Miramichi Wildlife

by Harry Walker

What to do with carpenter ants

From Harry Foran of Trout Brook comes this question: How do you get rid of Carpenter Ants?

Some of Harry's neighbours have been faced with this problem ever since they had some new cupboards built into their home, and it is suspected that the ants came in with the new lumber that was used in constructing the cupboards.

About a year ago, we were faced with this same problem. And, similar to the case mentioned above, the ants appeared in our house after a section of one wall had rotted out and had been torn down and rebuilt. These ants were not concentrated in any one area of the house but would be found wandering about anywhere; usually on the floors, but sometimes on the walls, in the bathtub, or elsewhere. We never found their nest, and presume that it was somewhere inside the walls.

My wife sent three specimens to the Department of Agriculture in Ottawa where they were identified as Black Carpenter Ants. An insecticide dust containing 5 per cent Chlordane, or 5 percent Carbaryl, was recommended as a means of eradicating them. We obtained such a product in Newcastle. It was called Ant and Grub Killer insecticide dust, and it proved effective.

AWAY FROM PETS, CHILDREN

It is a strong poison, and it was placed under and behind furniture where children and pets could not get at it, but where the ants could travel.

The letter from the Department of Agriculture also contained this information about Carpenter Ants:

"Carpenter Ants, the largest of our Common ants, can be seen in infested buildings at any time of the year. The brownish to black workers range in length from six to 12 mm. (one-quarter to one-half in.). A queen may be more than 25 mm. (one inch) long. The ants usually choose damp or unsound wood for digging out their tunnels and nesting cavities, although they can and sometimes do tunnel in sound wood. The small particles of wood resembling sawdust that they eject from their tunnels can be useful in locating a nest. But if their nest is in a concealed place, as studding in a wall space, you may not see the sawdust. They do not feed on the wood, but on a wide variety of animal and vegetable products.

NESTING OUTDOORS

"Outdoors, carpenter ants nest in old trees, stumps, posts, or logs. They often infest buildings, particularily outside woodwork such as verandas and. wooden steps, and sills next to foundations, especially if they are damp. A new colony may be started by a single fertile queen or by part of an old colony. Infested

The Illustrated Encyclopedia of Animal History contains an older remedy for the problem we are here dealing with. It contains this recipe for a poison mash which is said to be effective against Carpenter Ants:

Add Paris green or arsenate of lead to a mixture of bran and molasses, with only enough water to make a thick paste. Place this mixture where the ants will find it but where no other creature can get at it. The ants, upon finding it, will carry enough of it home to feed the queen and thus poison the entire colony.

Information regarding pest control problems can be obtained from: Plant Industry Branch, N.B. Department of Agriculture and Rural Developement, Fredericton, N.B., E3B 5H1.

NATURALIST CLUB

There will be a meeting of the Miramichi Naturalist Club on Wednesday Jan. 16 at 8:00 p.m., at the home of Mrs. Sara Lounsbury, 121 King St., Chatham. Bob Lefebvre of Cassilis, an experienced trapper and woodsman, will be present at this meeting to answer questions about trapping. All are welcome.

Also, on Saturday Jan. 19, the Miramichi Naturalist Club will be having a field trip to the Fowler Lake--Kennedy Lake Wilderness Area. Those interested in taking part in this field trip should meet in front of the Sinclair Rink in Newcastle at 8:00 a.m. And again, all are welcome.

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"At certain times ant colonies produce winged adults. These winged ants swarm in mating flights from April to June and may often be a nuisance around homes.

"Several precautions can be taken to prevent infestation. Remove decaying wood from around your home or other buildings. Don't store firewood for a long time or bring infested pieces indoors. Provide good ventilation in your house and good drainage around it so that any wood used in the building stays dry. Wood to be used where dampness may occur should be treated with a preservative. Get rid of your garbage quickly. Store food in safe containers and keep your kitchen counters and shelves clean. A few crumbs or drops of syrup can feed many ants."

WINGED ANTS

I might point out here, that for a period early last winter, almost all of the ants in our house had wings. Perhaps, the fact that they were inside where it was warm resulted in the winged ants appearing earlier than is normally the case. Throughout the previous fall, pratically none of these ants had wings.

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Miramichi Wildlife

Jan. 19/80

by Harry Walker

Naturalists act as watch dogs"

In the Dec. 79 issue of the N.B. Naturalist is an editorial entitled **The Role of the Naturalist** by Donald McAlpine and Barry King. (The N.B. Naturalist is the official organ of the New Brunswick Federation of Naturalists). Part of this editorial is as follows,--

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

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

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

"WATCH DOG"

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

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

REAL RESPONSIBILITY

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

The N. B. Naturalist is to step up its publicaiton from four to five issues a year starting in 1980. It contains feature articles by various New Brunswick naturalists, as well as nature news.

Nature news includes unusual reports of birds, mammals, plants, etc., throughout the province. Subscription price is $3. per year, to be sent to Janice Dexter, 956 Dever Road, Saint John West, N.B., E2M 4J3.

This price includes membership in the New Brunswick Federation of Naturalists.

Miramichi Wildlife

Jan. 26/80

by Harry Walker

Provincial bird? No crows, please

A campaign is underway to select a provincial bird for New Brunswick.

Henrik Deichmann, park naturalist at Fundy National Park, and his wife Joanne have been thinking about this. A letter received from Hank reads as follows:

"Joanne and I have been talking over the Provincial bird (no crows please) idea, and of course, there not being much to do in Alma, except hike around, we thought we'd share some ideas on the topic...

"Taking it phylogenetically, the ones we thought deserving further assessment might go like this: Common Loon, Black Duck, Ruffed Grouse, Great Blue Heron (better for P.E.I., which has already selected the Blue Jay), Woodcock, Herring Gull, Puffin (a fun bird), Saw Whet Owl, Hermit Thrush, Dark-eyed Junco, White-throated Sparrow.

MORE DETAIL

"Now for some detailed approaches on these same species,--

"Common Loon: A great bird, almost pre-historic, and that eerie cry, call or song. Also so beautiful to look upon, especially when in full breeding plumage. Unfortunately not common all over N.B., maybe better for another area.

"Black Duck: What bird is more New Brunswick than a Black Duck! It nests just about every suitable place. Often in the spring a female will be seen flying low up a small brook to some secluded nesting site near a dead water or a small pond. And Black Ducks raise big families, often up to 10. The Black is one of the wariest and most alert of the ducks. Also they spend as much of the year in New Brunswick as possible, wintering both on the Fundy coast and on swift flowing sections of many of the rivers. Also the Black is not black, but really a rich brown, a sort of woodland Mallard, a beautiful practical kind of duck, unfortunately being interbred with the Mallard too often for its own good.

GAME BIRD

"Ruffed Grouse: Often called the Birch Partridge, this bird is known and sought after as a game bird throughout the province. The grouse is well known to most people for the drumming of the male in the spring. An old Malicite legend relates how the thump, thump, of the ruffed grouse, is evidence of this bird's successful canoe building as compared to the failure of the Loon (who presumably wails on account of his failure)

"Woodcock: Also called Timber-Doodle, and Alder Sky Dancer, this bird it is true is rarely seen by most people; however, nearly all who have been out in a spring evening in the country, have heard the almost exotic courtship fight song of the male. According to researchers, New Brunswick is a major breeding territory for the Woodcock, it being as common here as anywhere in eastern North America. It is found throughout the province, preferring old fields, but also utilizing cutovers, and other forest openings. The Woodcock returns quite early in the spring, often before the end of March, and stays regularly to mid Oct. or later.

SCAVENGER--WHY NOT?

"Herring Gull: Why not! Common, attractive, and highly visible. Certainly a noteable scavenger. Biologists and naturalists would resent more than most people, the gull's predatory tendencies towards terns, eiders, and other marine species. The point is that Herring Gulls are now much more common than pre-white man. I believe this species would be found (near water), just about everywhere in the province, however it would be most obvious on the sea coasts.

"Saw Whet Owl: According to D.S. Christie, the type specimen is from New Brunswick. The call does sound somewhat like a saw being whetted (sharpened). I believe they're fairly common in New Brunswick and some try to winter. I remember being thrilled on a Christmas Count to find one on a rafter in a hay barn. (It was the first my son had seen). Most people who travel the woods will eventually find one being mobbed by chickadees, and other small birds. One that I once saw was hiding close to the trunk of a cedar. The smallest provincial owl, and being a modest bird, a fitting symbol for N.B.

FINEST SINGER

"Hermit Thrush: This species is quite common in N.B. and spends a relatively long time with us; from early April to November, and rarely into winter. To quote Godfrey in **Birds of Canada**; the Hermit Thrush "is considered by many to be the finest singer of all North American birds. Its ethereal music, with its clear bell-like notes, is especially effective in the quiet of a north woods on a summer evening? Of the Hylocichla thrushes, this species with its rusty tail and its habit of raising and lowering the same appendage, makes it fairly easy to identify. However, it like the other three species of thrush found in our area, is fairly shy and retiring, and may be difficult for the non-birder to identify.

"Dark-eyed Junco: For distinctive colour and pattern, it would be difficult to find an equal among the perching birds. The Junco is a common nester, migrant and is fairly regular in winter in the southern part of the province at least. Its trilling call is pretty, but neither as remarkable, nor given with as much enthusiasm or frequency as the clear whistle of the White-throat. A plus for the Junco, is that it comes readily to feeders, and for this reason it could become quite popular with children.

COMMON SONG

"White-throated Sparrow: I agree with John Livingstone, that probably more people recognize the 'Old Sam Peabody, Peabody, Peabody' song than would recognize the bird, by its physical appearance only. The song may also be rendered 'Sweet Canada, Canada, Canada' as well. Some New Brunswickers, call the White-throat the 'Sam Peabody Bird'. Although the White-throat is common in Ontario, Quebec, and Newfoundland, it is certainly one of the commonest birds in New Brunswick, being well-adapted to our cut-overs, field edges, and openings in the mature forest. Not only does it have a simple song, easy to recognize, but it sings so constantly during the breeding season, that it's difficult to miss. Personally I've heard it singing as late as 11:00 p.m. in June, and have often had other observers speak of this trait.

"As this bird sings as early as dawn or 5:00 a.m. on the longest days, it's conceivable that a particular individual may in fact sing for as much as 18 hours, a work day that would make it a companion to the beaver, our country's symbol for industriousness. Let's give this beautiful bird high marks. Dan Gibson made a film on this species simply called the "White-throat,; in location in Ontario. (How many passerines have a film devoted to them exclusively?)"

ADD TO LIST

To Hank's list I would like to add the Belted Kingfisher and the Gray Jay. Both are found throughout the province.

The Kingfisher's large head and ragged crest give it a characteristic silhouette that could be used to advantage on pamphlets or posters. Also, since fishing is a favorite sport, as well as an important industry in New Brunswick, the Kingfisher seems like an appropriate symbol.

As for the Gray Jay or Moose Bird, there is no bird that is more familiar to woodsmen in this province. Its habit of always arriving for lunch, whenever one starts a little fire to boil some water for tea or coffee, has endeared it to many people.

MAKE YOUR SUGGESTION

If you would like to make your suggestion for a Provincial bird, call me at 622-2108; or call Sarah Lounsbury of Chatham, at 773-4087. And, of course, the bird that you select may not necessarily be any of those listed above.

P.S. The State of Maine has selected the Black-capped Chickadee as its State bird.

Miramichi Wildlife

by Harry Walker

Red squirrels naked, helpless

A reader in the Williamstown area asks, Are young red squirrels naked and helpless when born? Answer--Yes.

According to A.W.F. Banfield, in his book **The Mammals of Canada** red squirrels, when born, are pink, naked, wrinkled, blind and deaf, but their claws are well developed. At birth they weigh about 6.7 grams, or slightly less than one quarter of an ounce.

