

**Just like people**

# **Birds have a routine, too**

Last week's article contained the results of two bird surveys run on the same route on two consecutive mornings. The route started at the corner of Jane St. and the King George Hwy, followed the highway to the Centennial Bridge, crossed the bridge, and then followed the main auto route back to the traffic lights at Chatham Head.

From these surveys, it would appear that some birds are locked into a regular routine much like human beings. On June 21, at stop No. 3, at the lower end of Prospect Avenue, 6 Ravens flew overhead. They were in a loose flock spread quite far apart, but were all travelling in the same direction. All six birds kept on this same course from the time that they were first seen until they disappeared. As they passed over, they uttered a few croaks.

The next morning at exactly the same place and exactly the same time 6 Ravens again flew over travelling on exactly the same course as they had done the previous morning. The whole thing was a complete repeat of the performance the morning before. These six Ravens were the only Ravens recorded on the first survey, while two others were recorded on the second survey.

## **PLENTIFUL CORMORANTS**

The most unexpected birds recorded were the 35 Double-crested Cormorants (Black Shags) seen on the first survey. Cormorants are very plentiful on the Miramichi in early spring and again in late summer and fall, but are rare at this time of year. The first Cormorants seen were a flock of 28 flying up river in V formation, like a migrating flock that had both its time and its directions mixed up. A few stops later, another flock of 7 was seen, again flying up river.

On each of the two surveys, Cedar Waxwings were seen carrying nesting materials, but no other species were seen doing so. Cedar Waxwings are very late nesters. Almost all other birds would have finished building their nests several weeks ago.

The two Cedar Waxwings seen

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carrying nesting materials were at different stops, and therefore two different nests were involved. In both cases the nesting materials consisted of yarn or string. This seems to be their favourite nesting material. If you see a Cedar Waxwing building a nest, set out pieces of string or yarn and they will readily accept it; and they don't care what colour it is.

## **SERMON AND SONG**

Male song birds have their favourite singing posts. During these surveys, this was especially noticeable with the Red-eyed Vireos. At stop No. 2 in front of St. Mary's Convent, a Red-eyed Vireo was perched in a tree preaching a sermon. All the time that I was at this stop, it remained perched in the same place, and continued to deliver its sermon in the same unhurried way.

Next morning this same sermon was being delivered from the same perch, and this continued throughout the entire stop. Again, at stop No. 14, on both mornings, another Red-eyed Vireo acted exactly the same as the one at stop No. 2. This one was in a dead tamarack near the end of Kelly Road.

The Red-eyed Vireo is sometimes called the Preacher Bird. Its song consists of short, evenly spaced phrases, some rising in pitch and some dropping. Thus the bird seems to be trying to emphasize certain points. It will continue preaching in this way for long periods, even during the hottest part of the day when most other birds are quiet.

On the first survey, 46 species were recorded and 355 individual birds. On the second survey, 50 species and 404 individual birds. On the two surveys together 55 species were recorded. On the second survey weather conditions were somewhat better. Winds were lighter, so birds could be heard for a greater distance.

July 11/80

# Didn't know grass from hole in ground

Grass is such a common thing. Perhaps you think that the grasses need no description. But, do you always know a grass when you see one? Or, can you distinguish a grass from a sedge?

There are many sedges in our area. The sedges are most commonly found on wet ground; in ditches, swamps, or meadows. Some of them have hard sharp leaves, and these varieties are sometimes referred to as swordgrass. Superficially sedges look like grass; but, if you examine them carefully, you will find that there are many differences between them. What are these differences?

(1) Grasses have circular stems, sedges have triangular stems.

Here, it should be pointed out, that in some sedges, the corners of the triangle are very sharp, making the specimen readily identifiable as a sedge. In other cases, however, the corners of the triangle may be so rounded that the stem appears to be circular. If this is the case, then we must go on to some of the other distinguishing characteristics before we can decide whether the specimen is a grass or a sedge.

Also, in some of the finer varieties, it is difficult, without the aid of a magnifying glass, to tell whether the stem is round or triangular. With these fine varieties, a sharply triangular stem can often be detected by rolling the stem between the fingers.

(2) Grasses have hollow stems, sedges have solid ones.

(3) The leaves on grasses come out on only 2 sides of the stem (opposite sides), while the leaves on sedges come out on three sides (the three sides of the triangle).

(4) The nodes are more prominent in grasses than in sedges. In the case of grasses, these nodes are hard, often dark coloured, enlargements, appearing at intervals along the stem.

(5) The sheath of the leaves of grasses are split, while the sheath of the leaves of sedges are not split. To see this, take a long stem of grass and examine it. You will find that each leaf starts at the node and consists of two parts - a sheath, and a blade. The sheath wraps around the stem, and the blade runs out from it.

Now, if you pull on the end of the blade with one hand, while holding the stem with the other, then you will see that the sheath slips off of the stem without tearing, for the sheath is split along the side of the sheath opposite to the blade. Now, if you perform this same operation with a sedge, you will find that the blade will tear off, or the stem

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break, before the sheath pulls away from the stem, for there is no slit in the sheath of the leaf of the sedge.

Understandably, this is a little hard to follow unless you have a long piece of grass, that is in hand, in front of you.

## THEY'RE VALUABLE

Some of our most valuable plants are grasses. Not only do grasses cover our lawns, and provide hay and pasture for our livestock; but they also provide us with much of our food. All of the common cereals - wheat, oats, barley, rye, rice, millet, and even corn, are grasses. Bamboos are also grasses, some species of which grow to heights of 70 to 100 feet. What has been cultivated for 5 or 6 thousand years, and corn is believed to have been cultivated by Indians in the southwestern United States for over 3,000 years.

The tallest wild grass in our area is the Reed. It grows in marshes or other wet places. There are some large areas covered with reeds in the salt marshes at the mouth of the Napan River, and last year there was a small patch in the bit of marsh just to the east of Newcastle's sewage treatment plant. This grass can grow to over 15 feet in height under good conditions. It blooms in late summer, after which time it is topped with silvery plumes.

None of the sedges have much commercial value. However, one species, yellow nut grass (a misnomer, since it is not grass) or chufa, has been cultivated in Europe for its sweet tasting nuts or small tubers which grow underground.

Among the sedges of our area can be found a good variety with unusually shaped flower heads. This makes them interesting additions to dried flower arrangements.

A common sedge of this area is popularly known as Wool Grass (another misnomer). It has a flower head consisting of a cluster of soft brown balls; and, for anyone working at Heath Steele Mines, this plant has made up the clump of greenery, that has existed for years in the otherwise desert area back of the mill. Here it has grown prolifically at the discharge of the sewage line. However, this year, this clump of sedge does not look so healthy as the sewage has been re-routed around it.



# one day to live

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When we arrived, there were a lot of Mayflies still flying about; but we were informed that there were not nearly so many as had been there on the previous evening. Then they had swirled about the place like a blizzard. Many dead Mayflies littered the area, and the high tide line along the river was marked with a row of the dead bodies.

The Sillikers said that the Mayflies appear every year for three or four days, but that they had never before seen them in such vast numbers as they had seen them on the previous evening.

## **SALMON FLIES**

Mayflies are known locally as Salmon Flies; and Terry Silliker says, that in the Sussex area, they are known as Shad Flies.

Mayfly nymphs or naiads are recognized as the principal food of many species of freshwater fish. Hayward Sturgeon, chief wildlife protection office for the Miramichi, says that trout are very fond of them, and that he has opened trout and found their stomachs full of them. He says that they also go for the adults, and that the way to catch trout is to use a fly that looks like a mayfly. He also informed me that Mayflies are found throughout the Miramichi drainage area, right up to the headwaters.

## **LONG SLENDER BODIES**

In case you are unfamiliar with these insects, they have long slender bodies; delicate, transparent wings; and two very long, thin, appendages or filaments attached to the tail. These appendages are the most unusual feature about them, as far as appearance goes, but I have not been able to find out what purpose they serve. However, it as observed, that when flying, these appendages were sometimes held together; while, at other times they were spread apart to form a Y.

