLF
First spring peeper heard		6 Apr	CKC
Yellow-headed blackbird	Wolfville	10 Apr	FP
2 red crossbills	Wolfville	11 Apr	ES
"	Wolfville	16 Apr	JSB
13 Bohemian waxwings	Wolfville	12 Apr	PCS
Snow goose	Canning	12 Apr	MG
"	"	16 Apr	MT, JW
Two adult gannets	Avonport	18 Apr	RB
Singing palm warbler	Wolfville	19 Apr	BLF
24 snow geese	Amherst Bird Sanc.	20 Apr	BBT, JT
Exceptional northern lights		20-21 Apr	RB, JT
White crowned sparrow	Wolfville	21 Apr	BBT
2 otters, 2 barn swallows	Harris' Pond, Canning	21 Apr	AE, MG
Glaucous & 2 Iceland gulls	Sewage Pond, Wolfv.	21 Apr	ES
Smelt running	Gaspereau River	23 Apr	CKC
Mockingbird	Wolfville	24 Apr	JSB
Black-backed woodpecker	Gaspereau	24 Apr	ME
Orange-crowned warbler	Wolfville	27 Apr	ES
Nashville warbler	Wolfville	4 May	MG, JW
Hooded merganser	Starr's Point	4 May	ES, MG, JW

What	Where	When	Who
Bloodroot in bloom	Smiley's Prov. Park	5 May	HFN
2 glossy ibis, turkey vulture	Bier Island	5 May	RS
2 young G.horned owls in nest	Kentville Bird	S-9 May	JGT
Albino tadpole	Wolfville	12 May	JT
Many surf scoters	Minas Basin Shores	midMay	MG
2 male surf scoters	Lumsden Reservoir	midMay	BLF, HF
600 chimney swifts	Acadia U. chimney	14 May	JW
Southern flying squirrels	Gaspereau woods	17 May	ME
Black-backed woodpecker	Paradise	18 May	NSBS
Worm-eating warbler	Brier Island	17 May	ES
Brown thrasher, lark bunting rufous-sided tohees, Lincoln sparrow	Brier Island	18 May	ES, SIT
Painted lady Butterflies, purple sandpipers, Philadelphia vireo	Brier Island	19 May	MT, JW
Wood ducks, gadwalls, shovelers	Brier Island	19 May	ES, SIT
Scarlet Tanager	Brier Island	19 May	RS
Thousands of terns leave	Peter Island	19 May	RS
Sora rail heard	Starr's Point	19 May	BBT, JW
Downy yellow violets, trout lilies in bloom	Blomidon Prov. Park	20 May	MT, JW
Mourning dove nest +eggs	Wolfville	20 May	JSB
Bonaparte's Gull	Canning	20 May	LL
Glaucous gull	Wolfville	20 May	BBT
Nighthawk	Wolfville, Gaspereau	22 May	JW, ME
Scarlet tanager singing	Wolfville Ridge	24 May	JGT
All black woodchuck	Truro	25 May	MT, JW
Sora rail nest + 12 eggs	Starr's Point	28 May	BLF
Pied-billed grebe	Starr's Point	28 May	JW
Otter	Canning farm pond	Jun	MG
Luna moth	south of Kentville	4 Jun	MV
Large dog-fish shark seen	salt-marsh Kingsport	4 Jun	JSB
Black morel mushrooms	Wolfville yard	9 Jun	JT
Northern Lights	Wolfville	9 Jun	CM
25 large morels	Brooklyn (Hants Co.)	11 Jun	TH
Ram's head lady's slipper	near Windsor	14 Jun	JW
Spotted coral-root orchid	Wolfville	16 Jun	BLF
Great crested flycatcher	Kentville Ag Center	18 Jun	JW
Pair of shovelers	Port Williams, Canard	22 Jun	BBT, JT
Great horned owl	Acadia U. campus	27 Jun	GP, CKC
Adult polyphemus moth	Wolfville	27 Jun	GP

What	Where	When	Who
Showy lady's slippers	Smiley, s Prov. Park	30 Jun	BLF, BBT JT, JW, LAB
2 Peregrine falcons	Cheverie	2 Jul	KLC
84 dowitchers (early)	Avonport	3 Jul	SB
Raccoon den with young	Wolfville	10 Jul	RN
300+ swifts in chimney	Wolfville, Front St.	11 Jul	JW