Hair begins to appear when they are about a week old. They can hear at 18 days and their eyes open at about one month. The young squirrels start to play or scrap with one another about a week after their eyes open. They are weaned when seven or eight weeks old.

They start venturing forth outside the nest at about 10 weeks, and at this time they are still only about one-third grown. They leave their mother at 18 months, breed when they are one year old, and the whole cycle starts all over again.

SIZE VARIES

The size of a red squirrel litter varies greatly. There may be as few as one young to a litter, or there may be as many as eight. The average is between four and five.

In the northern parts of their range red squirrels apparently have only one litter per year, but in the southern parts, they usually have two--the first in April or May, and the second in August or September. Here in these latitudes, I do not know whether they usually have two litters or not; but, out at our East Point cottage, a litter of young emerged from the nest in late summer several years ago.

UNUSUAL AMERICAN BITTERN

Recently I received a coloured photograph of an American Bittern taken by Bill Spray of Chatham. This photo, snapped last August, shows the bird on Mr. Spray's back lawn, located right in town, on St. Andrews Street.

This is a very unusual place to find one of these birds which normally would be found in the long grass of marshes and swamps. This is the same bird that is sometimes referred to by the popular names of Stake Driver or Thunder Pump; these two names being derived from the strange and unmistakeable noise that it makes.

MORE WHITE BIRDS

I have also received another belated report of large white birds. This time the report comes from Harold Whitney of Strathadam who saw them earlier in the fall.

Presumably these were more of those Cattle Egrets that gave rise to so many reports back in November and early December.

A check with David Christis of the N.B. Museum in Saint John confirmed that the Cattle Egrets Miramichi had almost a monopoly on Cattle Egrets this year, as very few were reported from elsewhere in the province.

WORD FROM ARGENTINA

A card was received from Argentina. It came from Hal Gerow, who is spending a month visiting his brother there.

He says that he has added 180 species to his life list of birds since he arrived there. One of these birds was a tiny woodpecker which he says is more than an inch shorter than a House Wren. This would make it barely bigger than a hummingbird and I never imagined that woodpeckers ever came in such small sizes.

Hal will be remembered by some people of this area, as he was here one Sunday last summer relieving Mr. Hamilton as pastor of the Covenant Reformed Presbyterian Church in Newcastle.

YOU CAN STILL VOTE

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A check with David Christis of the N.B. Museum in Saint John confirmed that the Cattle Egrets reported by Boyd Carnahan of Millerton had set a record for our province. Cattle Egrets had never before been recorded so late in the season (Dec. 5). Also the Argentina. It came from Hal Gerow, who is spending a month visiting his brother there.

He says that he has added 180 species to his life list of birds since he arrived there. One of these birds was a tiny woodpecker which he says is more than an inch shorter than a House Wren. This would make it barely bigger than a Church in Newcastle.

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Miramichi Wildlife

by Harry Walker

Why no complaints about my ant poison control suggestion?

A few weeks ago I wrote an article about Carptenter Ants and advocated the use of certain poisons to control them. I had hoped that someone would protest but no one did.

I would have preferred to have come up with some other solution to this ant problem, one that would pose less threat to the environment. However, I do not know of any other solution that is both effective and practical.

The ant has many natural enemies. Many mammals, birds, reptiles, amphibians, and insects attack them. Also, some plants give off odors that will repel certain insects and possibly some of these plants will repel ants.

This last mentioned idea seems to offer the most promise as a natural means for ridding a house of ants. I have read that tansy will repel ants, but I have also tried it without success. I have not tried it against Carpenter Ants, however.

NATURAL ENEMIES

Now let us consider some of the ant's natural enemies, and possibly one of my readers can see how one or other of these could be put to use in ridding a house of ants.

Some insects eat ants; the Ant Lion and certain species of beetle do this. Also, some species of Chalcid Flies parasitize their pupae.

Among the birds, many no doubt eat some ants, but the Flicker and the Pileated Woodpecker are probably the best ant eaters.

The Flicker, although it is a woodpecker, nonetheless feeds on the ground much of the time, especially around ant-hills, and therefore a large percentage of the ants that it eats are ground dwellers. On the other hand, the Pileated Woodpecker feeds exclusively in the trees, and therefore almost all of the ants that it eats are Carpenter Ants.

Among the mammals of this country, none live primarily on ants, but many are highly insectivorous, such as shrews, moles, skunks, and raccoons. Even bears will tear apart logs that are infested with ants, put their paws in among the ants, and then lick the ants off of their paws.

NOT LIKELY!

However, anyone who has had a bear get into his camp will attest to the fact that there would be very definite problems involved in using a bear to clean the ants out of a house. In fact a skunk would be just as likely a candidate for the job.

In warm climates there are a number of large mammals that live exclusively on ants and termites. These include the Great Anteater or Ant Bear of South and Central America, the Aardvark of Africa, the Pangolins of Africa and Asia, and the Spiny Anteaters of Australia and New Guinea.

Almost everyone is familiar with the Great Anteater, with its long snout, long tongue, long coarse hair, and large bushy tail.

The Great Anteater will measure two feet high and eight feet long. It lives on the ground, but a couple of smaller relatives live in the trees where they feed on termites.

The Aardvark looks very different from the Great Anteater. It has short, sparse hair like a pig and a snout like a pig but longer. It has large donkey-like ears and a strong sturdy tail. Unlike the Great Anteater, the Aardvark has teeth. It is about five feet long and weighs about 100 pounds. It digs extensive burrows where it stays during the day but comes out to hunt at night.

GROUND AND TREES

There are a number of species of Pangolin. Some live on the ground, while others live in the trees. They are shaped much like the Great Anteater, but unlike the Great Anteater, their bodies are covered with hard armour-like scales, rather than with hair.

When attacked,a Pangolin will roll up into a ball to protect its belly which has no scales. The scales of the Common Ground Pangolin are so hard that a .303 bullet will not penetrate them. The largest of the Pangolins measure up to six feet long.

The Spiny Anteater or Echidna is a smaller animal, only about 15 to 20 inches long, and very differently shaped from any of the above mentioned ant-eaters. It has a chubby round body and practically no tail. It has a long snout and a long thin tongue, but no teeth. Sharp spines are mingled with the hair that covers the body.

The female has a pouch like a kangaroo, and here she keeps her single baby until it gets too prickly for her.

GOOD PET?

The Spiny Anteater can dig very rapidly and when it digs it does not go down head-first like other burrowing animals but remains in a horizontal position all the time. Apparently this creature is very shy but makes a very friendly pet when tamed.

Miramichi Wildlife

by Harry Walker

Living Rivers back in 1980

This week I received a letter from Rosemary Furfey of the Atlantic Center for the Environment announcing the Center's Living Rivers program for 1980. Here is what it says.

"Living Rivers is a summer program for residents of Atlantic Canada and northern New England who are interested in the environment. Located on the Tabusintac River in northeastern New Brunswick, the program examines issues in forestry, fish and wildlife management, land use, energy, and outdoor recreation. Its purpose is to stimulate environmental awareness through increased understanding of ecological principles, resource issues, and management techniques.

"The international blend of personalities combined with the isolated setting of the camp make the program an ideal learning opportunity for anyone who enjoys the outdoors and is concerned with the future of our natural resources.

"The program provides instruction in natural history, resource management, ecology, forestry, and wilderness survival to both youth and adults. The permanent staff is periodically assisted by visiting experts from government, industry, resource agencies, and universities.

"In addition, local and overnight field trips to areas of special environmental interest complement on-site instruction. In past summers, participants have travelled to Mt. Albert and Bonaventure Island on the Gaspe Peninsulas as well as to Kouchibouguac National Park, St. Andres, and the Tantramar Marshes in New Brunswick.

INDEPENDENT THINKING

"The program's curriculum is designed to encourage independent thinking and to develop skills important in judging future use of our natural resources.

"The program offers the varied pleasures of outdoor living and camp life.

"Anyone interested in participating must apply for one of the following sessions:

"Session I. Youth (ages 11-14), June 29 to July 4, six days for $40.

"Session II. Youth (ages 11-14), July 6 to 11, six days for $40.

Session III. Young adult (ages 15-18), July 13 to 20, eight days for $75.

"Session IV. Young adult (ages 15-18), July 27 to Aug. 6, 11 days for $95.

Session V. Adult (19 years and older), Aug. 10 to 15, six days for $55.

Session includes overnight field trip.

ENROLLMENT FEE

"The enrollment fee includes all room, board, and transportation during each session. In order to reserve a space for yourself, you of their own choice. The camping trip allows participants to study various natural habitats.

VARIED BACKGROUNDS

"Adults come from such varied backgrounds as: teachers of all grade levels, businessmen, wildlife biologists, and local citizens with an interest in the natural environment. The program focuses on a specific issue relevant to the Atlantic Region. Such topics as the plight of Atlantic Salmon, spruce budworm spraying and energy resources in New Brunswick have been investigated in recent years.

"The sponsor for this program is the Atlantic Center for the Environment--a division of the Quebec-Labrador Foundation. This Center is dedicated to the wise management of natural resources and has been founded with the express intention of helping to convey environmental information to the people of the Atlantic Region."

OCEAN HORIZONS

I also have details of the 1980 Ocean Horizons Program, which is a similar program, sponsored by the same organization. The Ocean Horizons camp is situated on Fogo Island, off the north shore of Newfoundland. Again the rates are very economical. If you would like to have more details on this program, give me a call at 622-2108.

NATURALIST CLUB

There will be a meeting of the Miramichi Naturalist Club on Wednesday, Feb. 20, at the Miramichi Valley High School in Newcastle, starting at 8:00 p.m. Some slides of native wildflowers and birds will be shown. Also on display will be some plaques of native birds made by Leonard Morrison of Newcastle. Everyone is most welcome.

NEW STYLE

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ENROLLMENT FEE

"The enrollment fee includes all room, board, and transportation during each session. In order to reserve a space for yourself, you must send a $20 deposit as soon as possible. Make cheques payable to **Living Rivers Program** and mail to: The Atlantic Center for the Environment, 951 Highland Street, Ipswich, Massachusetts 01938, U.S.A.

Along with your check, give your name, address, telephone number, age, occupation, any known health problems, preferred session, and why you want to attend.

"Additional information will be sent upon receipt of application and deposit. The $20 deposit will be returned only if notification of withdrawal is at least six weeks in advance of session opening.

"Each session at the Living Rivers Program has a particular focus to accommodate both the interests and age of the groups participating.

"The youth session provides participants with a broad basic exposure to general natural history topics. Organized groups such as Scouts and Girl Guides are encouraged to apply. Group rates are available.

"The young adult sessions begin with a background in natural history and then several topics are explored in greater depth. Participants are encouraged to complete an independent project

"The sponsor for this program is the Atlantic Center for the Environment--a division of the Quebec-Labrador Foundation. This Center is dedicated to the wise management of natural resources and has been founded with the express intention of helping to convey environmental information to the people of the

Wednesday, Feb. 20, at the Miramichi Valley High School in Newcastle, starting at 8:00 p.m. Some slides of native wildflowers and birds will be shown. Also on display will be some plaques of native birds made by Leonard Morrison of Newcastle. Everyone is most welcome.

Miramichi Wildlife

by Harry Walker

We see red, not arctic, foxes here

A white fox is a rarity, or at least it is so in the latitudes. Nonetheless, Cyril Mullin of Ferry Road came across such a fox while he was hunting partridge in the area between Russellville and the Bathurst Highway.

Cyril said that he was walking along a bush road when he happened upon it. It was a rather small fox, and his first impression of it was that it was a domestic cat. However, the animal, having little fear, allowed him to walk up to within about 25 or 30 feet of it, at which distance he could see clearly that it was a fox. For a time, it just stood there and looked at him, then it disappeared into the bush. It was all white, except for the eyes and nose, which were black.