I took measurements on one specimen and found its overall length to be three and one half inches from the tip of the antennae to the end of the afore mentioned appendages. The three and one half inches was made up of two inches for appendages, one inch for the body proper, and one half inch for the antennae.

The body itself consisted primarily of a long thin abdomen like that of a dragon fly. There were two pairs of lacey wings, the front pair being much larger than the back pair. These wings are folded together above the body when the insect is at rest.

## **NEST IN MUD**

From the literature I learned that there are many species of Mayflies, and that the ones encountered at Strathadam were probably burrowing Mayflies; this name referring to the fact that their nymphs usually burrow into the mud at the bottom of the ponds, lakes, and rivers in which they live.

The name Mayfly itself apparently was applied to them because the adults usually ap-

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peared in the month of May. However, this name must have originally been given to one of the other species of Mayfly or been given to it in a much more southerly location, for here on the Miramichi, Julyfly would be a much more appropriate name.

Mayflies belong to the order Ephemeroptera, which comes from the word ephemeral. In the dictionary ephemeral is defined thus, existing only for a day;

I am sometimes amazed at the extravagance of nature.

Daphne Silliker of Strathadam reported, that on the evening of July 8, vast hordes of Mayflies converged on their home.

On the following evening, my wife and I drove out to visit the Sillikers. As we did so, we started running into these flying insects at the west end of Eel Ground; and continued to do so, to a greater or lesser extent, until we reached our destination.

short lived. For this reason Mayflies are sometimes called Dayflies.

## **SHORT ADULT LIFE**

The Mayfly nymphs live for anywhere up to three years (depending on the species) before they emerge as adults. Their adult life lasts for only about a day; but, during this time, they molt twice, mate, and the female lays her eggs. The eggs are laid in clusters, and these are washed off of the abdomen into the water, where they sink to the bottom. One female may lay as many as 4000 eggs; but many individuals seem to mate over land where their eggs are never deposited in the water, and therefore lost.

The literature contains some, almost incredible accounts, of Mayflies appearing in such numbers as to make driving hazardous; and of their bodies piling up in such numbers that they have been collected by the cartload for fertilizers. These accounts come from widely separated parts of the earth, both in North America, and Europe. One species, the white-winged Mayfly, is said to sometimes appear in such numbers as to whiten the banks of rivers like drifting snow.

Now I wonder, why are such vast numbers of delicate, graceful insects created to last for but a day? It seems so wasteful and extravagant. Surely there must be some lesson here that I have yet to grasp.

The Miramichi Naturalist Club will be holding a field trip to the Red Bank Indian Reserve tomorrow, Saturday July 19. Purpose of the trip is to see the display of relics there, and visit the mounds where they have been excavated. If you are interested in joining us, be in front of the Sinclair Rink at 1:30 p.m., or join us later at the portable school at Red Bank at 2:00 p.m.

(Please see elsewhere in this paper for stories and pictures of the Augustine Mound.)

July 25/80.

# Boys adopt baby flickers

Two Newcastle boys, Michael Dykeman and Robert Ross Jr. became foster parents to two young flickers.

The flicker's nest was in a birch tree near the boy's homes. One day a cat was seen running off with a flicker which was presumed to be the mother.

Two young flickers were found lying on the ground under the tree below the nest. One was dead and the other was flopping about but unable to fly. The latter bird was fed potato chips, mini-sips, and similar foods, but this diet apparently did not agree with it, and it joined its mother and brother.

However, another visit to the nest on the following day revealed that there was still one little flicker up sitting in the entrance to the nest. This one tried to fly but fell to the ground. Robbie took it home, but this time the baby bird was fed a wholesome diet of worms and ants.

## HAPPY AGAIN

The young flicker quickly became attached to Robbie, and protested loudly when it was put outside in a tent for the night. When it was brought back into the house and placed by Robbie's bed, it settled down immediately, tucked its head under a wing, and went to sleep.

The next day Robbie again gathered ants and worms (mostly green worms which were plentiful in a nearby maple tree).

The bird was now much stronger and was placed outside in a box. It kept calling out. After a time it received replies from another bird back in the bush. An adult flicker then appeared. This adult then made several trips to the maple tree and fed the baby on the same green worms Robbie had been feeding it. Then the two

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of them flew off together into the bush.

## WHAT HAPPENED?

Robbie's father said that after the cat was seen at the nest, he and others frequently visited the tree where the flicker's nest was located, but had never seen any parent birds around. Now we are wondering whether one of the parent birds survived and returned, or whether the young flicker was adopted.

The Rosses noted one unusual characteristic about their baby bird. This was its extremely long tongue, which it stuck out to catch any worms dangled in front of it. This characteristic is common to all woodpeckers. The long tongue is barbed at the end and is used to retrieve worms and ants from their wooden walled tunnels.

The yellow shafted Flicker, to give its full name; or, Le Pic Dore, to give its French name, is a large woodpecker of a generally mottled brown colour. The undersides of its wings are yellow, and it has a large white patch on the rump. Both of the latter markings are very obvious in flight, but both disappear when the bird alights. It has a red crescent on the back of its head, and a larger black crescent on the upper part of its breast.

## UNEXPECTED NESTS

Although the flickers usually nests in a hole in a tree, fencepost, or hydro pole, it occasionally nests in quiet unexpected places, a haystack, a sand bank, or on the ground.

The starling is a serious enemy

of the flicker, as it sometimes drives the flicker away from its nest, and then takes the nest over for its own.

The flicker is a prolific egg layer. It usually has six, seven, or eight eggs, but may have as many as 14 eggs in its nest.

Hal H. Harrison, in his book **A Field Guide to Bird's Nests** relates a case where one egg was taken from a flicker's nest every day, but one egg was always left in the nest. In this case, the flicker laid 71 eggs in 73 days.

The female laid one egg every day during this period, except for two days that she missed.

In this same book, it is said that flicker eggs have occasionally been found in other birds nests, in the nests of tree swallows, house sparrows, bluebirds, pileated woodpeckers, and red-headed woodpeckers. Perhaps the female flicker thinks that her own family is already going to be big enough so she distributes her excess eggs elsewhere.

## MALE INCUBATOR

It seems that the male flicker does more of the incubating than does the female. Robbie W. Tufts, in his book **The Birds of Nova Scotia** says that he once had a flicker nest in his garden. He frequently tapped on the tree during the incubation period to see which bird was on the nest. Out of 100 times he tapped on the tree, the male appeared at the entrance 60 times, while the female appeared 40 times.

The male and female can easily be distinguished. The male has a black moustache while, of course, the female has no moustache. This moustache is a sharply defined block mark that runs from the base of the bill and runs along the lower part of the cheek.



Ask Dean Kirkwood

# Wood turtles seek human companionship?

The Wood Turtle is the only freshwater turtle that is native to our area, and even it is near the northern limit of its range here.

Turtles, like the other reptiles, snakes and lizards, are found in greater numbers and variety in southern latitudes.

Recently two Wood Turtles have come to my attention. Six-year-old Dean Kirkwood of Newcastle found one in his own front yard one evening. He was playing hide-and-go-seek with some of his friends at the time, and was running to hide when he nearly ran over it. Dean was a little surprised and I think that the game ended at this point.

At first the turtle was shy and would not come out of its shell to meet Dean and his friends. Now it seems to be unafraid of people. It no longer withdraws into its

shell when people are around, nor even when they handle it.

Dean says that its favourite food is strawberries but that it also eats worms and mosquitoes. One day he gave it some stew, but it only picked out a bit of potato and left the rest.

The other Wood Turtle was found by Robert Buckley of Chaplin Island Road. It was crossing the road at Bill Kingston's place above Wayerton.

## TIME ON LAND

The Wood Turtle spends more time on land than do most turtles and during the summer months will wander considerable distances overland. It is probable that because of all the wet weather these turtles have been inclined to travel farther from their normal haunts than usual.

Although the Wood Turtle has a fairly extensive range, it is not very plentiful anywhere. Its range extends from New Brunswick, south to the state of Maryland, and west through southern Ontario to the eastern part of the state of Minnesota.

Barbara Froom, in her book *The Turtles of Canada* lists the Wood Turtle's food as small fish, snails and tadpoles while in the water and berries, fruits, mushrooms, tender leaves, insects and earthworms while on land.