CONTRIBUTORS: Sherman Bleakney (JSB), Larry & Alison Bogan (LAB), Roy Bishop (RB), Sherman Boates (SB), Cyril Coldwell (CKC), Karen Casselman (KLC), Tony Erskine (AE), Mark Elderkin (ME), Bernard Forsythe (BLF), Harold Forsyth (HF), Merritt Gibson (MG), Tom Herman (TH), Jerry Karttunen (JK), Lance Laviolette (LL), Cethlyn MacKay (CM), Halifax Field Naturalists (HFN), Ruth Newell (RN), Fred Payne (FP), Greg Pace (GP), N.S. Bird Society (NSBS), Edgar Spalding (ES), P.C. Smith (PCS), Richard Stern (RS), Brenda & Bill Thexton (BBT), Jean Timpa (JT), Judy & Gordon Tufts (JGT), Miriam Tams (MT), Stewart Tingley (SIT), Michelle Vaughn (MV), Jim Wolford (JM),

Thank you all!

PANTHERS!

by Bill and Brenda Thexton
Wolfville, N.S.

The following two reports were taken from a book titled "The Eastern Panther" which was published in 1972. The author, Bruce S. Wright, was Director of the Northeastern Wildlife Station at the University of New Brunswick.

Panther observations used in the book include 26 from Nova Scotia and many from New Brunswick, Quebec and United States. Perhaps some of you have recent local reports of this elusive and rare animal that you would like to forward to the B.N.S. Newsletter.

Avonport, Kings County - "On March 11, 1954, a resident of Avonport, Kings County was returning home about midnight when a large animal jumped out in front of his car. He had to stop to avoid hitting it. The next day, L.A. Duncanson, the taxidermist of the Provincial Museum, made plaster casts of the animal's tracks. These were sent to the United States National Museum for identification.

On March 31, 1954 the answer came back from Stanley P. Young, Biologist, Section of Distribution of Birds and Mammals, United States Fish and Wildlife Service.

'...Regarding the cast from Avonport, there is no doubt in my mind, and this is confirmed by Dr. H.H.T. Jackson, that these are puma tracks.'

Thus was the existence of the panther in Nova Scotia confirmed for the first time."

Scotch Village, Hants County - "On March 22, 1964, the snowplough operator from Scotch Village, Hants County, was nine miles from the village on the Watters Road. He observed an animal killing a fawn deer on the road ahead at one-quarter of a mile. It dragged the fawn off the road ahead and began to eat one haunch as the operator watched. Its tracks were three and three-quarter to four inches across, and the animal was heavy enough to sink six to eight inches in heavy snow. The observer called it a cougar."

Note: A copy of this book is currently in the Wolfville Library.

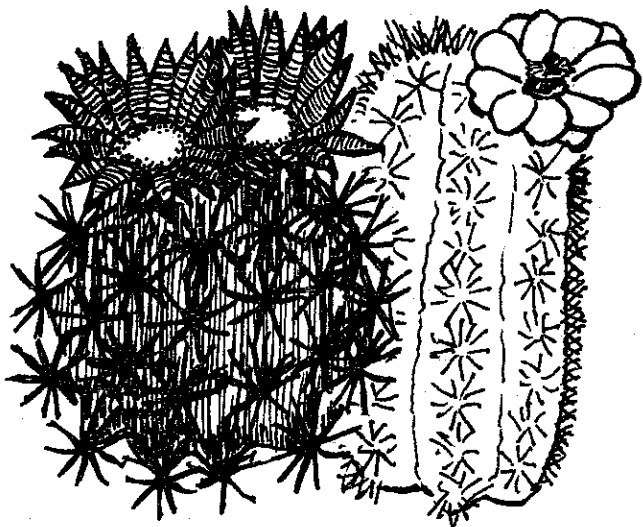
A LITTLE MORE ABOUT CACTI

by John A. Pickwell
New Minas, N.S.