When I checked with Bob Currie, our regional biologist, he said that he had never had a white fox reported to him before. He did say that albinos can occur in all animal species including the red fox, but that the possibility also existed that this could be an arctic fox which had strayed far south of its normal range. Without having the animal to examine, it was not possible to say definitely which it was.

PROBABLY ALBINO

He thought that it was more likely an albino red fox. The fact that it was small, might simply indicate that it was a young one.

I also spoke to Gene Harris of Sevogle about this fox. Gene has been trapping for many years. He said that he had never seen a white fox but that he had heard tell of them being seen in this area before.

According to Burt and Gossenheider, in their book **A Field Guide to the Mammals**, the arctic fox is smaller and is less shy than most other species of fox. The coloured picture in their book shows that it is all white, except for its black eyes and nose. All of these details coincide with Cyril's description of the fox that he saw.

The arctic fox has never been officially recorded in the Province of New Brunswick. A.W.F. Banfield in his book **The Mammals of Canada** indicates that the only definite records for the arctic fox in the Maritime Provinces are two for Cape Breton Island.

EXTENSIVE RANGE

The arctic fox's normal range is quite extensive. It covers the northern parts of both the old and new worlds, including much of northern Quebec and Labrador. However, it generally confines itself to the barren lands where there are few or no trees.

The arctic fox has smaller ears and a stubbier nose than the red fox. It comes in two colour phases--a white phase and a blue phase. Both are brown in summer. The so-called blue phase is really a uniform gray in colour rather than blue.

Cyril saw his fox on Oct. 18, or thereabouts, last fall; and this seems to be a little early for the arctic fox to have changed completely into its winter coat, judging from what Banfield's book says about this species.

MANY COLORS

The red fox can occur in a number of colours. Years ago, many farmers around here raised silver foxes, and Gene Harris says that some of these escaped and interbred with the wild red foxes. As a result there was a greater variation in the colour of wild fox pelts at that time than there is now.

Even under normal conditions, Banfield's book describes several colour phases that occur among red foxes. The most common of these, other than the familiar red phase, are the cross phase and the black phase.

The cross phase has a dark area across the shoulders and down the back forming a cross, hence its name. The black phase is all black except for a white tip on the end of the tail and a variable amount of white-tipped hairs throughout the rest of its coat.

In captivity, the platinum fox, and a number of other special phases have been developed.

THREE OTHERS

Besides the red fox and the arctic fox, three other species of fox occur in the part of North America north of the Mexican border. These are the gray fox, the swift fox, and the kit fox. The ranges of the first two of these extends slightly into Canada at a few joints along its southern border, but none of these occur in the Maritimes.

FIELD TRIP

The Miramichi Naturalist Club will be holding a field trip in the Fowler Lake--Kennedy Lakes Wilderness Area on Saturday, Mar. 1. This trip was originally scheduled for Jan. 19, but had to be postponed because of slippery roads.

Anyone interested in taking part in this trip should meet in front of the Sinclair Rink at 8 o'clock in the morning.

All are welcome.

Miramichi Wildlife

by Harry Walker

Trout Brook man studies Arctic Tern habits in Manitoba tundra

Steven Daniel of Trout Brook, a biology student a Mount Allison University, spent much of his past summer on the sub-arctic tundra of northern Manitoba.

He was one of a group of biologists studying birds at the La Perouse Bay Research Station. His station is owned and operated by Queen's University, and its main function is to study the Snow Goose colonies of the area.

While here, Steven and two other students, Jane Howie and Elizabeth Wells, both of Queen's, made a study of the Arctic Tern. A copy of their paper entitled "Arctic Tern Behavioral Study" was given to me along with permission to use any part of it in this article.

FARTHER NORTH

Before proceeding with their paper I would first like to point out that the Arctic Tern is very similar to the Common Tern which is so plentiful around our own Miramichi Bay during the summer. However, the Arctic Tern generally nests farther north than the Common Tern, and it is famous for its long migration.

Arctic Terns which nest in eastern North America cross the Atlantic in the fall, then turn southward along the coasts of Europe and Africa, and end up in the oceans off the southern tip of South Africa, some of them going as far south as the Antarctic Circle.

Although most of these Terns nest in the Arctic and sub-Arctic, a few nest along the coasts of our Atlantic Provinces, and there is one quite large colony on Machias Seal Island.

Now for some excerpts from the above mentioned paper:

"Our study consisted of observing the Arctic Tern, (Sterna paradisea) at three different stages in its breeding cycle. Parental behaviour was studied during the incubation period, at hatching time, and after the eggs had hatched. This was accomplished through the observation of three nests, which initially consisted of: nest No. 1 containing two eggs, nest No. 2 containing two eggs, one having a small "pip", (starting to hatch) and the No. 3 nest with two nestlings."

NEAR WATER

"All three nests were located within three meters of water. The nests themselves were very shallow depressions in the ground. They were sparsely lined with grasses and small willow twigs."

"Tern nests appeared to be commonly located on islands that had soft silty mud around them with patches of aquatic vegetation, known as mare's tail. The islands themselves were flat with a low vegetative cover.

off the nest was when they were warding off any predators."

"On the third and fourth days of observation the eggs had begun to "pip". The pipping seemed to be a very critical period in the terns life cycle. The adult tern's behaviour changed greatly.

MORE AGGRESSIVE

The parents became more aware of movement and became much more aggressive. Entering in any part of their territory resulted in very aggressive diving and physical contact. During pipping there was more vocal communication between the parents. The parents spent more time closer to the island, and the tern that was not incubating would always be within the nesting area. The now-incubating tern at this time would usually stand on one of the territoral marker rocks.

"Incubation exchange at this time was done very quickly, and the eggs were turned by the incubating parents. When landing approaches were made upon the nest, the terns would hover over the nest and wait for the incubating tern to leave. The hovering tern would then vertically lower itself onto the nest. On occasion they would swoop in and take over the nest from the other parent."

"In some cases many approaches were made without any exchange in incubating parent. These refusals were accompanied by strong vocal communications by both parents."

NEST NO. 2
PIPPING STAGE

"This nest was located on a small hummock about one half meter for the water. It started out containing two eggs, one of which was pipping."

"The following morning, the egg which had been pipping, had hatched. The nestling was 6.5 centimeters in length (from tail to tip of beak). It was covered in down, the colour of which was brownish with streaks of black through it."

"Its beak was red with a black tip, the pipping tooth was still present. There was no sign of any shell debris in or around the nest. There was still no pipping noticed on the second egg."

"When recording was resumed later in the day, pipping had started on the second egg and the first nestling was now able to stand."

"July 10, 1979, both chicks had hatched and the egg shells were not present. The younger of the two chicks was very damp and was shivering. It measured 6.0 cm. in length, while the other chick measured 9.6 cm. The parents were more active in the role of incubating the nestling."

been done previously, the terns also, now made trips north (probably to the bay) for fish. Also at this time the terns caught insects from the air. Another new style encountered during this period was the collection of aquatic invertebrates by bobbing."

"It was assumed that the bird was feeding due to the fact that after each set of bobs, the young were fed. The tern would stand in the water up to its belly and bob its head under the water to get the invertebrates in the soft silty bottom."

"All total a greater time by each parent was spent feeding the young and themselves. This was probably due to the demands of the nestlings once hatched. At the end of this day (July 11) the chicks were now 10.8 cm. and 7.5 cm. respective to age.

NEST NO. 3
AFTER HATCH

"On the first day of observation it was assumed that the chicks were two or three days old. The larger of the two chicks was more active, and it swam in the surrounding water. Apparently they swim as of two days old. The nest was well guarded during the study. The adult terns were very aggressive and physical contact was frequent.

At all times at least one of the parents was visible around the island. After the young were large enough to leave the nest, it was destroyed by the parents. It was observed that one parent tended to do all of the feeding, while the other spent most of its time in close contact with the nestlings. In general feeding was minimal in the morning periods and relatively frequent in the afternoon.

"The terns appeared to tolerate the other birds on the island unless they were in large numbers. Dunlins were always present on the island. But if the birds were in flocks they were quickly chased away by one or both parents."

TERRITORIAL HABITS

"Territorial disputes amongst other terns were quite common. Tolerance levels were quite low when another tern entered its territorial air space. When there was only one parent on the island, small shorebirds (Dunlins and Least Sandpipers) could get within one meter of the nest.

The parent incubating, very rarely got off the nest unless the nest was in danger. The terns within the colony would help one another when a large predator would enter into the tern colony ie. Parasitic Jaeger. On two occasions Parasitic Jaegers entered the colony only to be warded off by a multitude of terns. Individual pairs would

other students, Jane Howie and Elizabeth Wells, both of Queen's, made a study of the Arctic Tern. A copy of their paper entitled "Arctic Tern Behavioral Study" was given to me along with permission to use any part of it in this article.

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"Tern nests appeared to be commonly located on islands that had soft silty mud around them with patches of aquatic vegetation, known as mare's tail. The islands themselves were flat with a low vegetative cover. Willows and shrubs were few, and the grasses were rarely higher than 10 centimeters."

"On five consecutive days, each nest was observed in the morning, afternoon and during dusk. The nesting sites could be observed 24 hours a day due to the sun never setting. The nest sites were observed for approximately 14 hours per day. All of the activities of the nesting pair were recorded as extensively as possible."

NEST NO. 1 BEFORE HATCH

"The parent terns during incubation were far less aggressive than after the chicks had hatched. When an approach was made toward the island, the nesting parents would leave the nest and execute warning dives, but no physical contact was made. Once off of the island, the aggressive behaviour would cease and the parent would return to incubating the eggs. Incubation was shared by both parents. One parent would patrol the area while the other stayed on the nest. During the incubation exchange, one parent would fly off while the other moved in immediately. Incubation exchange never took more than a few seconds. The only time that both parents were in any part of their territory resulted in very aggressive diving and physical contact. During pipping there was more vocal communication between the parents. The parents spent more time closer to the island, and the tern that was not incubating would always be within the nesting area. The now-incubating tern at this time would usually stand on one of the territoral marker rocks.

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NEW STYLE

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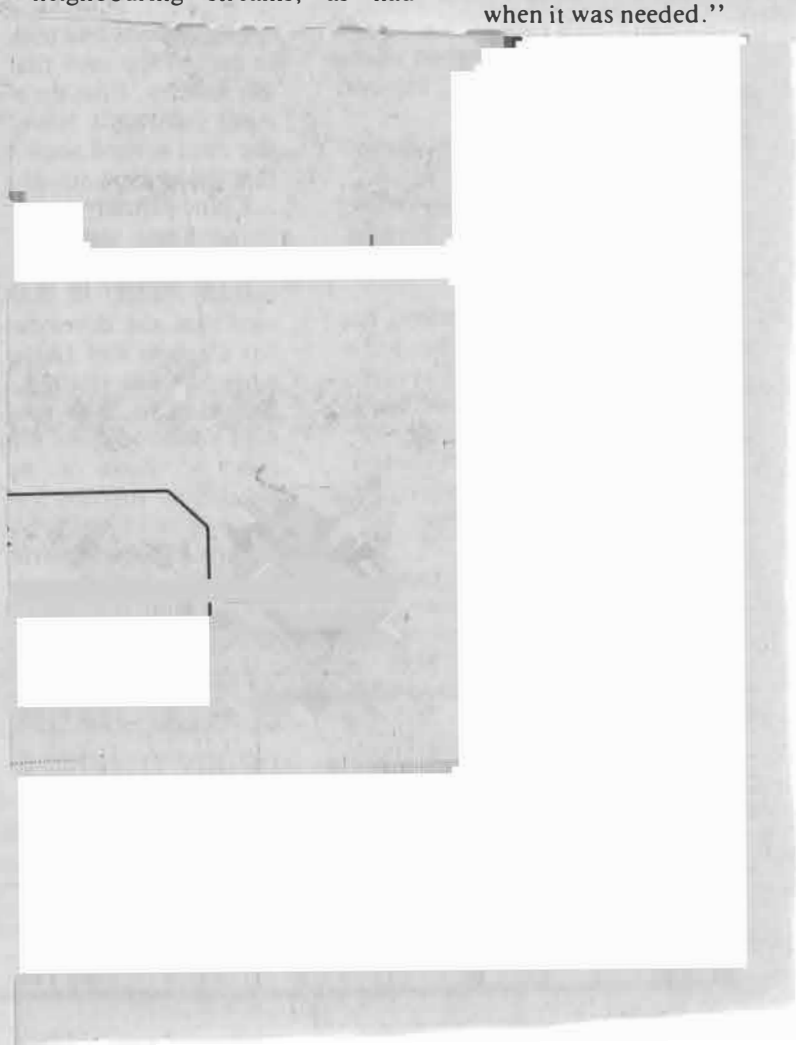


Mar 8/80

Miramichi Wildlife

by Harry Walker

It's cold for naked birds

Philip Anson of Newcastle, a member of our own Miramichi Naturalist Club, has been selected to represent the province of New Brunswick at the Canadian Nature Federation's Youth Leadership Camp. This camp will be held in the Ministick Hills, south-east of Edmonton, in Alberta. It will start in mid July and run for a period of 3 weeks.