## LIVED IN BUCKET

I remember my dad telling me long ago about a turtle (species unknown) that lived in a swill bucket. And, in case you don't know what a swill bucket is, it was standard equipment in every farm home when I grew up back in the depression.

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It was kept at the back door, or in a back shed and all of the dish water, potato peelings, apple peelings, and other such scraps went into it. The bucket was emptied periodically to feed the pigs.

Barbara Froom also says in her book that there are 10 different species of inland turtle native to Canada, and four species of sea turtle that are found off our coasts. She expresses concern for many species of turtle, both inland and sea turtles, as they have declined greatly in numbers and may be in danger of extinction.

The largest inland turtle of Canada is the Snapper which

may reach a weight of 50 pounds, while some Leatherback Turtles off our coasts may reach a weight of about one ton.

## NOT IN CANADA

No sea turtles lay their eggs on Canadian soil. They lay them much farther south.

Some Leatherback Turtles swim north into Canadian waters in the summer. But when the water becomes colder, these same turtles become sluggish, and eventually are unable to swim at all. In this condition they are sometimes washed ashore and then die.

Huge sea turtles have at times been credited with saving people's lives. In such instances, victims of shipwrecks have been able to cling to the backs of turtles until they were rescued.

# Oak apples are abnormal galls

Oak apples! Who ever heard of oak apples? Robert Kenny of Whitneyville brought one to me recently, and said, that the tree from which he picked it, was covered with them.

Of course, oak apples are not really apples. They are abnormal growths, or galls, which form on the leaves, acorns, or tender young twigs of oak trees. At a distance they resemble small green apples, and they are caused by small insects known as gall wasps.

The oak apple that Bob delivered to me was about one inch in diameter. It was mostly hollow, but it did contain the rudiments of an acorn. There was a hole in the side of it, and there was no sign of insect larvae in it; and therefore, I presume that the insects had either, matured and flown away, or some bird had devoured them.

The gall wasp lives within the gall during the larvae stage and also pupates there, and only emerges when it becomes an adult. It then mates and lays its eggs in other oaks.

## MANY SPECIES

There are many different species of gall wasps, or cynipids, and I have never seen one to recognize it as such. However, from what I read, they are all small, insignificant-looking insects that are not nearly so likely to attract attention as are the galls that they cause. They do not sting and do not much resemble the stinging insects that most of us recognize as wasps.

Galls (or Cecidii) are not peculiar to oak trees for they are found on many other species of plants as well; but, oak trees seem to have been specially singled out as the target of attack for many different species of gall wasps. Various species produce galls on the roots, trunks, leaves, buds, flowers, and acorns of oak trees. Generally each species of gall

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wasp attacks a particular organ of a particular species of plant. The gall wasp lays its eggs in the plant tissue, and the resulting enlargement is caused, in some cases, by some kind of growth stimulation caused by the eggs; and, in other cases, by chemical action caused by secretions of the larvae which hatch from the eggs.

## SOME CAUSED BY FUNGI

Here, it should be pointed out, that there are also other families of insects that cause galls, but the gall wasps include the greatest number of gall forming insects. Also, some galls are caused by fungi; and again, the gall is caused by secretions from the fungi. Galls assume many different forms, but each form is characteristic of the insect or fungi which causes it.

Some gall wasps have strange and interesting life cycles. For example, one species upsets the usual pattern of things. It has two generations per year. One generation produced in the spring consists entirely of females. The unfertilized eggs of this generation hatch in the summer to produce the second generation. This second generation is normal, containing both males and females. These mate and the cycle starts all over again. The first generation produces irregular swellings on oak twigs, while the second generation produces blister galls on oak leaves.

Some galls are important sources of tannic acid. There are types of galls found on European oaks that are known as gallnuts, and these contain about 65 percent tannic acid. Tannic acid is used in tanning leather, and is also an ingredient in some inks, dyes, and medicines.

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# Nest fungi is rare

Bird's nest fungi! I felt that I had made a big discovery. I had read about them before, but had never before seen them.

At first I did not know what they were, for the first ones that I saw were not yet fully developed. Also, this is the sort of thing that requires us to get down on our hands and knees, if we are to see them properly. A magnifying glass will also help to bring out the fine, details. How intricate is nature!

The bird's nest fungi were growing in a damp, shady flower bed among the begonias. There were several clusters of them; in each cluster, they were packed closely together. In the largest cluster there were about 50 of them. Some were growing among the moss, on a piece of rotting wood.

Each fungus measured about one-half inch in height. It consisted of a cinnamon-brown stalk, narrow at the base, and tapering outward as it went upward. This stalk was fuzzy, and quite tough and strong. On top of the stalk was a cup, little more than a quarter of an inch in diameter. The inside of this cup was chocolate-brown in color and pleated on the sides; and, except for its very small size, it looked exactly like a paper cup-cake holder.

## HIDDEN UNDER CAP

When the fungus first develops, the cup is hidden under a white paper cap stretched over the top of it. Later, this paper cap wears away, and the cup is revealed; on the bottom of this cup, are two or three little balls or eggs, not much bigger than pin heads.

The top of each fungi looks like a little bird's nest with eggs in it. These tiny eggs are really little puffballs, and consist of a thin skin on the outside, and many microscopic-sized spores on the inside.

When the eggs break open, the spores are dispersed by the action of the wind and the rain. These spores then start new fungi elsewhere.

Scientists consider the bird's nest fungi to be closely related to the puffballs.



## We must guard our environment

# Living Rivers valuable experience

I have just returned after spending a week on the Living Rivers Program. This program was conducted at Clive Wishart's camp on the Tabusintac River. I am glad that I went to it. I found it to be both informative and enjoyable, and would definitely recommend it to others who might be contemplating the idea of going to it in future years.

One of the participants at this camp was Hank Tyler, a botanist who is working on Maine's Critical Areas Program. He explained this program to us, and showed slides of some of these areas. The rest of this article (except for the last paragraph), is taken directly from a brochure obtained from Hank.

### MAINE'S CRITICAL AREAS PROGRAM

#### What are Critical Areas?

"Critical Areas are officially recognized (Registered) areas which contain natural features of state significance - either highly unusual natural features, or outstanding examples of more common features. Critical areas, on both public and private land, may include exceptional plant or animal habitat, areas of geological or historical interest, and outstanding scenic areas. They may or may not be well-known to the public. Some examples of critical areas include colonial bird nesting sites, naturally occurring rhododendron stands, significant fossil deposits, and scenic gorges and waterfalls.

#### Why are Critical Areas Important?

"Critical areas are a highly significant part of our natural heritage. They provide important opportunities for general natural history education, serving as museums and classrooms for student groups, conservation organizations, outdoor clubs, and individuals. Critical areas also serve as study areas for professional researchers in-

involved in investigations of undisturbed natural features. Areas with particularly good specimens of plant or animal species, or with populations of unusual species, provide "breeding stock", thus helping to maintain diversity and stability in the natural system.

In some cases, these areas may have the capacity for recreational use, providing space for such activities as sightseeing, hiking, canoeing, photography, and art. In some cases, these areas also have outstanding scenery.

#### What is Maine's Critical Areas Program?

"Recognizing that the proper identification and assessment of critical areas in Maine should be a major part of comprehensive planning activities, the 106th Legislature in 1974 enacted "An Act Establishing a State Register of Critical Areas." Under this legislation, the State Planning Office has the responsibility to develop a Critical Areas Program for the purpose of identifying, documenting, and encouraging the conservation of critical areas. An eleven-member Critical Areas Advisory Board has been created to advise and assist the State Planning Office in this endeavor.

#### What are the Phases of the Critical Areas Program?

"The Critical Areas Program consists of two phases: registration and conservation. Since the importance of various natural features cannot be established until a detailed inventory has been made, initial emphasis has been placed on the registration of critical areas. We must know what critical natural features are present, and where they are located before further conservation efforts are undertaken.