Sometimes I get asked about a problem with someones cactus plant only to find out the plant is in fact not a cactus. So before we go any further, let's clear up what is and what is not a cactus. First a cactus is a succulent plant of the cactus family. However, not all succulents are cacti. Many other plants from many different families can be succulent. That is, they can store water in their leaves or stems in time of plenty to be used when water is short. Cacti are only one of the succulent plants and differ from them and from all other plants for that matter, in their basic structure. Although there are about two thousand or more species, very distinctive and diversified from one another, they all have structures in common. All the families span the two American continents. Other deserts have their own set of succulent plants. Some cacti inhabit the arid regions, others are forest dwellers and are perched on trees. Some of the

latter type, known as epiphytes, are vine-like and produce long, straggling shoots. Because of the lack of fossil cacti, the cacti relationship with other plants is uncertain.

Cacti flowers differ from those of all other plant families; they have a single flowers with the many petals and sepals with their bases joined to the ovary; numerous stamens are in the cup or tube formed by the union of the sepals and petals. The other structure all cacti possess in common is the "areole" (spine cushion) and provides the best way to tell cacti from other succulents. The areole is a small growth center that can be readily seen on any barrel-type cactus. From it comes the spines, flowers, and in a few cases, leaves. Most cacti lose their leaves at a very early stage of growth. In the epiphyte cacti (Christmas Cactus, Orchid Cactus, etc.) the areole is far harder to see. However, if we look at the place where one segment joins the next, small hair-like spines can, in most cases, be found. In the *Opuntia* cacti, there are also small bristles (glochids) which are barbed and are bad if you get the in your skin.



Regardless of the foregoing, in practical terms, since most succulent plants grow under the arid or semi-arid conditions, their treatment in cultivation is almost the same. The key to the whole thing is water control and starts with the soil. In nature they grow in widely different conditions. In cultivation we are not growing them in natural conditions so that over the years most growers have developed their own soil mix. The two main purposes of the soil mix is

to provide the elements needed for growth and to hold water just long enough for the plant to absorb it, not long enough to cause root rot. Since the soil needs to be open to let surplus water run away, it follows that the elements needed for growth are leached out after a time. It is best, therefore, to use a weak liquid fertilizer through the growing season. The roots of most succulents will not stand harsh treatment, so care must be taken with such fertilizers; if in doubt, leave it out; better to repot more often. Never use pots that are too large, as they do not dry out quickly enough, and clay pots are by far the best. The soil mix that I have used over the years consists of 1/3 coarse sand, 1/3 good garden loam, and 1/3 peat moss (I use chick grit for baby chicks as the coarse sand).

I use the common household plastic pail to mix the soil, and add a cup of bone meal or bone-meal, rock-phosphate mixture. Also I like to add up to two cups of fine dry cow dung or sheep dung. If you can manage, some charcoal and/or some oyster shells, so much the better. These days, I use 2/3 Nova Mix to 1/3 grit as my basic soil; it also saves on mixing. Some plants will need a little more or less grit in the basic mix. This is something you will learn over the years, but you will not be far out with the above mix. The one class of cacti that need special attention is the epiphyte cacti. Their mix should have less grit and more peat and cow dung. Do not use oyster shell or bone meal in this mix.

The next thing to consider is watering, and here again I can only use a general plan; remembering that epiphytes need a little more than a barrel-type cacti. Starting with the growing season, we begin giving a little water in March. This should be increased as the new season's growth begins; by the end of April, it should be once a week. This is the time that they are most likely to get root rot. In April, May, and even June, it helps to add a little "no damp off" to the water, along with your liquid fertilizer. Through the rest of the summer they should be watered whenever they dry out. September is the time to start tapering off watering; in October water about once every two weeks; in November and December stop watering and don't start until March. This is the all important resting time for cacti, the time when they make their flowers for next summer. This is the time to give them all the light from the south they can get. If they are a window they should be close to the glass. Any high

temperatures while resting would start them growing again and would spoil everything. On the other hand, they should not drop below freezing. The rest is up to luck, because Nova Scotia with damp, cold weather, most of us who grow cacti, have our failures.

FROM OTHER PUBLICATIONS

IS A TROUT A TROUT?