At this camp Philip will join 18 other participants selected from all across Canada. All expenses will be paid by the Canadian Nature Federation. In order to be selected for this camp, participants must have demonstrated a keen interest in nature and have leadership potential. They must be 17 or 18 years of age, and may be of either sex.

In his province, each of the six naturalist clubs in the New Brunswick Federation of Naturalists, made one nomination, and Mary Majka, well known naturalist of Albert County, made the final selection after receiving a letter from each of those nominated.

DEVELOPMENT OF SKILLS

At this camp (and I quote Mr Gordon MacKenzie, chairman of the Canadian Nature Federation's Youth Committee)-- "The emphasis of the activities will be the development of naturalist skills such as plant and animal identification, nature photography and sketching, soil, water and air testing, record keeping, etc. The interpretation of environmental relationships and the development of an ethical environmental philosophy will also be stressed."

SNOWSHOE HIKING

Saturday, Mar. 1, was a beautiful day to be out on snowshoes. A few members of the naturalist club hiked into Kennedy Lake on that date. After a trek of from 2 to 3 three miles into the lake, we found a sheltered sunny location, built a fire, had our lunch, and then hiked back out again. The route that we followed took us along a bush road and then over a series of small lakes.

The bush was by no means quiet. The high gusty winds made a swishing noise in the tree tops, and the trees creaked and groaned. There were high pitched squeaks and low pitched squeaks. There were tapping noises and some thump-thumps; and one big old dead tree standing on the shore of a little lake came tumbling down in a series of snapping and crashing noises.

Out on the lakes, the wind carved interesting snow sculptures, and I wondered why the snow formed into knife thin edges that pointed into the wind and then suddenly broke off to blow away in chunks.

A COLD DAY

I found the whole outing to be very invigorating, but one needed to be dressed warmly in order to enjoy it. Others present to enjoy this exhilarating experience were. Jane Arsenault, Vimy Trevors, Vernon Goodfellow, George Cadogan, and my son Bruce.

It's a cold time of the year for a poor little naked bird to be born into this world, but it can happen. Jack Butler report that his wife's cousin, Margaret Butler, formerly of the Chaplin Island Road, had some pigeons nest on the window ledge in front of her highrise apartment in Ottawa. The young pigeons emerged from the eggs during the second last week in February.

Miramichi Wildlife

by Harry Walker

Yes, animals do have languages

I have sometimes been asked if animals have languages. Well, they definitely do. Mammals, birds, and even insects have languages. Just how complex these languages are, however, is a somewhat more difficult question.

Anyone who has observed wildlife carefully will see that animals communicate with one another to a certain extent.

One familiar example: if you grew up on a farm back in the days when chickens were hatched under hens, rather than in hatcheries, you will remember how the mother hen led her chicks about the yard clucking as she went. But, when she found a tasty morsel, she suddenly changed her tune, making another sound that brought all the little chicks running to her head. It was apparent that the young chicks recognized this sound as meaning that their mother had found food, and they all tried to get to it first.

According to Burt and Grossenheider in their book, **A Field Guide to the Mammals**, a Black Bear gives a loud growl when fighting, gives a woof-woof to warn its cubs of danger, and gives a whimper to call the cubs.

Farley Mowat in his book, **Never Cry Wolf**, credits the arctic wolves with having a much more sophisticated language than is normally credited to animals.

WHALES WHISTLE

Whales and dolphins make a variety of underwater squeaks and whistles, and it appears that they have a more complex language than do most mammals.

Different species of firefly differ in rhythm of their flashes, and one group of experimenters found that they could get responses from fireflies by using flashing lights. Surprisingly, it did not matter about the colour of the light, nor the intensity of it, but only the interval between flashes.

Some wood-boring beetles are said to communicate with one another by tapping their hard heads against the sides of their tunnels.

AMAZING LANGUAGE

Perhaps the most amazing known language among wild creatures is that of the honeybee; and, since this insect is deaf, its language cannot consist of sounds. Researchers have found that a worker honeybee returning to the hive with a load of honey can tell the other workers the direction to this honey, the distance to it, and the kind of flower.

Knowledge about the direction and distance is imparted through a type of dance, direction always being given with reference to the position of the sun.

Knowledge about the kind of flower is imparted from the odour on the returning bee's body.

WARNING OF INTRUDERS

Communications are not necessarily between animals of the same species. If you are out in the bush, and a crow happens to fly overhead and spot you, it will start cawing excitedly. It not only tells all other crows that there is an intruder in their midst, but it also passes this same message on to all other creatures of the area.

I remember reading an article in **Nature Canada**, where an observer spotted a fox in a marsh. It was sneaking up on a duck dozing at the edge of the water. Suddenly a blue jay flew over and started screaming just above the duck. The blue jay's warning alerted the duck which quickly took to the water, thus foiling the fox.

NOT SO NICE!

And, of course, dogs and cats talk to one another, although some of the things they say are not very nice. The words that they use may not be as clearly defined as most English words, but the essence of their meaning is just as clear.

Anyone who owns a pet soon develops some kind of communication with it. Such languages are not entirely verbal. Dogs and cats give us some familiar examples of this.

When a dog barks, growls, yips, howls, or whines, it is in each case giving us a different message. When it wags its tail, scratches at the door, pulls on our trouser leg, or brings its toy, it is giving us other messages.

LESS INHIBITED

Anyone can give similar examples. Animals express their feelings quite as adequately as we can and with fewer inhibitions; and, in fact, the meanings we try to convey are sometimes lost in a pile of words. Even the grosbeaks that come to our bird feeder will flutter against the window if there is no seed in it.

When I was a boy, I liked to play in the sheep pen with the lambs; but, when a ewe suddenly stamped one of her front feet, I knew she meant that I was to leave her little lambs alone.

In order to train any animal, a line of communication must be set up between the trainer and the animal, and even worms can be trained to some extent.

WORM TRAINED

In the book, **Territorial Imperative**, some experiments are described in which a type of aquatic worm similar in development to an earthworm, was taught to solve simple problems. These worms had neither eyes nor ears but they were sensitive to light and darkness. In training these worms, a combination of the following stimulae were used as cues for the worms,--

(1) Texture of the surface over which the worms were crawling (rough or smooth)

(2) Light and darkness

(3) Withdrawal of the water from around the worm's body.

The experimenters found that only a certain percentage of these worms could be trained.

NATURALISTS MEET

There will be a meeting of the Miramichi Naturalist Club at the James M. Hill Memorial High School in Chatham on Wednesday, March 19, at 8:00 p.m. Robert Lefebvre of Cassilis will be on hand at this meeting to answer questions about fur-bearing animals and about trapping. All are welcome.

Miramichi Wildlife

by Harry Walker

Happiness not a material thing

The following letter was written by Deming Gerow who teaches in a Baptist seminary in Argentina.

Recently he has also been working on a bird-banding project in co-operation with the University of Tacuman. The letter was given to me by Deming's brother Hal, who explained to me that the Chingolo is closely related to our own White-throated Sparrow, or Old Tom Peabody. Here is Deming's letter:

"What a happy little bird is the Chingolo. Always singing, regardless of the circumstances! When we camp on the edge of the forest, we hear his song in the blackest dead of night. Between the claps of thunder, through the pouring rain, comes the joyful song of the Chingolo. This rufous collared sparrow (scientifically Zonotrichia Capensis) nests on the ground. Snakes swallow his eggs. Swarms of ants attack and destroy his chicks. Though there may be a moment of scolding, one soon sees the little fellow, with head thrown back, singing his heart out!

IN LIGHT OF TRUTH

"The Chingolo never read Matthew 6:25-34 nor Philippians 4:4, but he sure lives in the light of these truths. He doesn't know Psalms 145-150 exist, but he is constantly doing what they say--just praising the Lord all the time!

"Am I like the Chingolo? Are you?

"One of our extension seminary students, a lay pastor, lives in almost constant pain. There was a factory accident a few years ago Then spinal column surgery. Now a back brace, worn continually--and suffering most of the time. He has been threatened with expulsion from the country, due to some confusion in past legal documents.

"Though this problem is in lawyer's hands, and before the proper authorities, still he waits in uncertainty month after month for a decision on his case. He was late to class one day. Had to rush one of his children, seriously sick, to the hospital. We started class without him.

PRAISE AND GLORY

"Soon I saw him coming up the path with his guitar under one arm and Bible and textbook under the other. His broad smile showed that he was praising and glorifying our Lord.

"He's one of God's Chingolos.

"Bird watching is biblical. Matthew 6:26, 'Behold the fowls of the air' or as in some versions, 'Look at the birds'. God has important lessons to teach us from them. You have read in your Bible about the sparrow, dove, eagle, partridge and raven. But did you know that the Spirit of God mentions some 50 species of birds, and speaks of them in 45 of the 66 books of the Bible? Looks like He is trying to tell us something, no? Yes, He wants to teach us many blessed spiritual truths through the wonders of His handiwork all around us.

"Like the little Chingolo!"

MISSIONARY BIRD WATCHER

Well, that is the letter of a man who is both a missionary and a bird watcher. I think that most of my readers will find it interesting.

Personally I would concur on the following very important point implied in Deming's letter,--that our happiness is not primarily dependent on our physical condition nor upon the material circumstances in which we find ourselves.

P.S. In an earlier article I mentioned that Hal Gerow had seen some very tiny woodpeckers while visiting his brother in Argentina. In a more recent letter Hal said that he had found one of their nests in a gate post, and the hole into the nest was exactly the size of an American penny.

March 29/80

Miramichi Wildlife

by Harry Walker

Horned Larks visit local dump

There are signs of spring appearing in the bird world already.

The first truly spring birds to come to my attention, were half a dozen Horned Larks. They were seen at the old dump site on Strawberry Marsh on Mar. 9.

Purple finches first appeared at our bird feeder on Mar. 13, and they have been back almost every day since then. Purple finches also appeared at many other feeders on almost the same date. Reports of these finches came from Margaret Wheaton and Dale Atkinson of Newcastle, Sara Lounsbury and Delta Steeves of Chatham, George Cadogan of South Nelson, and an anonymous caller in Nordin.

Also Daryl Linton of St. Stephen reported that purple finches returned to both St. Stephens and St. Andrews on approximately this same date (Mar. 13) and that these were the first ones seen in those two areas this year. So, great numbers of purple finches would seem to have returned to New Brunswick at almost the same time.

In some years, limited numbers of purple finches remain with us throughout the winter, but none were reported this year, and Mar. 13 is very early for them to arrive back in the spring.