#### What is the Registration Process?

"The registration process begins with the identification of subjects (Potential critical area types such as: waterfalls, heron rookeries, and rhododendron

stands) for investigation under the Critical Areas Program. Priorities are then established as to which subjects will be looked into first, second, third, etc. A planning report is then prepared on the top priority subject. This planning report presents information relevant to the Critical Areas Program, specifically, which areas of the type under consideration should be considered further for registration. The planning report is the result of systematic, thorough, and detailed investigation of the subject, including contact with the landowners of potential critical areas and field investigation.

"Following review of the planning report, recommendations for registration of specific areas may be made to the Critical Areas Advisory Board by the State Planning Office. A preliminary decision is then made on the registration of each area recommended for consideration. If the preliminary decision on a particular area is favorable, the landowner is notified that it is being considered for registration and is given sixty (60) days to express his or her feelings to the board.

"After the 60 day waiting period has expired, the board again reviews the information on the area including the landowner's suggestions, if any, and decides whether or not to include the area on the register.

"The Critical Areas Register is a public document available for inspection at the State Planning Office.

#### What about the Conservation of Critical Areas?

"Conservation of critical areas is dependant upon the cooperation of the landowners, and may, with the owner's consent, involve management agreements and the sale or donation of property rights. At the present time however, the primary emphasis in the Critical Areas Program is placed on the registration of critical areas.

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"The State Planning Office attempts to maintain a close relationship with the owners of critical areas. In order to protect the landowner's assets and privacy, as well as to attain the primary objective of preventing damage to critical features, wide dissemination of information on critical areas will not be encouraged.

"To allow time to respond in the event of an imminent threat to a registered critical area posed by activities such as roadbuilding, clearing for powerlines or commercial development, the landowner is required by the Critical Areas Act to give the State Planning Office 60 days notice before such activities are undertaken on the area. If the proposed activity is of concern, the State Planning Office will contact the owner, as well as appropriate government and private organizations, to try to work out an arrangement whereby the threat may be avoided.

"If the critical area no longer possesses the values for which it was recognized, removal from the Register will be considered by the Board.

"Suggestions on areas which might be included on the Critical Areas Register are welcomed."

End Quote

I believe that similar efforts should be made, in all parts of our country, to safeguard the jewels in our environment before they are forever lost. Please take note that the purpose of this program is to keep these jewels as they are, rather than to expropriate the land that they are on. In some cases it protects the land being expropriated for other government projects.

# Kildeer now common in N.B.

The Kildeer is a bird that commands a lot of interest on the Miramichi. There are few, if any birds, that I receive more calls or inquiries about. No doubt, one important reason for this is, that the Kildeer is a new bird for this area, having established itself here only in fairly recent years.

It has long been a common bird in Ontario and the western provinces; but, the first official record of it nesting in New Brunswick was in 1946, at St. Andrews. Since then, it has spread rapidly and is now known to nest throughout the province. It appears that it now nests quite commonly on the Miramichi, judging by the number of Kildeers around.

Early in the summer, Stirling Burchill reported a Kildeer with young, at his place in South Nelson. Shortly after this I saw young Kildeers on Mercury Island near Blissfield. Reports were received later, of young Kildeers running about in the South Esk Road area, and on the playgrounds of James M. Hill Memorial High School. Similar reports were received in previous years. Such reports, no doubt, represent only a small sampling of the number of birds that actually nested here.

## LEAVE EARLY

At this point, perhaps I should point out, that the young Kildeers leave the nest as soon as they hatch. They then run about until they are able to fly. The brood usually consists of 4 chicks; and unlike young ducks or partridge, these chicks do not stay together. Instead each one

strikes out on its own. As a result the parents must have a difficult job keeping track of their four youngsters. Perhaps this is what has made them such high strung

Kildeers have not only spread throughout New Brunswick in recent years, but they have also spread much beyond our borders, to the north east. Paul Motts, of the Living Rivers Program, said that he saw a number of them at Bonaventure on the Gaspé coast; and, away beyond that again, Kathy Blanchard, who has been working on a project on St. Mary's Island on the Quebec coast (near the Labrador border) says that there are Kildeers up there. She also says that a Canadian Wildlife Service official found one of their nests on a nearby island, two years ago.

The Kildeer is a member of the Plover family. The name Kildeer comes from one of its calls, and the name Plover comes from the Latin word *Pluvia* meaning rain. The name Plover was first given to birds of this family in the Old World. There is no obvious connection between rain and the Plovers of this hemisphere, and just how they came to be known as Rainbirds is not clear.

A close relative of the Kildeer, which is common in New Brunswick at this time of year, and which looks much like it, is the Semipalmated Plover. However, the Semipalmated Plover is always on the shore, while the Kildeer is usually in fields far from the water. Also,

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the Semipalmated Plover is a smaller bird and has only one black band on its throat, while the Kildeer has two. Also, the Semipalmated Plover lacks the cinnamon coloured rump of the Kildeer; this being obvious in flight. In addition, the calls of the two birds are very different.

and excitable birds. This characteristic also accounts for the fact that people often find young Kildeers running about by themselves and then presume that they are lost, abandoned, or hurt. If left where they are, these birds' parents will probably soon return.

Kildeers lay their eggs on the bare ground and have practically no nest at all. Gravel pits, cultivated fields, and bare patches in pasture fields, are preferred nesting sites. They have been known to nest on the flat roofs of large buildings, and even between the ties of used railway tracks. Both parents help to incubate the eggs; and the brownish colouration of both birds and eggs, makes them almost indistinguishable from the earth and pebbles around them.

## TRICKY BIRDS

Kildeers are experts at the broken wing trick, by which, they lure intruders away from the nest or young. They may even use this trick simply to lure intruders away from their favourite haunts.



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# **Bird survey results**

Here are the results of a bird survey run between East Point and Chatham, on the last day of June this year.

The survey was started at East Point, a few minutes after 5 a.m. From here, the survey route followed was, --along the Shore Road in front of Loggieville and right into downtown Chatham, up Lobban Ave. to Wellington St., and then back to East Point via Wellington St. (or the inland road). The survey ended about 9:30 am. Along this route 24 stops were made, and birds in between stops were not hunted.

Birds recorded in order of decreasing abundance were:

- Starlings 73;
- Grackles (Blackbirds) 22;
- Crows 18;
- Black Ducks 17;
- Chipping Sparrows 16;
- Song Sparrows 15;
- Purple Finches 14,
- White-throated Sparrows (Old Tom Peabodys) 14;
- Redstarts 13;
- Yellow Warblers 13;
- Bank Swallows 12;
- Goldfinches 12;
- Ravens 10;
- Yellowthroats 9;
- Bobolinks 9;
- Kildeers 8;
- Tree Swallows 7;
- Ovenbirds 7;
- Red-eyed Vireos 7;
- Verrys (Wilson's Thrush) 6;
- Spotted Sandpipers 6;
- Swainson's Thrush (Olive-backed Thrush) 5;
- Magnolia Warblers 5;
- Pine Siskins 4;
- Evening Grosbeaks 4;
- Least Flycatchers 4;
- Flickers 4;
- Rose-breasted Grosbeaks 4;
- Pigeons 4;
- Red-winged Blackbirds 4;
- Savannah Sparrows 4;
- Kingfishers 3;
- Great Blue Herons 3;
- Alder Flycatchers 3;
- Cape May Warblers 3;
- Ruby-crowned Kinglets 3;
- Looms 3,
- Cowbirds 3;
- Double-crested Cormorants (Black Shags) 2;
- Chestnut-sided Warblers 2;
- Tennessee Warblers 2;
- Catbirds 2;
- Kingbirds 1;
- Black-Capped Chickadees 1;
- Cedar Waxwings 1;
- Bay-breasted Warblers 1;
- Wood Pewees 1;
- Baltimore Orioles 1;
- Myrtle Warblers 1;
- Lincoln's Sparrows 1;
- Barn Swallows 1;
- Nashville Warblers 1;
- Yellow-bellied Flycatchers 1;
- Chimney Swifts 1.

There were also 93 gulls recorded.