By Barry Sabean
from "Conservation"
Spring 1985

Most fishermen know that several different types of fish are commonly called trout. Nova Scotia has four species, the native brook trout and lake char as well as the introduced rainbow and brown trout. The most abundant of these by far is the brook char which is almost always referred to as the brook or speckled trout. This article discusses the possibility that not all brook trout are the same.

Brook trout probably found their way to Nova Scotia shortly after the last glaciers receded from the province about 13 000 years ago. The fish's tolerance of salt water enabled them to spread along the coast from watershed to watershed. Although their strong homing tendency would have slowed this colonization to some degree, there were enough strays to ensure that all the suitable and accessible freshwater habitat was eventually occupied.

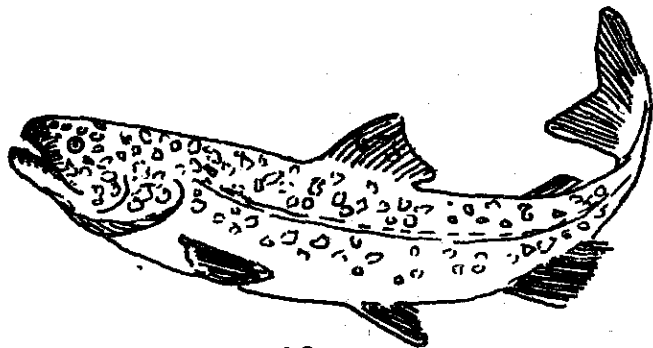
The process of natural selection took place during the establishment of trout in any stream or lake and has continued since. Those individuals that were best adapted to a particular environment were the one most likely to survive, reproduce and pass on their superior characteristics to succeeding generations. Less well adapted individuals usually died without reproducing and their characteristics were lost.

Since there are many small relatively isolated watersheds, each with a wide variety of habitats around the province, there are likely to be many genetically different populations or stocks of brook trout throughout the province. Each of these stocks has had its biological and behavioural characteristics fine-tuned by natural selection for the particular water quality, habitat types and other fish species within its particular environment.

Although there has been little research on trout stocks in Nova Scotia, this concept of discrete stocks has been well documented elsewhere in North America. A good example can be found in the cutthroat of Yellowstone Lake, Wyoming. In that lake, some trout spawn in inlet streams, and some in the outlet. Both populations of trout fry migrate to the lake soon after hatching but those in the inlet must go downstream to reach the lake and those in the outlet must go upstream. It has been shown that if the eggs are transplanted to another stream, one group will still migrate upsteam and the other downstream. These migratory responses are controlled by the fish's genes. Similar results have been found for sockeye salmon and rainbow trout.

Another example was found during stocking of lake trout in New York State. Lake trout taken from a population native to an Adirondack Lake returned 16 time more fish to the fishery than did the offspring of lake trout native to the Finger Lakes region. Apparently the Adirondack stock was genetically better adapted to the stocking location than were the Finger Lake trout.

This concept of different stocks of fish within a species has been recognized by fishery biologists for some time and it poses some interesting management problems. AS already mentioned, it has taken thousands of years of natural selection in Nova Scotia in order to create stocks of brook trout with the proper mix of genetic characteristics to do well in their particular environment. Undoubtedly, some of these stocks have already been lost though pollution, habitat distruction and dams. There is also a growing concern that past stocking practices may have contributed to the loss of some of our wild stocks. The protection of these individual



wild stocks must be a high management priority.

Hatchery trout, especially those which have been bred in a hatchery environment for several generations, tend to have very different genetic characteristics from wild trout. Obviously, genetic traits which allow a fish to do well in a hatchery environment may not have the same survival value in the wild. Hatchery fish breeding with native fish may result in genetic characteristics with poor survival value. These genetically inferior fish are usually "weeded out" of a population through natural selection but continuous stocking combined with the heavy angling pressure change the gene pool of a native stock with disastrous results.