JUNCOS

Doug Underhill of Ferry Road reports that Juncos are coming to his bird feeder, and that they first arrived there about the middle of March.

Another species that has returned is the Common Merganser or Fish Duck. Somehow these ducks always find that little strip of the river that is warmed by the effluent from the Boise-Cascade mill. This portion of the river always opens up much before the rest of the river; and, the area of open water there is never very big, before the Fish Ducks have found it. A flock of them were there on Mar. 22, and were probably there earlier than that.

Starlings and Crows have become much more plentiful during the last few weeks; and the Starlings, which during the winter months seem to confine themselves to the immediate vicinity of Chatham and Newcastle, have now returned to the outlying areas such as Trout Brook and Wayerton.

OTHER SIGNS

Other signs of spring: away back on Feb. 16, a Great Horned Owl was continually hooting, out at East Point; and, more recently, Ravens have been seen carrying sticks for their nests. The breeding season for Great Horned Owls, is late February and early March, and Ravens are very early nesters.

Marion Arsenault of Newcastle had a Robin in her yard one day early in March, but this was probably one that had wintered here, rather than one that had returned from the south.

Bohemian Waxwings are not spring birds; but rather, they visit us irregularly during the winter months. This winter the only two reports of these birds have come within the last week. Dr. Hayward of Chatham had a flock at his place, and Sara Lounsbury saw two small flocks during a recent drive in the Napan area.

RARE ACCOUNT

This last rare account comes from Bob Lefebvre of Cassilis, as he related it at a recent naturalist club meeting.

Some years ago, while working at a camp on Guagus Lake, he acquired a pet snake. It came about in this way: just outside of the camp a large boulder protruded out of the ground. This boulder heated up during the day and was massive enough to retain much of its heat throughout the night.

As a result, a snake frequently curled up on it to keep warm.

Bob wondered how he could tame this snake, and then he struck upon the idea of giving it an egg. The snake at first tried to swallow the egg, but the egg was too big. The snake then curled around the egg and broke it against the rock, then ate it. Each day after that, Bob fed the snake one egg.

The snake soon became very tame, and it would come to Bob every time that he came out of the camp. It would follow him when he went down to the water to fish, and it would crawl up his leg and around his neck.

In the spring when Bob started to feed it, this snake was small, but by fall it had grown until it was four feet long and one and a half inches in diameter. Bob says that one advantage of having this snake about, was that it kept the mice cleared out of the camp.

More about this meeting next week.

April 5/80

Miramichi Wildlife

by Harry Walker

Don't "rake" a moose

Bob Lefebvre of Cassilis was guest speaker at the March meeting of the Miramichi Naturalist Club. As a trapper, prospector, and guide, Bob has spent much of his life in the out-of-doors.

He says that an animal's feelings can be easily hurt, as is indicated by the following incident which took place at the Guzzle Hole.

A cow moose and her calf frequented the area around the fishing camp there. Bob fed them, and the calf became tame enough that it would eat out his hand. While it did this, its mother would stand back about 50 feet and watch.

Their relationship continued in this way until one day a minor accident happened. Bob was walking slowly up to the calf. He did not notice the lawn rake that was lying on the ground. He stepped on the teeth of the rake causing the handle to fly up and strike the calf on the nose.

The calf bawled and ran into the bush accompanied by its mother. Bob never saw the moose or her calf around the camp again.

MARAUDING BEAR

Here is another episode that took place while Bob was at the Guzzle Hole.

One night, a bear pulled the stove pipe out of the end of the camp. Bob figured that the next thing the bear would do, would be to tear the end out of the camp, so he got his rifle.

The bear's claws were visible in the stove pipe hole. So, estimating the position of the bear's body by the position of its claws, Bob fired through the plywood wall.

There was a groan and a thud. Not wishing to go out into the dark with a wounded bear, Bob waited until morning before venturing out.

In the bush, not far from the camp, he found the dead body of the bear. Along with it were two small cubs looking for their breakfast. Bob fed them some bread and honey, and these two cubs became his pets for that summer.

CUDDLY CUBS

They slept with Bob in his sleeping bag and, if he closed up his bag without letting them in, they would roll on his face and all over him. They would continue in this way until Bob opened up his bag and let them in.

These two cubs followed him everywhere, and they would climb up on his back and hang on there, while he was fishing.

Cougars: Bob has come across a few of them during his life in the bush. He saw two at close range near Guagas Lake, while he was prospecting in the area about 25 years ago. They were in a burned-over area and it was winter.

One was large and the other one was small. When the large one took off, it covered the ground in 30-foot leaps.

Bob's next sighting of a cougar took place about 15 years ago, this time about two miles from Red Bank. It was lying along a branch of a tree and was at first mistaken for a porcupine, but then it leaped from the tree and bounded away.

COUGARS MEMORABLE

Bob's last encounter with cougars was the most memorable one. It took place near the head of the Little Sevogle about 12 years ago. It was dark, and Bob was carrying out a load of beaver pelts. Two cougars followed him for about five miles.

One would scream on one side of him, and then the other would scream on the other side. He never saw the cougars but there was no mistaking the screams. Bob says that he was very seldom been afraid in the bush, but he admits this is one time that he was realy scared.

SLY AS A...

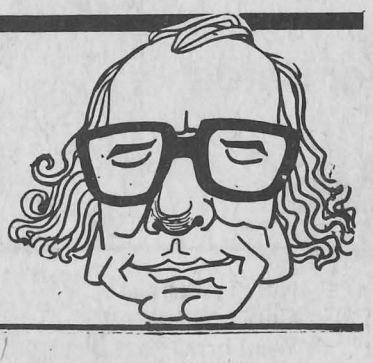
Bob says the fox is the most difficult animal to trap because it has such a keen sense of smell, and because it is so wary of anything that has the scent of man on it. Quite an elaborate procedure is followed in order to prepare fox traps for use. A whole article can be written on this alone and I will leave this until some later date.

P.S. The Guzzle Hole is situated at the juncture of the Guagas Stream and the north branch of the Little S.W. Miramichi.

Don't be snobbish about pike

Harry Walker

MIRAMICHI WILDLIFE



This column does not often carry articles dealing with fish. Most people in the Maritimes know more about fish than I do.

However, one earlier article did appear here which dealt with the Bullhead or Mud Pout, a species found in Ontario but not in New Brunswick. Another species, which I have caught in Ontario, but which does not occur here is the Northern Pike.

The discriminating fisherman, who is interested only in quality fish, may look down on the pike; but, for the less sophisticated fisherman, who is interested only in catching a **big** fish, the pike fulfills the necessary requirements. Of course, most of the fishermen in Central Canada fill into the latter category, and a five-pound pike is not uncommon. In remote areas 30-pound pike are sometimes caught, and the record confirmed catch weighed slightly over 46 pounds.

The Northern Pike inhabits shallow waters where there is little or no current. And where there is plenty of grass or weeds growing on the bottom. It is a rather solitary fish, and does not normally travel in schools. It is a vicious predatory fish with long jaws and sharp teeth.

STEALTHY STOCK

It hides in the grass or among the other aquatic plants, then suddenly darts out to catch its unwary prey. At other times, it may stealthily stock its prey, until within easy striking distance, then suddenly pounce on it. Its prey is usually another fish, but it may be almost any creature that is small enough for the pike to overpower. Among its victims are frogs, mice, muskrats, and young ducks.

Apparently hybrids between pike and pickerel, and between the pike and muskellunge have been found in nature. It is thought that these hybrids occur as a result of these species carrying on their reproductive activities in the same areas at the same time.

Most of the pike that I have caught came from Grassy Lake, a small lake situated a few miles from Sudbury, Ont. The lake was well named as the grass growing on the bottom reached to the surface throughout much of its area. Boats were for rent there and we occasionally rented one of these boats and trolled for pike. I haven't been there for about 30 years.

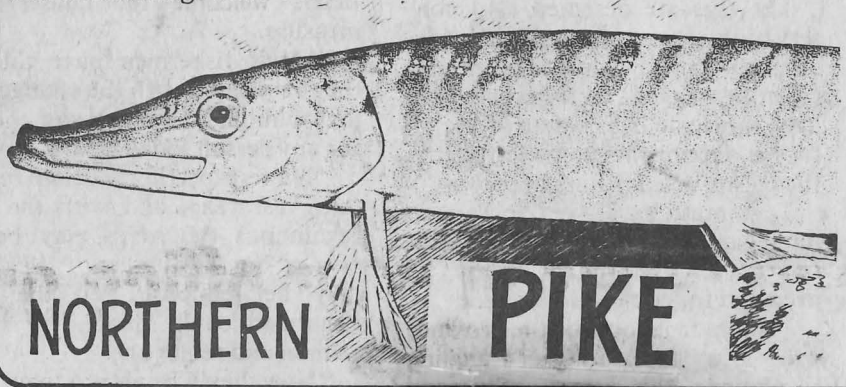
REMEMBER THIS?

At that time a lot of dislocated Maritimers lived in Sudbury, so some of you may ~~know~~ the lake to which I am referring.

I think that one of my friends at that time came from a small French village in this general area. His name was Frank McGrath and he was an electrician at the Copper Cliff Smelter.

How have freshwater fish been transplanted from one freshwater body to another when there has been no connecting waterway?

Back in the 16th century, a famous naturalist and author named Gesner, had a unique explanation for this. He proposed the theory that pike were bred from aquatic plants by help of the sun's heat.



MOON BIRDS?

Such explanations of natural phenomena were common back before our so called scientific age began. At one time it was seriously propsoed that some of our birds migrated to the moon for the winter. Another commonly held belief was that rotting meat turned into maggots.

Getting back to the original question: I once read an article by Gregory Clark, who had an interesting explanation on how Mud Pout got transplanted from one pond to another. He said that many farmers in Southern Ontario dug out ponds for watering their cattle. Many of these ponds had neither inlet nor outlet, yet nonetheless, the Mud Pout soon found their way into them. His explanation:

THE STORK?

Great Blue Herons flew from one pond to another. At each pond they tramped around in the mud, and some of this mud stuck to their feet. In this mud were some Mud Pout eggs or even tiny Mud Pout, and these were carried to the next pond.

Bob Currie, our regional biologist and his assistant, Hayward Sturgeon, will be our guest speakers at the next meeting of the Miramichi Naturalist Club to be held on Tues., Apr. 15 starting at 8:00 p.m. Meeting place will be the Dept. of Natural Resources, Pleasant St., Newcastle.

SALMON SEASON

Subject: **The 1980 Salmon Season on the Miramichi.** New regulations in regard to Crown Reserve Waters, guides, and tagging procedures will be explained. Come along, you are welcome at the meeting regardless of whether you are a member of the naturalist club or not.

Courtship flights, anyone?

Harry Walker

MIRAMICHI WILDLIFE

Tonight, Friday, Apr. 18, weather permitting, the Miramichi Naturalist Club will be having a field trip.

If you are interested in seeing the Snipe and the Woodcock perform their courtship flights, join us in front of the Sinclair Rink at 6:30 p.m.; or, if you prefer call me at 622-2108 to find out where we are headed. I have a number of places in mind which I hope to check out this week.

If 6:30 is too early for you, you might be able to join us later. The Woodcock does not start its performance until considerably later anyway, when it is starting to get dark.

On Apr. 3, I saw my first Woodcock for the year. It was doing its sky dance and, when it plunged to the ground, it almost hit me. The next morning Tony Harwood telephoned to say that he had a Woodcock in his yard, and that he was able to approach to within about three feet of it.

BRIEF STOP

This Woodcock was probably just making a stop-over during migration. Like most other birds, the Woodcock migrates at night. When morning comes, it simply seems to drop down on any patch of bare ground that it sees, then continues its migration the following night. As a result during spring migration, these birds often turn up in strange places.

SNIPES SOON

I have not seen a Common Snipe to date (April 13) but expect that it will be here by Friday.