After reporting the results of two similar surveys run along the two main auto routes between the Morrissy Bridge and the Centennial Bridge, I received a call from a bird-watcher in

Goldfinches 12;  
 Ravens 10;  
 Yellowthroats 9;  
 Bobolinks 9;  
 Kildeers 8;  
 Tree Swallows 7;  
 Ovenbirds 7;  
 Red-eyed Vireos 7;  
 Verrys (Wilson's Thrush) 6;  
 Spotted Sandpipers 6;  
 Swainson's Thrush (Olive-backed Thrush) 5;  
 Magnolia Warblers 5;  
 Pine Siskins 4;  
 Evening Grosbeaks 4;  
 Least Flycatchers 4;  
 Flickers 4;  
 Rose-breasted Grosbeaks 4;  
 Pigeons 4;  
 Red-winged Blackbirds 4;  
 Savannah Sparrows 4;  
 Kingfishers 3;  
 Great Blue Herons 3;  
 Alder Flycatchers 3;  
 Cape May Warblers 3;  
 Ruby-crowned Kinglets 3;  
 Looms 3,  
 Cowbirds 3;  
 Double-crested Cormorants  
 (Black Shags) 2;  
 Chestnut-sided Warblers 2;  
 Tennessee Warblers 2;  
 Catbirds 2;  
 Kingbirds 1;  
 Black-Capped Chickadees 1;  
 Cedar Waxwings 1;  
 Bay-breasted Warblers 1;  
 Wood Pewees 1;  
 Baltimore Orioles 1;  
 Myrtle Warblers 1;  
 Lincoln's Sparrows 1;  
 Barn Swallows 1;  
 Nashville Warblers 1;  
 Yellow-bellied Flycatchers 1;  
 Chimney Swifts 1.

There were also 93 gulls recorded.

After reporting the results of two similar surveys run along the two main auto routes between the Morrissy Bridge and the Centennial Bridge, I received a call from a bird-watcher in Douglastown, Rick Wedge. He expressed some surprise that I had not recorded any Tree Swallows on the second survey. When I checked my original records with my article in the paper, I found that the following 3 entries had been left out,--

Yellowthroats 11;  
 Tree Swallows 4;  
 Nashville Warblers 1;

While taking a walk near their cottage at East Point, Mr. and Mrs. Robert Currie Sr. of Chatham, saw a brown skunk. It was accompanied by three normally coloured young ones.

Brown or Cinnamon Skunks are very rare. A stuffed specimen was on display at the Living Rivers Camp this summer. It had been borrowed from Robert Currie Jr. of the Dept. of Natural Resources here in Newcastle.

Mrs. Joan Houston of Newcastle says that if you or your pet get squirted by a skunk, then spray aerosol shaving cream over the affected area, and then wipe it off. This will remove the skunk odour. She tried this on her dog and it worked well. She feels that this is a better method than taking a bath in tomato juice.



# Mine ravens like swallows

Lenn McDonald and I have just returned from a trip to Murdochville, Quebec, where we toured the operations of Gaspé Coper Mines Ltd. Here are some points of interest:

As we looked over the brim of the large open pit mine, the Ravens flying far below us looked more like swallows than ravens. It seemed a little odd that any birds would be flying around in that rock desert below us; but ravens, being the scroungers that they are, were no doubt looking for crusts and other scraps that the miners would throw away at lunch time.

In the mill, one recent innovation impressed us. This was the use of two flotation columns for separating molybdenum from the copper concentrate. In this operation, 13 steps in the old set up, had been replaced by two steps in the new; at the same time, the amount of molybdenum recovered had been substantially increased.

## SIMPLICITY

The metallurgist felt, that in this case, the improved recovery was largely a result of the new circuit being simpler and easier to understand, and therefore easier for the operators to control. The new set up also occupied a lot less space. This is the kind of inventions we need. As someone once said, - "Anyone can invent something that is complicated, but it takes a genius to invent something that is simple."

The sulphuric acid plant removes about 60 percent of the sulphur dioxide from the smelter gases before they are discharged into the atmosphere; and the people of Murdochville have noticed two differences since this plant started production back in 1972.

First, some of the bare hills around the smelter have become a little greener. Second, the black flies have returned.

## LUXURIOUS PROFUSION

In the interior of the Gaspé Peninsula, in general and, around the mine, in particular, coltsfoot was growing more luxuriantly, and in greater profusion, than I had ever seen it grow before.

It was growing along the roadsides, on steep road cuts

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where all the topsoil had been removed, on piles of waste rock from the mine and in patches around the edge of the mill tailings disposal area. So it seemed to be the natural choice for a plant for revegetating the tailings dump.

Danielle Gagnon, a metallurgist, has been working on this very problem. She started on this project only recently. In cooperation with the Agricultural College at Guelph, two species of grass, and one species of trefoil have been planted on a portion of the tailings.

It is still too early to say how successfully these species will grow. One reason for using trefoil for this purpose is that it is a legume; and, like all legumes, it takes nitrogen from the air and adds it to the soil, thus improving the fertility of the soil.

## NOT AVAILABLE COMMERCIALY

When asked about trying coltsfoot for this project, Danielle replied that she had tried to obtain its seed, but that it was not available commercially. So, I suppose, that it has always been regarded as a weed, without a useful purpose.

Coltsfoot was described in this column earlier this year. It blooms very early in the spring and the flowers look very much like dandelions. However, the stems have long pointed scales on them and, the leaves, which are not at all like dandelion leaves, do not appear until after the plant has stopped blooming. For the rest of the summer, the plant consists only of low lying broad leaves. It always grows in close patches, rather than singly.

On Wednesday, September 17, come to the Miramichi Naturalist club meeting at Miramichi Valley High School, in Doug Underhill's classroom, starting at 8:00 p.m. Albert Crossman, formerly of Newcastle, and now Park Naturalist at Kouchibouguac National Park will be our guest. He will be giving a slide presentation on bogs. All are welcome.

# Coyote likes hand-outs

Coyotes are showing up on the Mines Road. Clarence Walsh of Wayerton saw one about two weeks ago. I was about one mile above the Miner's Bridge. And, Harry Bryenton of sunny Corner saw two of them at almost the same place, a few days earlier.

Out at Boise Cascade's Opertaions No. 2 camp, Leng Brideau of Tracadie says that he and many other men in the camp have had coyotes eating right out of their hands. He says that at lunch time a coyote will sometimes go from one working party to another, getting hand-outs. Although he has seen only one coyote at a time, Leng says that there are a number of them aorund, for he has seen males and females and young ones. They will not accept bread or cake, but only meat.

## MOURNING DOVES

Mourning Doves continue to be reported from time to time. Doug Underhill of Ferry Road had one frequent his year for about a week, after he had just seeded his lawn. And, Perley Hare of Strathadam reported that three Mourning Doves had joined his flock of tame ducks at feeding

time, to eat grain with them. Frank Mahoney had a Mourning Dove spend the winter at his place in Williamstown a few years ago. It came regularly to his bird feeder.

Don and Barbara Archibald had a Phoebe build its nest on the side of their cottage at Baie Du Vin. The nest of mud, grass, and moss, was placed on top of the light fixture beside the cottage door.

The Phoebe is a small, greyish bird of the flycatcher family. It is not very common in New Brunswick; but, it is a very friendly bird, often placing its nest very close to human habitations.

Small wooden bridges, or old wooden sheds are favourite nesting sites; and, I once found one inside a limestone cave. According to Hal H. Harrison in his book, A Field Guide To Bird's Nests, the phoebe seems to lack orientation, and may build many nests side by side along a beam. Harrison found 6 complete, and 22 incomplete nests on a bridge beam. One nest contained 3 eggs, and another on contained one egg.

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## WHALES

In the 1st Newsletter of the Conservation Council of New Brunswick, is this note about Whales:

"As you may know, Canada's delegation to the International Whaling Commission last month renewed its alignment with the whaling interests (Japan, Russia, etc.) rather than with the growing number of countries concerned with whale preservation (Australia, France, U.S.A. etc.). Many feel that Canada should take a more careful look at its responsibilities to the environment, the oceans, and the protection of endangered species.

"If you share this concern, it would help to write a sentence to that effect to: The Honorable Romeo LeBlanc, Minister of Fisheries and Oceans, Ottawa, Ontario, K1A 0E6. Postage Free."