Indiscriminate hatchery programs, where the importance of genetic differences was not considered, are a thing of the past. Nevertheless hatcheries remain a valuable tool in modern fisheries management. In areas close to population centers, heavy fishing pressure leaves few management options other than intensive stocking. Also, some areas do not have enough spawning or rearing area to support a viable fishery without hatchery assistance. Great care must be taken, however, not to call for the hatchery truck whenever a trout population is thought to be smaller than it once was. In areas where wild populations are capable of sustaining themselves, their unique genetic characteristics need to be protected. Management options include fishing regulations, habitat improvement or careful use of hatchery techniques such as using the depressed native stock as a brood source for the hatchery.

Wild trout are our "gene banks" for the future. For the benefit of future generations, these stocks must be managed carefully, and their habitat protected.

MORE ON TURKEYS

by Tony Duke
from "Conservation"
Spring 1985

Last fall we outlined the Department's (N.S. Lands and Forests) plans concerning a proposal to introduce wild turkeys to the province. Our readers' response was positive - some even volunteered to help. Biologist Paul Tufts visited Maine where he saw recently introduced turkeys doing quite well in habitat much like parts of Nova Scotia. We feel the

most promising area for a trial introduction might be along the edges of the western end of the Annapolis Valley.

However - our concern now focuses on competition with pheasants for food and cover. Both species may use the same food namely seeds, grasses, fruit, insects, spilled grain and spread manure. These may become limited especially during the winter with long periods of deep snow. Since Nova Scotia is the most northerly place pheasants can survive the winter on their own in eastern North America, we must not endanger these birds, which have done well since their introduction in the 1930's

Other concerns are potential hunter/landowner conflicts, preventing the spread of disease and the nuisance factor. More time is required to provide answers to these concerns before attempting the introduction of this popular gamebird.

A TRIBUTE TO ROBIE WILFRED TUFTS, 1884-1982

by W. Earl Godfrey
National Museum of
Natural Sciences

The death of Robie Wilfred Tufts on November 1982 in Wolfville, Nova Scotia, in his 99th year, marked the close of an era in natural history and conservation circles throughout and beyond the Maritime Provinces. Pioneer in the interpretation and enforcement of the federal migratory bird laws; fluent writer of books, articles, and essays on birds; inspiration and career-maker of many young bird student, he reached and influenced many people in all walks of life. For over half a century he was the chief spokesman for bird welfare in the Maritimes, his name synonymous with rightness of the conservation principles he so ably supported.

Robie Tufts was born on 11 August 1884 in Wolfville and he lived his entire long life there. His father Dr. John Freeman Tufts, was Professor of Economics and Political Science at Acadia University and sometime Principal of Horton Academy. His mother, Marie Woodworth Tufts, was principal of Acadia Ladies' Seminary, a botanist, and a connoisseur of literature. Thus, from his parents, Robie inherited an aptitude in the natural sciences, in the effective use of words, and in practical affairs and money management, all of which were to stand him in good stead.

As happens often in the careers of successful naturalists, Robie's interest in nature was early acquired. While he and his older brother, Harold, were still young children, they were introduced to field work by their mother who took them on local plant collecting trips. In the meadows, marshes, and wooded hills surrounding Wolfville the innate interest of the two brothers flourished and soon focused irrevocably on birds.

As was the custom in those days, the collecting of birds' eggs was high in their priorities and they collected also a small number of birds for scientific purposes. They kept meticulous records of their observations and were unusually skilful in the preparation of bird specimens. Thus the brothers grew into manhood, both of them keen and competent ornithologists.

Salaried careers in ornithology in those times, however, were few and hard to come by. Consequently Harold turned to dentistry and set up a successful practice in Boston, Massachusetts, where he lived until his retirement. Robie, who disliked living in a large city, remained in Wolfville and, on completion of his education at Acadia University, entered the world of finance with the local branch of the Bank of Montreal. At the bank, his shrewdness in money management stood him in good stead although his interest in birds remained always paramount. He spent as much of his spare time as possible observing the local birdlife and eventually published an unusually well-written and accurately documented annotated list of the birds of the Wolfville region (Tuft 1917).