I wrote an article about the Woodcock last fall. The Common Snipe (or Wilson's Snipe) is a similar bird, with a long biil which it uses to probe the wet ground for worms. Although many people refer to all shore birds as snipe, the true snipe is seldom found on the shore. If it is on the shore, it will be in very muddy areas, and where the water is not very salty. It lives mainly in wet grassy fields and marshes, or in open alder swamps.

DIFFERENT FLIGHT

The snipe's courtship flight is very different from the Woodcock's.

It consists of circling high in the sky while periodically producing a hollow tremulous sound which has been interpreted as who-who-who-who. This sound is produced by air rushing through its stiffly spread-out tail feathers.

This sound can carry a long way, and on a good evening, when atmospheric conditions are right, it can be heard here on Heath Court, well inside the town of Newcastle. This sound comes from the direction of Domtar's creosote plant.

Snipe can be found every spring in the wet fields surrounding this plant.

Observe courting à la Woodcock

Harry Walker
WILDLIFE

Hayward Sturgeon, chief enforcement officer for the fish and game laws in this area, and Bob Currie, Regional Biologist, were guest speakers at the last meeting of the Miramichi Naturalist Club held on April 15, at the Department of Natural Resources building in Newcastle. They outlined the new fishery laws pertaining to Anglers on the Miramichi. Much interest was shown by those in attendance and considerable discussion ensued. Fishermen can obtain summaries of these laws from any Forest Service Office.

This year, unlike previous years, all anglers will be required to tag all salmon taken, including grilse. A Season Salmon License will have 15 tags attached to it, and when a holder of one of these licenses has taken 15 salmon, he will be finished salmon angling for the season. In addition, no person will be allowed to have in his possession, at any time, more than 10 salmon caught by angling.

NO REMOVAL

Each salmon must be tagged immediately upon killing it, and the tag must not be removed until just before consuming it. This tag is to be attached around the small of the body just in front of the tail.

A Season's Salmon License will cost a resident of New Brunswick $15, while it will cost a non-resident $100. In addition, the non-resident will be required to employ a guide at all times, while angling.

SHARING A GUIDE

Three non-residents can share the same guide provided that the guide has a class 1 license, and provided that the fishing is being done from the shore. If the fishing is being done from a boat, then **each** non-resident must be accompanied by a Class 1 or Class 2 guide. If the guide employed has only a Class 2 license, even if all the fishing is being done from the shore, then each non-resident must be accompanied by his own individual guide.

Anyone who obtains a salmon from an angler, must, upon the request of a warden, be able to supply the name and the address of the angler from whom it was obtained.

MOOSE LICENSES

Bob Currie informed me that moose hunting license applications will be available all through the month of May at any Forest Service Office, and the draw will be run sometime during the first week of June. Anyone who had a moose license in 75, 76, 77, 78 or 79 will be ineligible to apply.

On the Miramichi Naturalist Club's field trip, held on Friday evening, April 18, participants were entertained by the Snipe and the Woodcock. Both of these birds were doing their courtship flights, and both birds performed well. However, by the time that the Woodcock started its part of the show, the night was already quite dark. The Woodcock was close by and although not visible, the full range of sound effects were clearly heard. Only one or two observers were able to catch a brief glimpse of the bird as it landed after one of its flights. Also seen on this short field trip, on the outskirts of Newcastle, was a small porcupine, and a very tame Ruffed Grouse that was eating buds from a popal.

By the way, earlier in the year, Phyllis Jardine of the Shore Road, Chatham, had three partridges (Ruffed Grouse) coming to her bird feeder.

Animals make good machines

Harry Walker

WILDLIFE

Technology and nature are generally thought of as very diverse fields with little in common: in fact, they are continually at war with one another. Yet many, if not most, of the machines and gadgets produced by the technologists have their parallel in nature. Here are a few:

Heat exchangers: many of them are found in nature. Ducks and gulls minimize the loss of heat through their feet and legs by means of heat exchangers. In winter, when they spend most of their time sitting in cold water or standing on ice, the temperature of their feet is only a few degrees above freezing, while the temperature of the rest of their bodies is several degrees higher than that of the human body.

In the case of these birds, the arteries carrying warm blood to the legs, are in direct contact with the veins carrying cold blood back from the legs. As a result, most of the heat in the blood of these arteries is tranferred to the cold blood in the veins, before the blood in the arteries reaches the legs.

WE'RE NOT LIKE CARIBOU

The caribou, which lives in cold arctic regions and therefore has much need to conserve body heat, incorporates this same type of heat exchanges to cut down on the heat loss through its legs. Although it is also true that the ends of our legs and arms are cooler than the central part of our bodies, apparently it is not true to the same extent that it is in the case of the caribou.

Fish are cold blooded; however, a certain amount of heat is generated when the fish exerts itself while swimming. In most species of fish this heat is soon lost through the circulatory system, as the blood passes through the gills. But, in the case of the tuna and certain other species, this heat is retained within certain muscles, again with the aid of heat exchangers as described above. Fish which retain heat in this way are very fast swimmers.

Thermostats: Here is how the porpoise's thermostat works:

BUT NOT FLIPPERS

The porpoise's body is insulated by a layer of blubber but his flippers are not so well insulated. When the porpoise is cold, most of his blood bypasses the flippers. When the porpoise is hot, much of its blood is directed through the flippers, and the heat from this blood is dissipated to the surrounding water.

Hydraulic controls: a spider's legs are not manipulated with muscles in the same way that most creature's legs are; but rather, they are manipulated by means of changes in hydraulic pressure. Similarly the movements of an earthworm, a star-fish or an octopus are mainly governed by changes in hyudraulic pressure in different parts of their bodies.

LEAPIN' LIZARDS

Solar Energy: All reptiles (snakes, lizards and turtles) like to sun themselves. When their bodies heat up, their metabolism speeds up, and they are able to move much faster.

This in turn means that they can catch their prey more easily and escape their enemies more readily.

On the other hand, when a reptile is cold, its movements are very sluggish. This is probably the reason that there are many more species of reptiles in hot countries than there are in cold countries.

May 9/80

Intrepid columnist takes first (chilly) dip

Harry Walker
WILDLIFE

'Last week-end I performed one of my annual spring rites, that of taking a swim in one of our streams during the spring run-off. This year I chose the Mill Stream for this event and my daughter Elayne accompanied me.

During the hottest weather in the summer I always have difficulty getting into the water. I gradually inch my way into it, gasping at every step; but, if I plunge into the water from a canoe, I can get thoroughly immersed much more easily.

Elayne lost her can of worms during this ceremony. She had intended to do some fishing when we reached the old Fraser Dam and she bemoaned their loss. Later, as we were passing a grove of poplars, she suggested that we might find worms there.

She was right. When we landed and examined the site, it appeared that there may have been a small clearing here at one time, with a road running down to it. The poplars had long ago taken over and were now fully grown. A heavy rusty piece of some old machine lay there. Not being much of a mechanic, that is as close as I could identify it. Anyway, using a canoe paddle for a shovel, we were able to secure half a dozen fair-sized fishworms. As far as a fishing expedition goes, however, that was where our success ended. We may as well have eaten the worms.

THE CHEERY KINGLET

Otherwise our canoe trip was most pleasant. It was a bright sunny day; and all along the route, the cheery little Ruby-crowned Kinglet greeted us from the tree tops. Its song was the most prominent sound in the woods.

It is surprising to find that such a loud song comes from such a small bird. Its song is long, rich, and varied, and is delivered frequently. This is one of our earliest songsters to arrive back in the spring; and at this time of the year, its song is all the more noticeable since few other songsters have yet arrived to compete with it. It arrives here in the latter part of April.

Rusty Blackbirds and Robins frequently flew across the stream in front of our canoe, or were seen gathering tid-bits at the water's edge.

The Rusty Blackbird is truly a bird of the wilderness, being very different from other members of the blackbird family in this respect. They are most commonly found along heavily wooded streams, or around springs, or ponds, in the bush. Whereas other blackbirds often gather in mixed flocks containing grackles, red-wings, cowbirds and starlings; the rusties remain in pure flocks of their own species, or are seen singly, or in pairs. They are most plentiful right now during their spring migration, although some of them remain here to nest.

AND PARTRIDGE

Also, during our canoe trip, we occasionally heard the drumming of a partridge, sounding like some distant engine starting up; or the drumming of a woodpecker on some big hollow stub. At one point we saw a groundhog sunning itself on a log.

When we landed for a brief expedition ashore, it was good to see some greenery on the forest floor again. Various members of the pyrola family, and several species of club moss were here. These plants are all evergreens and retain their leaves underneath the snow. I particularily appreciated the shiny green leaves of the pipsiscwa which is one of my favourite plants.

COLTSFOOT

On May 2, Paul Stewart of Mathew's Settlement found some yellow flowers blooming near the Heath Steele tailings dam. These were the flowers of the Coltsfoot. The flower heads are much like those of a dandelion but the stems are very different, having long narrow pointed scales that lie against it and point upwards. The Coltsfoot grows in patches, usually on wet ground. This plant is peculiar in that it has no leaves at this time of the year, but only stems and flowers. In a short time these flowers will die, and the leaves will appear, so that during most of the summer, the only part of the plant above ground will be a patch of low-lying leaves. These leaves are shaped somewhat like maple leaves except that the points are very blunt making the leaf almost round or heart shaped. It and the Mayflower are probably the first wild flowers to bloom.

REASONABLE ALTERNATIVE?

The Miramichi Naturalist Club will be holding a field trip tomorrow night, Saturday, May 10, to look for frogs and salamanders. If you consider this to be a reasonable alternative to the hockey game, meet us at the pole line on the Harper Road at 9:00 pm.

Also, there will be a meeting of the Miramichi Naturalist Club at the James M. Hill Memorial High School in Chatham at 8:00 pm, Tuesday evening, May 13. Come and meet Gladys MacLean of Whitneyville who will be telling us about the wild foods that she uses. She will also be giving us some instruction on how to dry and arrange wild flowers and other plants. Miss MacLean was formerly a missionary in India. All are welcome.

May 16/80

Frog and salamander trip showed a good time

Harry Walker
WILDLIFE

A frog and salamander field trip was held on the Harper Road on Saturday night, May 10. It was sponsored by the Miramichi Naturalist Club. The night was beautiful, and, if you enjoy listening to a frog chorus (another example of the sudden and miraculous transformation that comes over the earth in spring) then you would have had a good time there.

Spring Peepers, Wood Frogs, and Spotted Salamanders were all present in considerable numbers. In addition, a Woodcock could be heard performing in the distance. Of course salamanders are voiceless.

During the evening we caught one Spring Peeper, two Wood Frogs, and six Spotted Salamanders. However, we caught them only to observe them close up. We put them into a basin full of water where everyone could see them; then, like all good conservationists, we returned them to the same stitches from which we had taken them. None of us fell in during this operation, but some of us returned home slightly wet, which is normal for such an evening.

The Spring Peeper, although the noisiest and most abundant of the frogs, is not often seen. It is a tiny tree frog measuring only about one inch in length.

THE GRUFF WOOD FROG

Recently two different people have asked me about a certain sound that they had been hearing. In both cases they described it as sounding like some kind of duck. It seems that what they had been hearing was the Wood Frog. It has a gruff, low-pitched voice compared to that of the Spring Peeper. It is the first frog to be heard in the spring.

The Chignecto Naturalist Club held a similar field trip a few days before ours. They reported finding Spring Peepers, Wood Frogs, Leopard Frogs, Green Frogs and Toads; but no Salamanders. I think that our field trip was a little too early for the latter three species; whereas, theirs could have been a little too late for salamanders.

The long trills of the toad, although not heard on our field trips, could frequently be heard a few nights later.

On similar outings during previous years, Blue-Spotted Salamanders and Red-Spotted Newts, as well as all of the above mentioned amphibians, have been found on the Harper Road. This has become our favourite spot for such excursions.