# Rare orchid found at Kouchibouguac

Sept. 26/80

More species of orchid are found in Kouchibouguac Park than are found in any other national park in Canada. Twenty-five species have been found there, and one of these is very rare. It has never been found elsewhere in New Brunswick; and, in fact, its discovery at Kouchibouguac represents only its ninth record for the whole of the Dominion of Canada.

This we learned from Park Naturalist, Albert Crossman, who spoke to us at the last meeting of the Miramichi Naturalist Club. This meeting was held at the Miramichi Valley High School on Wed. evening Sept. 17.

Albert grew up here in Newcastle, and studied Biology at Mount Allison University, before assuming his present job at Kouchibouguac.

He says that there are eight major habitats in the park, including, 52 percent forest, 21 percent bogs, 18 percent lagoons and estuaries, 4 percent open fields, 3 percent salt marsh, 2 percent barrier islands, less than 1 percent freshwater streams and ponds, and the open sea. This latter habitat is not really within the park boundaries, but it, nonetheless, borders on it and influences it.

In his slide presentation Albert focused in on one of these eight major habitats - the bogs.

He pointed out that bogs present very austere growing conditions. Bogs are very acid; since they are formed by layer upon layer of sphagnum moss building up, sometimes to great depths, the surface of the bog contains practically no mineral nutrients.

## NUTRIENTS

Plants must therefore obtain most of their nutrients from the air, from the rain and the snow. Some bog plants solve this problem by trapping insects and digesting the soft parts of their bodies. There are three such groups of insectivorous plants in Kouchibouguac Park - the bladderworts, the sundews, and

the pitcher plant. Each of these three groups of plants have their own peculiar ways of trapping these insects.

Most of the bladderworts are aquatic and they have small bladders arranged along their leaves. Each bladder has a tiny opening which leads into it, and this opening is surrounded by bristles. When a tiny aquatic insect touches one of these bristles, the bladder expands sucking the insect into it.

The sundews have tiny drops of glue on the tips of hairs that protrude from the plants leaves. Insects get stuck to this glue.

The pitcher plants have leaves shaped like cups. These cups contain water; if an insect falls into one of them, it is prevented from crawling out again by the downward pointing hairs that grow on the inside of the cup.

As a result of the nutrient poor conditions in a bog, some plants found growing there are only mere miniatures of those found growing elsewhere. For instance, a 75 year old black spruce growing in a bog, might be a dwarf half the height of a man; whereas, if it had grown in a more hospitable environment, it would have been a large tree.

## COMMON GROWTHS

Some other plants that commonly grow in bogs are, Leatherleaf, Sheep Laurel, Labrador Tea, Rhodora, Bog Cotton, Bog Cranberry, Blueberry, Huckleberry, Bake Apple; and several of the orchids, Calapogan, Rose Pogonia, and Aethusa.

Coloured slides of all these plants were shown at the meeting.

In connection with Labrador Tea, Albert said that its leaves, either dried or green, made a good tea; but he warned against drinking too many cups at once as it acted as a laxative.

He said that Bake Apples (also known as Cloudberry) are delicious, but expensive. He saw some that were up for sale in Newfoundland at \$14 per gallon.

Harry Walker

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During many seasons, the Bake Apple plants in a particular bog, may fail to produce a single fruit and, unscientific as it may sound there is evidence to support the belief that Bake Apples will not produce fruit if there is an electric storm in the vicinity of the bog while they are in blossom during July.

Bake Apples are yellow in colour, but otherwise look like raspberries.

Huckleberries are another delicious fruit, and they taste much like Blueberries.

Bogs are not very rich an animal life, but moose are plentiful in them.

Flarks are soft, black, soupy areas in bogs; and, the muck in these places acts much like quicksand. The depth of this muck may vary anywhere from a few inches to many feet.

The partially decomposed sphagnum moss that constitutes the boyd of a bog acts like a blotter. It soaks up and holds water. But, since this water lacks oxygen, it precludes the growth of bacteria and fungus. As a result, anything that gets buried in a bog becomes preserved until it is exposed to the air again.

Albert had on hand a book called *The Bog People*, written by P.V. Glob. This book tells the story about human bodies that have been found buried in bogs and which have been preserved in them for centuries.

The Indians made use of the absorbent qualities of sphagnum moss. They used it for diapers and for sterile dressings on wounds.

If you care to take a walk through a bog, there is a wooden walkway built over the Kelly Bog in Kouchibouguac Park. The depth of the sphagnum at the centre of this bog is 21 feet, the same as the height of the viewing tower built at the edge of it.



# Noone's seen coyotes like those in N.B.

How quickly are Coyotes multiplying in New Brunswick? And, what effect will they have on our native animals, such as deer and fox?

Gary Moore of Fredericton has been studying the coyotes of New Brunswick as part of his requirements for a Master of Science degree at the University of Western Ontario. Last year, in co-operation with the Department of Natural Resources, he examined the carcasses of 103 coyotes that had been snared, trapped, or shot in the province.

He took weights and measurements on each carcass, examined them for parasites, and examined the contents of their stomachs. Also, by examining their teeth, he has been able to classify them according to age. On Monday evening, Sept. 22, he spoke to members of the Miramichi Trappers council at a meeting held in the Recreation Centre in Newcastle. Here are some of the results of his study;

The coyote is increasing by leaps and bounds. They first appeared here in 1973-74 season when 5 of them were taken in the province. In the six years since then, the number of coyotes taken in New Brunswick have increased as follows;

74 to 75 season 7; 75-76 season 17; 76-77 season 32; 77-78 season 49; 78-79 season 152; and 79-80 season - over 300. (exact figure not available.

## NB COYOTES BIG

The coyotes of New Brunswick are big. As a group, no one has seen coyotes this big before. Also, the coyotes of New Brunswick vary greatly in colour. Besides the usual grizzled grey colour, some individuals have turned up that are red like a fox, and others are fawn coloured. Why the coyotes of New Brunswick are so big, and why they very so much in colour is not known definitely, but Gary thinks that the coyotes here may have crossed with wolves. Through the years there

have been a few scattered reports of wolves being taken in the Gaspé, and he suggests that there may have been a small remnant population of wolves that survived on the south side of the St. Lawrence.

He believes, that after the coyote has become established in New Brunswick, the population will tend to become more uniform in colour. This seems to have been the case in other new territories where the coyote has been able to establish itself.

Here is the breakdown in ages of the coyotes that have been turned over to Gary, 65 of them approximately one half year old (pups are born in the spring, and these were taken in the fall and winter), 15 of them 1.5 years old, 11 of them 2.5 years old, 6 of them 3.5 years old, and the remaining 6 were 4.5 or more years old. One of these last 6 was 13.5 years old - a very old coyote, the record being only one year older than that, or 14.5 years.

Of the coyotes examined, 64 were males and 38 were females. Why

there should be such a high percentage of males is again a matter of speculation, but Gary suggests that the males may travel about more and are therefore more likely to be taken.

## MUCH LIKE A SHARK

Now for the contents of their stomachs: in this respect, Gary says that a coyote is much like a shark - you may find anything in it.

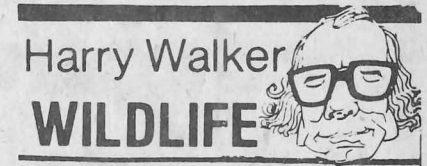
The following figures are the percentages, of the coyote stomachs examined, that had some of that particular item in it.

Rabbit 27.5 percent, Deer 22.5 percent, Grasses and other plants 20.6 percent, Non-edibles (rubber, plastic, paper, etc.) 20.6 percent, Mice 12.7 percent, Large birds 4.9 percent, Porcupines 3.9 percent, small birds 2.9 percent, Carrion (indicated by the presence of maggots) 2.9 percent, feces 2.9 percent, garbage 2.9 percent, sheep 1.0 percent, apples 1.0 percent, moose 1.0 percent, and Canid (Fox) 1.0 percent.

He pointed out that all of these coyotes were taken during the fall and winter; and, that in the summer their diet could be considerably different.