It became a matter of increasingly deep concern to Robie that the numbers of many birds, particularly game birds and the birds of prey, were steadily declining due to over shooting and the lack of effective game laws. He followed eagerly progress of consultations between Canada and the United States on the drafting of continental laws designed for the protection of migratory birds. When the Migratory Birds Conservation Act, the enabling legislation under which Canada was to carry out her commitments, was drawn up in 1918, Robie left his position wht the bank and applied for one as a district administrator under the new Act. In 1919, he was appointed the first Chief Federal Migratory Birds Officier for the Maritime Provinces, charged with two primary duties: education of the public in bird conservation and the enforcement of the bird laws.

Armed with a pioneer's conviction of the rightness of the new laws and the enthusiasm, energy, and fearlessness to enforce them, he lost little time in taking up his new duties. He travelled widely throughout the Maritimes, meeting with the leading bird hunters and organized sportsmen. He lectured to adult audiences in the evenings and visited schools by day. He was remarkably successful in enlisting support. Still there were many who openly rebelled against the new restrictions on their hunting, some of them violent and dangerous; but that never deterred Robie as he proceeded to enforce laws impartially and vigorously - indeed too vigorously by some standards! His guidelines were to "hew to the line and let the chips fall where they may". He followed those guidelines to the letter. As he (Tufts 1975) explains it:

"During the first 13 years - 1919 to 1932 - we recorded 679 convictions, so many in fact that (according to an admission latterly received from my superior officers) the top brass in the political arena in Ottawa were so bothered by complaints that kept coming in from Members whose party supporters at home had run afoul of the bird-laws and been fined, that in 1932 all of my full-time assistants were fired. As for myself, I was instructed to stop law enforcement activities and in future to act as liaison officier with the R.C.M.P. who from then on would enforce the Migratory Birds Act."

No matter, by that time Tufts has broken the backbone of resistance to the bird laws and had accomplished the general purpose of the Act.

He was by no means ruthless in his treatment of law-breakers unless such treatment was well deserved. Indeed, he was extremely sensitive to the spirit of the law and to the intent of the law-breaker. It is well known that on more than one occasion he paid out of his own pocket the fines of persons who technically broke the law but did so under extremely extenuating circumstances. He was forever looking for the good in people and he often found it. As one of many example, the first caretaker of Seal and Mud Islands Bird Sanctuary, appointed on the basis of Robie's recommendation, was a man whom Robie had formerly prosecuted for illegally taking wild bird eggs from a large tern colony there! Robie correctly read his character and the man faithfully performed his caretaker duties for the rest of his life.

Dr. Tufts enjoyed helping deserving people and few there were who came to his door were turned down. Often when he had no work for them he invented some. He derived particular pleasure from encouraging and helping serious young bird students, and through him the small town of Wolfville produced undoubtedly more native sons who successfully found ornithology-oriented careers than any other town of its size in the country! He had an amazing ability, unique in my experience, to inspire so much enthusiasm for the work that transcended all obstacles and the inevitable disappointments. He wisely instructed his proteges in the fundamentals of ornithology and impressed on them the necessity of a formal education. Once convinced that his proteges showed real promise, he was tireless in searching for a job opening for them, anything that could give them a start. He had many influential contacts who highly respected his judgement and his success in finding foothold employment for his proteges was truly outstanding. Therein lies another of his major accomplishments, for his students went on to hold positions, including some of the highest, in museums, universities, wildlife management organizations, and other institutions in both Canada and the United States.

A fine figure of a man, tall, slim, quick, handsome, and charismatic, he immediately created a favorable impression in people of all ages and both sexes. This certainly was an important ingredient in the success of his career. He possessed tremendous energy and was inclined to run as often as he walked. He did just about everything well. He invariably went far in tennis tournaments for many years and he was the best wingshot I ever hunted with. He was an excellent woodsman with an uncanny orientation ability. In specimen preparation he was a perfectionist. He wrote easily and well, and as a story teller he could hold an audience for hours.

When I was a boy in Wolfville, it was a red letter day when he took me afield with him. At no time did it ever occur to me to doubt for a moment his ability to cope with any difficulty we encountered whether it was handling a canoe in roughest water, maintaining a walking course through the most confusing terrain, or rounding a hairpin turn in the road at something well in excess of the speed limit! Indeed we boys looked up to him as a sort of Superman and I guess he was.