THROUGH THE SCREEN

Henry Bourette had a Sharpe-shinned Hawk crash through the screen of his gazebo. This screened in enclosure, used as a protection against mosquitoes and flies, is situated in his back yard on Millar Ave. It appeared that the hawk had struck the screen with enough force to pull part of the screen away from the frame, thus allowing the hawk to pass through. Once inside the hawk did not know how to escape, and so became imprisoned, until Mr Bourette removed some of the screens. The experience may have been a little rough on the hawk, but it afforded us a good opportunity to view it at close range.

DUCKS GALORE

An early morning walk around the salt marsh at East Point on May 17, yeilded the following assortment of ducks, 8 Pintails, 4 Blacks, 2 Golden-eye, and 1 Widgeon (Baldpate). In addition 2 Greater Yellowlegs and a Snipe were seen in the marsh, while 2 Loons and 4 Great Blue Herons flew overhead. When I visited this same marsh a few hours later, an Osprey flew over.

On this trip I also met Albert Savoie and Vince Murdock, both of whom grew up in the vicinity of this marsh. They told me, that when they were boys, the gulls and Pit-gars (Common Terns) nested on the sand point in front of the marsh; and, when they went out there, these birds would dive-bomb them.

This point has long since been abandoned as a nesting site. I have frequented it for the past 11 years and have never seen any evidence of these birds nesting there. They prefer locations farther from human habitation, such as out on the islands in Miramichi Bay.

Vince Murdock grew up in the old house overlooking the marsh. This is one of the few houses that survived the great fire of 1825 and it is now owned by Mrs Ernest Murdock.

P.S. The Spotted Salamander is dark in colour with yellow spots and is 6 to 8 inches in length. The Blue-spotted Salamander is dark on the back, lighter underneath, and has blue and white flecks along its sides. It is 4 to 6 inches long.

Ecology meeting of interest to forestry capital residents

Since this is the forestry capital of Canada; and, since the theme of the annual general meeting of the New Brunswick Federation of Naturalists is **Forest Ecology of New Brunswick**; it seems likely that some people on the Miramichi will be interested in attending this meeting. Therefore the program is given below. It will take place in Fredericton, next week-end.

ANNUAL MEETING PROGRAM N.B.F.N.

Friday evening, May 23 - Odell Park Centre, Fredericton.

8 pm - Introduction to the forests of New Brunswick (illustrated) Henrik Deichmann.

8:30 pm - Forest flora and fauna in late spring (illustrated) David Christie.

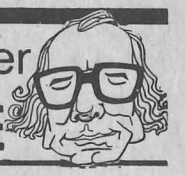
9 pm - Three recently released films on nature subjects.

All evening - Registration. A fee of $2 per person or $5 per family will be charged.

Saturday, May 24 - Meeting place: Odell Park Centre, Fredericton.

7-9 am - Morning bird walk in the park.

Harry Walker



WILDLIFE

9-9:30 am - Registration. See fees above

10 am - Leave Odell Park for Acadia Forestry Station (Route 10, 15 miles east of Fredericton).

10 am-1 pm - Tour of Acadia Forestry Station, guided by Don Fowler and Ron Hallett, to inspect tree breeding experiments, provenance trials (of stock from different parts of the world) and silvicultural treatments.

1 pm - Lunch (bring your own picnic) at Acadia Forestry Station.

2-4 pm - Return trip to Fredericton via the St. John River floodplain (water levels permitting) with stops at points of natural history interest.

5 pm - Group meal (cost extra) at Odell Park Centre.

6-7:30 pm - Annual General Meeting of the Federation.

8 pm - An overview of the forestry situation in New Brunswick. Gordon Baskerville, Asst. Deputy Minister, Dept. of Natural Resources.

9 pm - Acid precipitation in New Brunswick. Jane Spavold, Dept. of Environment.

9:30 pm - Premiere of W.A. Squires Memorial Natural History Programs. Tape-slide show project, prepared by Michael Burzynski.

Sunday, May 25 - Meet at Odell Park Centre

8 am - Meet to pool cars and leave for Nashwaak Experimental Watershed Project.

8:30 am - Alternate nature field trip in or near the city; to be announced.

8:30 am - Tour of Nashwaak Project with Doug Eidt or Herman von Groenwoud. This project is studying the recycling of nutrients, stream flow, regeneration and many other aspects of forest processes, under different types of harvesting and management methods.

1 pm - Lunch and depart for home.

Who--or what-- are gorbies?

Harry Walker
WILDLIFE

The albatross never tires
Of following ships on the sea;
It's when woods workers kindle their fires
That the gorbies seek company.

They come around where you're sitting,
So tame, you can scarcely believe,
And the men will be feeding them fragments
Of food that they happen to leave.

For lumbermen have their own legends;
They will tell you the stories they've heard
Of terrible things that have happened
To those who have injured this bird.

Another thing they will tell you,
Though they've searched both the trees and the ground,
In all of the forest surrounding,
No nest has ever been found.

Which leads to the last of the legend,
Why you must never molest
This little, wild child of the forest,
And the reason it hasn't a nest.

It is not just a bird like the others;
No nest could be built that would hold
Such happy, carefree little creatures,
So friendly, so trusting, so bold.

Why do they make friends with the woodsman
And seek his companionship, then?
It's because they're not birds; they are spirits,
The souls of old lumbermen.

Hazel MacQueen
Plaster Rock, N.B.

The author of the above poem has given me permission to reproduce it here. She has written two books of poetry, and this poem is taken from the latest of these, -- "The Collected Verse of Hazel MacQueen." Her earlier book was entitled "The Story of a People".

As most of you probably know, the Gorbie is the Gray Jay. The fact that this bird has been given so many different local names is probably some measure of its popularity.

Other names that it goes by are, -- Canada Jay, Moose Bird, Camp Robber, and Whiskey Jack. And recently, from Hank Deichmann of Alma, comes yet another name for it, that of Sam Goodard's Ghost, a name probably familiar to the author of the above poem, as it originated up on the Tobique.

NOT IN THE SOUTH

Although many people on the Miramichi have selected the Gray Jay as their first choice for New Brunswick's provincial bird, it does not seem destined to receive many votes from the southern part of the province. Hank Deichmann says that the Gray Jay is absent from large areas of the south. Leo Martin of Shediac, another avid birdwatcher, objects to it on the same grounds.

If the Gray Jay doesn't make it as our provincial bird, may be it could be made Northumberland County's bird. I learned from Lillian Cusick of Newcastle that we have a county flower -- the Twinflower. I hope you all recognize it. It is common in our woods but is not in bloom yet. It is a creeping plant and derives its name from the fact that its flowers always occur in pairs. Each of the slender flower stalks rise vertically and branches into a Y near the top. A dainty little pink bell, with a fragrant perfume, hangs from either branch of the Y.

Tony Johnston of Newcastle reported a black bird with a white tail. It turned out to be a partially albino grackle (blackbird . The tail was completely white, and there was a white strip on the underside of each wing. The white pattern on this bird was quite symetrical making it look like some new species.

This was quite different from that of a partially albino robin that I once saw. In this latter case, the white pattern was quite irregular and unsymetrical.

June 6/80

What is it?

June 6/80

This pump never needs priming, and works for hundreds of years

Mechanics take note.
How is this for a pumping system?
It can pump up to a vertical height of 350 feet.

It will automatically maintain itself for hundreds, or even thousands of years, without pump failure and without danger of the pipes rusting or rotting out.

It will automatically start up or speed up as the demand upon it changes.

It can stay outside in all kinds of weather; and, even though it automatically shuts off in cold weather when it is not needed, the pipes never burst because of freeze-up.
The pipes never build up with scale.

The power costs are nil for it draws its power from the sun.
Are you impressed?

There is such a pumping system in existence and it is not a new invention. It has been around for a long time, and it is very common. It is found in every tree. It pumps water from the ground up into the tree's leaves.
An ordinary suction pump cannot pump water higher than 32 feet, and some of the tallest trees grow to 10 times that height.

BUT HOW?

How does a tree pump water to such heights? This question has stumped biologists for a long time. There have been theories put forward to explain it, which are based primarily on capillary rise and osmosis, but the process is still not completely understood. It is generally considered to be a suction pump,

Harry Walker WILDLIFE

but there is not complete agreement on this.

The amount of sap being pumped up through the tree's trunk varies a great deal, depending on the size and species of tree, the condition of the tree, the weather, the time of year and the time of day, and the amount of available water in the ground.

A broad-leafed tree uses more water than an evergreen tree. all trees use more water in hot, dry, windy weather, than in any other kind of weather.

150 FEET PER HOUR

In some species of broad-leafed tree, the sap may rise at a rate of 150 feet per hour; whereas, in evergreens, it will not exceed more than 2½ to 3 feet per hour. The rate of rise depends, not only on the type of leaves on the tree, but also on the thickness of the sapwood layer. In some species, like maple and beech, the whole trunk consists of sapwood; while in other species, such as oak and ash, most of the trunk consists of heartwood through which no sap rises. It is in trees of this latter type that the sap rises most quickly.

While some species of tree will only live to about 40 years, others, like sugar maple, will live for 500 years. Some oaks will live up to 1500 years; and the giant sequoias of California, up to 3000 to 4000 years.

1000 FEET STEMS

Some tropical vines have stems a thousand feet or more long, trailing and coiling from tree to tree. In this case, the sap must be pumped through a thousand feet of these twisted stems and to a vertical height as high as the tallest trees.

RARE BIRDS

I have received two reports of Mockingbirds and two of Scarlet Tanagers.

Mrs. Freeman Gallant of Ferry Road reported that a Mockingbird had frequently been singing near Raymond Gallant's place in Douglastown; and Mary Smallwood reported two Mockingbirds at their place in Maple Glen one day. Both reporters were understandably impressed with this bird's singing. It's great repertoire of songs, and its ability to suddenly switch from one song to another, and render them with such loudness and clarity, is incomparable with that of any other bird.

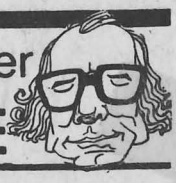
Phillip Anson of Newcastle and Douglas Underhill of Ferry Road both reported Scarlet Tanagers.
Many other people have been seeing brightly coloured birds. Four different people described what were probably Redstarts - a beautiful little bird. Others reported Goldfinches, Rose-breasted Grosbeaks, Yellow Warblers, Wilson's Warblers, Myrtle Warblers, Blackburnian Warblers, Bobolinks, and others.
Hubert Sherrard of the North Esk Road reported that a flock of Bobolinks, which he estimated as numbering about 200 landed at his place about two or three weeks ago.

June 13/80.

Burdocks remove bats

Former missionary shares plant lore

Harry Walker
WILDLIFE



Gladys MacLean grew up in Strathadam where her father, the late Jared MacLean frequently took her and her brothers and sisters on nature walks. In these early years she developed an interest in nature. In later years this interest grew while she was a missionary in India and Hong Kong. In these overpopulated areas, the people make all possible use of wild plants; and so wild plants have become an area of special interest to her. In India she lived with the Soras, and aboriginal tribe living in the jungle.

For the last few years Gladys has been living in Whitneyville where her home has been named "Haven of Rest." A co-missionary, Miss Turnbull, lived with her until her passing about three years ago. Here Gladys gathers a great variety of wild plants; and, as she says, makes use of what God has provided.

Some wild plants she uses for food, others she uses to make teas, tonics, and medicines. Some are used to make fertilizer, and still others find use as pest controls. And finally, many are used in her dried flower arrangements.

SPECIAL GUEST SPEAKER

At the May meeting of the Miramichi Naturalist Club, held at the James M. Hill Memorial High School in Chatham, Gladys shared with us, some of her knowledge and experiences with wild plants.