Their diet in summer would probably contain more mice, berries, fruits, etc. In connection with the meat found in their stomachs, there was no way of knowing how much of this was freshly killed, and how much was really carrion (except when maggots were present). Gary expressed the belief that most of the deer meat found in the stomachs was probably from deer that had died during the winter, or had died of wounds inflicted during the hunting season; and he believes that domestic dogs pose a greater threat to the deer population than do the coyotes. However, coyotes are capable of bringing down a deer, and have been known to do so.

Fox are driven away from the vicinity of the coyotes den while there are young in it; and the in-



roduction of coyotes into New Brunswick, could result in some drop in the fox population, although the impact in this respect is not expected to be great. Bob Currie also adds that they might also have a similar effect in reducing the cat population. These points are a concern to trappers because fox and bobcat pelts are more valuable than are coyote pelts.

Coyotes first appeared in agricultural areas of the province; and are more plentiful in such areas, and in clear-cut areas, than they are in heavy bush country.

Gary will be continuing his study during the coming season; so, hopefully, we can bring you further informaton on this study next year.

# A time for turkeys

Oct. 10/80

This being Thanksgiving, it seems appropriate to say something about the turkey.

Wild Turkeys were once plentiful throughout much of North America. To quote the famous naturalist John James Audubon, who lived from 1785 to 1851, "At the time when I moved to Kentucky, turkeys were so abundant that the price of one in the market was not equal to that of a common barn fowl now. I have seen them offered for the sum of three pence each, the birds weighing from ten to twelve pounds."

Southern Ontario was the only part of Canada where wild turkeys were found. Since they were non-migratory, their numbers there became greatly depleted during severe winters. However, since they laid lots of eggs, they could soon recuperate from their losses.

When the white man settled in Ontario, however, they were soon exterminated, the last ones disappearing about 1902. They still exist in some out-of-the-way woodlands in the south eastern United States.

Our Domestic Turkey was developed from the Wild Turkey, and The Domestic Bronze variety differs very little from the original wild species.

## TRAVELLING TURKEYS

One of the first things to be imported into Europe from America was the turkey from Mexico, the Spanish brought turkeys back home to Spain with them. These turkeys had already been domesticated by the Aztecs. From Spain, the turkey reached England around 1520 to 1524.

Major W. Ross King, in his book *The Sportsman and Naturalist in Canada*, published away back in 1866, explains how the turkey got its name. I quote:

"The slight value to be attached to mere local names is well exemplified in our own misnomer, 'Turkey' which we

have absurdly bestowed on this bird for no better reason than, that at the time of its introduction into England, most foreign articles were vulgarly supposed to come from that country; while the french, dindon, which is a corrupted abbreviation of coq d'Inde, assign it to the Old World instead of the New, apparently from a confusion of the East Indies with the West."

After being accustomed to seeing domestic turkeys in fields, it seems rather odd that the Wild Turkey's natural habitat was mature hardwood forest and that it was the destruction of this habitat, as much as hunting pressures, that resulted in its extinction from Canada.

The old major, quoted earlier, recorded some other interesting information about Wild Turkeys.

He says that they were such wary birds, and so difficult to approach, that some people credited them with a keen sense of smell. (This of course was wrong, for birds have practically no sense of smell.)

He says that they were easily trapped. It was simply a matter of making a wooden cage and then sprinkling some grain around and leading into it. In this way, large flocks could be trapped in the same cage.

He also says that the Indians sometimes caught them on baited hooks, the same way that we catch fish.

## NOT AIR-BORN

Wild Turkeys were not strong fliers but they would travel long distances on foot, as they searched for new feeding grounds.

The following description was written by Alexander Wilson (1766 to 1813), the first person to make a comprehensive study of American birds in their native haunts.

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"When their progress is interrupted by a river they will hesitate for a day or two on the banks, as if unwilling to risk so formidable an undertaking. All this time the males gobble continually, and strut about with absurd importance; the females and young also assuming much of the same pompous air. At length the moment arrives and the whole mount to the top of the highest trees and take flight together towards the opposite bank. The older birds cross, without much difficulty, rivers even a mile in width; but the young and weak often fail to reach the other side and have to swim for it, which they do well enough."

"If, in the endeavour to land, they approach an inaccessible bank, they resign themselves to the stream for a few moments, in order to gather strength for one grand effort; but many of the weaker, which cannot rise sufficiently high in the air, fall again and again into the water, and are finally drowned."

I should point out that the Sandhill Crane in western Canada is sometimes called a Wild Turkey, but this is an entirely different bird to the one referred to above.

You are invited to attend a meeting of the Miramichi Naturalist Club to be held at the James M. Hill Memorial High School in Chatham on Tuesday Oct. 14 at 8:00 p.m. David Morris of Newcastle will be showing underwater movies taken off the Bahamas and Guadalupe, and will also be explaining some of the equipment used on these expeditions. See you there.

Have a good Thanksgiving.



# My friend in the English channel

After making the effort to write a column like this, it is of course gratifying to learn that someone is also reading it. However, it came as some surprise to learn that this column is read in such a far off place as the Isle of Wight, of the south coast of England.

Audrey Wilkinson is a youth hostel warden there, and she studies nature in her spare time. She grew up here in Newcastle, but she says that she did not become seriously interested in this study until after leaving her. Her parents, Mr. and Mrs. Edmond Robichaud, still live here, and she says that for the past few years her mother has been sending her clippings from this column.

Here is a list of birds that Mrs. Wilkinson saw while she was visiting with her parents here about a year ago;

In Strawberry Marsh: Greater Yellow Legs, Lapland Longspurs, Horned Larks, Snow Buntings, Dunlin, Pectoral Sandpipers, Wilson's Snipe, Spotted Sandpiper, Pipits, Teal, Black Ducks, Common Loon, a Red-Breasted Merganser, and two Hooded Mergansers.

Upper end of Sweeney Lane: White throated sparrows, Slate-coloured juncos, and a Fox Sparrow.

On outing to Bald Mountain: Snow Buntings, Horned Larks, Pine Grosbeaks, and Ravens.

From the above list, it is apparent that Mrs. Wilkinson is a careful observer of birds, and that she was here in the fall of the year. Many of those listed are migrants, and the Pectoral Sandpipers and Dunlins normally pass through our area only in the fall.

During spring migration, they pass north via a more westerly route. As shore birds go, these latter two species are rather late migrants, passing along our coast considerably after the main body of shore birds has already passed by.

## GOOD JUMPING PLACE

Mrs. Wilkinson indicates that the Isle of Wight is a good place

to observe migrating birds, and one would rather expect this from its geographical location. It looks like a good jumping off place for flights across the English channel, and it is the first land that many birds would come to as they pass in the opposite direction.

It seems to be a good place to watch for sea birds as well, for she lists gulls, skuas, fulmars, kittiwakes, gannets, auks, ducks, geese, terns, and waders, as some of the birds that she has observed from a coastal point there.

One unusual bird that she mentioned seeing there was a hoopoe. This bird was apparently north of its normal range,

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although it has occasionally nested in southern England. Not knowing what a Hoopoe was, I looked it up.

The Hoopoe would remind one of a Kingfisher. It is about the same size and build, but it has a much more exaggerated crest - the crest looking much like the head-dress of an Indian chief.

The Hoopoe is related to the Kingfisher but lives on insects rather than fish, its favourite food being ants which it digs out of the ground with its long bill. Its plumage is a striking and variegated pattern of white, buff, and black.

Mrs. Wilkinson says that quite a number of North America vagrants arrive in the European side of the Atlantic each year (1,015 reported between 1958 and 1972 according to **British Birds**).

To some extent, the same happens in the opposite direction, with some European vagrants appearing on this side of the Atlantic, but probably to a much smaller extent. I have no figures on this; but, being in the belt of the westerly winds, it would be easier for a bird to cross the Atlantic from west to east than it would be to make the crossing in the opposite direction.

# Help solve marking mystery

Last fall we had some strange white birds visit the Miramichi. Eventually they were identified as Cattle Egrets. This year, there is a strange black bird with us.

This strange bird is obviously some species of puddle duck. It has been living among the Black Ducks down in Strawberry Marsh, for at least a week now. It acts like a Black and quacks like a Black, but it is larger and quite differently coloured from a Black.