For many years an evening of poker with several friends, each of whom took his turn at hosting the game, was a

favorite relaxation. When conferences took him to Ottawa, there was sure to be poker session which included Robie, the Hoyes Llyods, P.A. Taverner, and others. Although the stakes were low, rivalry ran high over the years. As Taverner expressed it, "Robie Tufts of Nova Scotia has been here for a week or so and there have been some wild poker nights.... I was lucky enough to escape the worst that broke up at 4 a.m. and I think I broke about even, but there was some weeping and wailing and a smile on the face of the tiger."

As an oologist, he often found it necessary to climb trees. He was injured by falls several times but this never restrained him. Once while recovering from one such serious mishap he saw fit to hire a telephone linesman to climb a formidable tree. When the linesman saw the tree, he took one glance at it and refused. Robie borrowed the man's climbing irons and climbed the tree himself despite his injury.

Dr. Tufts had a passion for fireplaces and he had a way with them. He could quickly transform the sullenest embers into a crackling fire, one of the charms of his study. Up almost until his last summer, he harvested firewood with chainsaw and axe, and his spacious basement bulged to the ceiling with cords of it. As Don Crowdis, a longtime associate of Robie's observed "He had a truly great talent for friendship and his fireside warmed the great and the small, the scholar and the player of games, the rich and the not-so-rich. Enough wood went into it to rebuild Wolfville and enough living went on in that study to fill several lives."

It is my own good fortune to have known Dr. Tufts for most of my life. Although I was a boy when I first met him, every detail of that meeting is as clear as though it happened yesterday. It was in April and there were birds in the bare branches of a Wolfville apple orchard. Another boy and I were taking practice shots at the birds with our homemade slingshots when suddenly an impressive figure dashed up, seemingly out of nowhere. He introduced himself as Robie Tufts, promptly confiscated our slingshots, and severely reprimanded us. Just when we were contemplating the prospect of a lengthy period in some reformatory, his voice softened and he instructed us to appear at his office at a later date.

At the appointment time, days later, we were at his doorstep. We were pleasantly welcomed by Dr. Tufts into the most intriguing office I ever encountered. There were paintings of birds by famous artists, cabinets of mounted

birds far more beautiful than I ever imagined mounted birds could be, shelves of bird books, a warm and redolent fireplace. In that enchanting setting, the Robie Tufts enthusiasm and charm quickly converted two misguided boys into lifelong conservationists. That was my introduction to the treasured friendship of Robie Tufts, a friendship that was to grow and endure and become a never-failing source of inspiration, guidance, and freely-given help of all kinds for over half a century.

Dr. Tufts officially retired from the Canadian Wildlife Service in 1947, after 28 years with that organization. His bird work continued unabated but now with greater emphasis on writing for publication. He contributed articles and notes to various scientific journals, especially "The Canadian Field-Naturalist", and for many years his popular newspaper column entitled "Woods, Water and Sky" appeared weekly in the Halifax Chronicle-Herald. In 1972, he combined a selection of these newspaper essays into a book entitled "Birds and Their Ways". Other books from his pen include "Looking Back", which appeared in 1975, a well written narrative of 15 of his exciting experiences as a migratory bird officer. In 1978, he published "Nova Scotia Birds of Prey". Most successful of all was his authoritative book "The Birds of Nova Scotia" in which he brought together the fruits of a lifetime of observation and record-keeping. The first edition appeared in 1962 and it was followed in 1975 by a completely updated new edition. Both editions were quickly sold out and are now collector's items.

Well deserved recognition came abundantly in later years. He was the recipient of honorary doctorate degrees from Acadia and Dalhousie universities. The laboratory of ornithology at Acadia University was named in his honor. A bird, a subspecies of the Longeared Owl (*Otio otus tuftsi*), bears his name. He was an Honorary Member of the Ottawa Field-Naturalists' Club. In addition, he was the first president of the Nova Bird Society, and he held high official positions in the Nova Scotia Fish and Game Association and other wildlife organizations.

Surviving are his wife, the former Lillian Thompson and one daughter, Virginia (Mrs. Allison D. Pickett), Deep Brook, Nova Scotia. He was predeceased by his first wife Evelyn, a sister Hilda, and a brother Harold.