She began her talk by pointing out that the Bible begins with the story of a garden and ends with the story of another garden. Most of us are familiar with the story of the Garden of Eden in the Book of Genesis, but most of us are not so familiar with the other garden described in the 22nd chapter of Revelation.

HOW TO USE THEM

Some examples of wild plants which she uses for food are,--

Caraway--Greens, roots, and seeds can all be used in soups, salads, and souffles.

Dock--Use leaves as a spinach substitute.

Fireweed--Use new shoots as asparagus, use the dried leaves for tea, and use the green leaves as spinach.

Penny Royal--Use seeds to flavour soups. The leaves are small and are not available in large enough quantity to make a complete dish, but they can be thrown in with other greens when making either a salad or a cooked vegetable.

Elderberry (disparagingly called stinking alder by some people)--Berries can be used for pies, and the flower buds can be used in fritters.

Jerusalem Artichoke (a species of wild sunflower)--The tubers can be used in any way that potatoes are used. They are less starchy than potatoes and they have a nutty flavour. Do not and, late in the season, the seeds and leaves can be stripped from the stems and ground up as flour. Some of this flour can then be substituted for regular flour in any recipe.

TEAS, TONICS, MEDICINES

Now some examples of wild plants used for teas, tonics, medicines,--

Snowberry--Brew the vines, either green or dried, to make tea. The berries are also edible.

Wintergreen--Use the berries or leaves to make tea. The raw berries can also be used in salads.

Labrador Tea--Use the dried or green leaves for tea.

Staghorn Sumac--Let the ripe berry clusters soak in cold water, then strain, to make a pink lemonade flavoured drink.

Aloes (a healing plant)--break the plant and rub the juice on insect bites, etc.

Couch Grass--Steep the roots to make a tea. This tea is a wonderful tonic.

Plantain--The raw leaves can be used to make a poultice that will draw the poison out of boils and other similar ailments. The new leaves can also be used as spinach.

Mullein--new leaves can be dried and then used to make tea.

Sheep Sorrel--add the leaves into any tea.

Clover (any species)--can be brewed to make a tea that is good for the kidneys.

MORE USES

Fertilizer produced from plants,--

To make fertilizer, gather weeds, cover them with water, and then let them steep in the sun. In a few days that water will have formed a tea that is good for fertilizer. The horsetails and lambsquarters are especially good for this purpose.

Plants used for pest control,--

Burdock--bats were a continual nuisance in the attic of Glady's house until she hung burdocks up along the peak. The bats disappeared, and one bat was found stuck to a burdock.

Dried orange peels, or cedar branches--can both be used as moth balls.

Dried flower arrangements--

For this purpose, plants are pressed, dried, then pasted onto a cardboard backing. They are then covered with glass and framed, to make novel, atrractive and interesting pictures. Some flowers lose their colours on drying and may need to be touched up with paint or dye.

Miss MacLean said that a few years ago she had a health problem. this problem did not yield to regular medical practice, but she was cured when she went

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Jerusalem Artichoke (a species of wild sunflower)--The tubers can be used in any way that potatoes are used. They are less starchy than potatoes and they have a nutty flavour. Do not overcook them. Some people like to eat them raw.

Sow Thistle--the leaves makes a wonderful spinach, and they are also good in salads.

Evening Primrose--Leaves and roots are both edible when young and tender. They can be used either raw or cooked.

Ground Ivy--Use both flowers and leaves in salads.

Day Lily--Use both roots and new shoots, either raw or cooked. The flowers can be used in fritters.

Burdock--is a little bitter, but the roots are much like water chestnut and can be used as such.

Dandelion Greens--Use raw in salads, or cooked as spinach.

Stinging Nettle--When cooked, it loses its stinging quality, and makes a wonderufl green. It is good in souffles.

Red Clover--Use the crumbled up dried blossoms as flour. Use some in muffins, cookies, or biscuits. This flour is high in protein. It can also be added to rice or porridge.

Common Mallow--Use both the cheeses and leaves. (The cheese are the unripened seeds which are arranged in a circle like a cheese).

Lambsquarter--is a very nutritious plant. The young greens can be used as spinach; tea. The berries are also edible.

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Miss MacLean said that a few years ago she had a health problem. this problem did not yield to regular medical practice, but she was cured when she went to a naturalpathic doctor, Dr Bruce Hayhoe, of St. John. Today she is in excellent health, and she believes that her good health is, to a large extent, due to the wild foods and tonics that she is using. She says that hardly a day goes by, from the last week in April until early November, that she does not use some wild foods that she gathers out-of-doors.

Coincidentally Mike Wong of Hong Kong was present at the meeting, as was Alma Smith, a former teacher in India. Gladys said that she developed a liking for Chinese and Indian cooking when she was in these countries. She likes to cook many of her wild foods in the Chinese way--that is, cook a number of vegetables together, along with some meat or sea food. She also curries some of her wild foods.

There will be a natural foods, pot luck supper at the Walker cottage at East Point tomorrow night, Saturday, June 14. If you feel that you cannot cook any wild foods, then we will accept you anyway. If this is the case, then bring something more conventional. Supper will be at 5:30 p.m. and after supper, we will look at the plants and birds in the immediate neighbourhood. Also, if you arrive early, we will do the same before supper.

Processing ore no simple task

Harry Walker
WILDLIFE

This article hardly falls under the heading of Wildlife, but I think that it will be of interest to many readers of this newspaper.

What goes on in the Heath Steel Mill?

This is where the ore from underground is separated into the following four products.

a copper concentrate.
a lead conccentrate.
A zinc concentrate.
and a waste product known as a tailing.

There is no separate silver concentrate but much of the sliver in the ore ends up in the copper and lead concentrates and becomes a valuable constituent of them.

How are the minerals separated into these four products

First the ore must be crushed and ground until it has been reduced to a very fine sand. This fine grinding is made necessary because of the fact that the various minerals in the ore are so finely disseminated through one another. Ideally, the grinding should continue until each of the resulting particles contains only one mineral, otherwise these minerals cannot be completely separated from one another in the subsequent step described below. The grinding is carried out in water; and, when the mixture of ground up ore and water leaves the grinding mills, it looks like very muddy water, and is known as a pulp or slurry.

By mixing certain chemicals into this pulp, the mineral surfaces can be altered so as to give them a somewhat water repellant surface much the same as though they were coated with oil.

If the right chemicals are used, the surface of one or more mineral species can be altered, while the surfaces of all of the other minerals remain unaffected. When air is blown through a pulp conditioned in this way, those mineral species which have this somewhat water repellant surface become attached to the air bubbles and are carried to the surface where they can be skimmed off in the form of a froth, while the other minerals remain behind in the pulp.

Since a certain amount of unwanted minerals are carried over with this froth, the froth is sent to other flotation cells where the minerals are floated over again. Several such cleaning steps may be required before the concentrate has been upgraded to the necessary degree of purity.

Ideally, the concentrate grades should be as high as possible in order to save on shipping and smelter costs. However, generally speaking, as the concentrate grades rise, the metal recoveries drop; or, in other words, if the flotation operators try to keep the concentrate grades too high, then they will lose a lot of valuable minerals into the tailings. Therefore, they must strike a practical balance between grade and recovery.

What becomes of the Four products produced in the Heath Steele mill?

The copper concentrate is shipped by rail to the smelter at Murdockville, Quebec.

Some of the lead concentrate goes to the Beldune smelter, while the rest of it is shipped to Europe from the Dalhousie docks.

All of the zinc concentrate is shipped overseas from Dalhousie, but in the near future it will be sent to Valleyfield Quebec for processing.

The tailings are pumped into an area behind the tailings dam where the solids settle out. This dam retains the tailings so that they cannot wash into the neighbouring streams.

A little crazy maybe ?

He not only watches birds, he keeps a running tally

Harry Walker
WILDLIFE

I contend that everybody is crazy. It's just that some of us make greater efforts to conceal the fact than do others.

Anyway, on June 21, I got up at 4:30 a.m. to count birds. I travelled along the two main auto routes between the Morrissey Bridge at Newcastle and the Centennial Bridge at Chatham, starting at the corner of Jane St. and King George Hwy, and ending at the traffic lights in Chatham Head.

I made 21 stops along this route, 11 on the north side of the river and 10 on the south side. At each stop, I got out of my car, and listed all the birds that I could identify by sight or sound. Here are the results, listed in the order of decreasing abundance.

Starlings 47, Double-crested Cormorants 35, Grackles (Blackbirds) 27, House Sparrows, 23, Robins, 23, Crows 18, Yellow Warblers 14, Redstarts 12, Bank Swallows 12, Song Sparrows 11, Chipping Sparrows 10, Red-winged Blackbirds 9, Bobolinks 9, Ravens 8, Red-eyed Vireos 8, Tree Swallows 7, Goldfinch 7, Yellowthroats 7, Pigeons 6, Great Black-backed Gulls, 6, Herring Gulls 5, Veery 5, Barn Swallows 4, Rose-breasted Grosbeaks 4, Spotted Sandpipers 4, Alder Flycatchers 3, Least Flycatchers 3, Cedar Waxwings 3, Ruby-crowned Kinglets 3, Magnolia Warblers 2, Kingbirds, 2, Wood Peewees 2, Northern Waterthrush 2, Catbirds 2, and one each of the following--White-throated Sparrow, Ring-billed Gull, Purple Finch, Loon, Cowbird, Flicker, Pine Siskin, Kildeer, Kingfisher, Hermit Thrush, Swainson's Thrush and Blackcapped Chickadee.

Since the results of this survey were quite different to what I expected, and since I love doing such surveys anyway, I decided to repeat it again the next morning, making exactly the same stops. Here are the results of the second survey.

Starlings 55, House Sparrows 30, Crows 29, Grackles 24, Robins 20, Redstarts 16, Song Sparrows 15, Goldfinches 15, Redwinged Blackbirds 15, Yellow Warblers 14, Bank Swallows 14, Chipping Sparrows 12, Red-eyed Vireos 9, Veery 9, Bobolinks 7, Barn Swallows 7, Alder Flycatchers 7, White-throated Sparrows 6, Ravens 6, Spotted Sandpipers 6, Cedar Waxwings 6, Kildeers 6, Kingbirds 5, Catbirds 5, Least Flycatchers 4, Northern Waterthrush 4, Nighthawks 4, Loons 4, Rose-breasted Grosbeaks 3, Ruby-crowned Kinglets 3, Kingfishers 3, Purple Finches 3, Canada Warblers 3, Baltimore Orioles 3, Herring Gulls 2, Cowbirds 2, Swainsons Thrush (Olive-backed Thrush) 2, and one each of the following--Blue Jay, Warbling Vireo, Solitary Vireo, Ovenbird, Hermit Thrush, Savannah Sparrow, Pine Siskin, Pigeon, Wood PeeWee, and Magnolia Warbler.

After completing this survey, I went on to South Nelson and made one stop at the eastern end of the town. Here are the results for this one stop:

Starlings 9, Robins 4, House Sparrows 2, Bobolinks 2, and one each of the following: Chipping Sparrow, Red-winged Blackbird, Least Flycatcher, Goldfinch, Redstart, Least Flycatcher, Goldfinch, Redstart, Yellow Warbler, Chestnut-sided Warbler, and Baltimore Oriole.

At this point Bud Russell came out and invited me in for a cup of coffee. It was now 9 o'clock and I had had only a light breakfast at 4:30, so I was ready for refreshments. This is one of those unexpected bonuses that sometimes comes with bird-watching. I had an interesting visit with the Russells as well as a much appreciated snack.

I have the results for each individual stop along the route of the above surveys. If you live somewhere along this route and would like to have the results for the stop nearest you, I will gladly supply them.

Next week I will tell you about a few things that I noticed during these surveys along with an analysis of the results.

* Survey June 22 – 4 Tree Swallows, 11 Yellowthroats, and 1 Nashville Warbler