Its colour is a true black rather than a dark brown as is the case with the so-called Black Duck. Even its bill and its eyes are black. But, its legs are yellow; or, at least that is the general impression gained from very brief glimpses of the upper part of its legs, seen while the bird has been paddling along in the water.

It has a few white markings. The most obvious of these is a patch on the front, at the base of the neck. There is also a thin edging of white on part of the outer wing. There also appears to be a very tiny area of white at the base of the bill.

This is not the normal markings of any of our native North American Wild ducks. If you can help solve this mystery, give me a call at 622-2108.

## PAINTING COLLECTION

One evening last week, my son Bruce arrived home from school with a book containing a collection of John James Audubon's paintings. Sister Hickey was sending it to me on loan from the school library.

Sister Hickey is very good to me. She periodically loans me literature in this way; and, in case you do not know her, she is the librarian at the Miramichi Valley High School.

It may have been just coincidence, but the first painting in the book was that of a Wild Turkey, and my last article had been about this very bird.

Harry Walker

**WILDLIFE**



The write-up beside this picture contains the following comment:

"Benjamin Franklin once said that he wished the turkey 'withal a true original Native of America' had been chosen as America's national symbol rather than the eagle 'a bird of bad moral character'".

Jackie King reported that David MacRae saw a yellow-crowned Night Heron at the Baie Du in River last July; and that she, herself, saw it sometime later at the Bay Du Vin beach. These sightings are the first for this bird in this area, as far as I know.

Up until 1970, there was only one record for this species for the whole of New Brunswick; but there have been a few more since then. There have also been at least two records for Newfoundland.

## OCCASIONALLY WANDERS

The yellow-crowned Night Heron nests from Massachusetts southward, but occasionally wanders north of its breeding range. A close relative, the Black-crowned Night Heron nests in north-eastern New Brunswick, and it can sometimes be seen in Strawberry Marsh.

Both of these night herons are about the size and build of the American Bittern, and immature birds are coloured much like bitterns. However, night herons generally feed in the open, in shallow water; rather than remain hidden in the long marsh grass, as is the case with the bittern. Also, when people are around, the bittern freezes with its bill pointed skyward so as to blend in with the marsh grasses. Whereas, the night herons stand with their bills pointed on the horizontal.



# Scuba diving: Rewarding, but dangerous

Scuba diving is a hobby of David Morris, a lawyer here in Newcastle, and he spoke to us about this hobby at the last meeting of the Miramichi Naturalist Club held in the James M. Hill Memorial High School in Chatham on Tuesday evening Oct. 14.

He showed us two rolls of film that he had taken underwater, one taken off the coast of Guadeloupe, and the other, off the coast of the Grand Bahama. He also outlined some of the dangers of scuba diving, and some of the precautions that must be taken while underwater.

When diving, enough weights are attached to the diving suit to make the body bouyant at the depth to which one wants to descent. If the diver goes a little deeper than this; then, due to the increased pressure, his suit and body are compressed, making him heavier; therefore, he tends to sink. If, on the other hand, he rises higher than the intended depth, then his suit and body expand, and he starts to rise; and eventually, to pop right up like a cork.

As the diver rises and the pressure drops, then the air in his lungs expands; and, if he rises too rapidly, his lungs may burst. If he breathes out very forcefully while rising, he can help to counteract this effect.

## DISSOLVES NITROGEN

Also, the blood dissolves a certain amount of nitrogen at all times; and, the greater the pressure, and the greater the length of time exposed to high pressure, then the greater is the amount of nitrogen that becomes dissolved in the blood. As a consequence, if a diver has been doing a lot of deep diving every day, his blood can become saturated with nitrogen.

In such a case, if he surfaces too quickly from the deep dive, then some of this nitrogen may come out of solution and collect at the joints causing pains similar to arthritis. These pains may not be noticeable immediately, but may develop on the following day.

An airplane ride, right after a scuba dive, would further reduce the pressure; and therefore, intensify this condition. For this reason, scuba divers are not allowed to fly until 24 hours after their last dive.

If a diver develops the above symptoms, he can be relieved by treatment in a recompression chamber. In this chamber he is put under pressure again; and, after a time, the pressure gradually released.

Other problems: the diver normally floats just above the bottom, rather than walking on it; for if the silt on the bottom is disturbed, it rises to form the equivalent of a dense fog. In the open ocean this is not a serious problem for there are currents that will soon sweep this silt

Harry Walker

## WILDLIFE



sharks do not often venture beyond them.

## NOTHING SHINY

A word of caution: do not wear anything shiny as this may attract barracudas. Mr. Morris mentioned one case, when a woman wearing silver nail polish, had some of her toes bitten off.

Other hazards: if you come in contact with fire coral, it acts like poison ivy causing a rash; stone fish are poisonous; and, of course, so are jellyfish, especially the portuguese man-of-war.

Blue holes are underwater caves formed in coral. They may be very long and have more than one entrance.

Such holes should be entered only at slack tide, as otherwise, the pull of the tide may cause a suction through them that makes it difficult or impossible for divers to leave them again.

In cold water there is another problem - the loss of body heat. In water the body loss heat 25 times faster than it does in air, and the temperature of salt water can go as low as 29 degrees F. without freezing.

For protection against cold, there are two types of diving suits - wet suits and dry suits. In wet suits, some water enters the suit, but it becomes trapped and warms up. Dry suits are warmer but they must work perfectly, and there is danger of them getting torn.

## LIFELINE

When diving through the ice on a river, a life-line is used to connect the diver with the surface crew. If this type of diving is carried out after dark, or if the water is very dirty and there is a strong current flowing, then this situation can be unnerving. Divers have been known to panic, give wrong signals to the surface crew, get tangled up in their own lifelines, etc., with fatal results.

For communications underwater, a slate and slate pencil are carried, and also signals are given by tapping. Communications with the surface crew are carried out by using different numbers of pulls on the life-line.

In taking underwater pictures, there is this factor to be considered: different wave lengths of light penetrate the water to different depths. All red and orange colouring disappears at the depth of 15 feet; and, as one descends still further, other colours disappear, one by one, until all is blackness. As a result of this, the same fish will appear to be differently coloured at different depths.

## TRUE COLOURS

Since blue is the last colour to disappear, many underwater

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Other problems: the diver normally floats just above the bottom, rather than walking on it; for if the silt on the bottom is disturbed, it rises to form the equivalent of a dense fog. In the open ocean this is not a serious problem for there are currents that will soon sweep this silt away. However, if this happens while exploring an underwater cave where there are no currents, then this murky water clears very slowly.

In a situation like this, it is very easy to become completely disoriented so that up, down, and sideways all look the same. A person, not accustomed to this, can be perfectly calm one minute, and go into a complete panic the next minute. Accidents are often the result.

#### **STABBED FRIEND**

In one case, a diver who ran out of air, stabbed his own buddy and both died. (a knife is standard equipment for a diver). If some water is kept inside the face mask, the surface of this water can be used as a level indicator, thus improving one's sense of direction.

A person's sense of balance can be affected by diving; and Mr. Morris said, that while taking a shower, after a hard week of deep diving, he could hardly close his eyes without losing his balance.

Sharks are not a problem, so long as one does his diving within the lagoons that are cut off from the ocean by coral reefs. These corals can cause severe cuts that do not heal readily, and the

very long and have more than one entrance.

Such holes should be entered only at slack tide, as otherwise, the pull of the tide may cause a suction through them that makes it difficult or impossible for divers to leave them again.

In cold water there is another problem - the loss of body heat. In water the body loses heat 25 times faster than it does in air, and the temperature of salt water can go as low as 29 degrees F. without freezing.

For protection against cold, there are two types of diving suits - wet suits and dry suits. In wet suits, some water enters the suit, but it becomes trapped and warms up. Dry suits are warmer but they must work perfectly, and there is danger of them getting torn.

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#### **TRUE COLOURS**

Since blue is the last colour to disappear, many underwater pictures have a blue wash; and, in order to bring out the true colours, it is necessary to carry one's own source of light. (Some of Mr. Morris' film was shot at a depth of 130 feet.)

Due to refraction, all objects viewed underwater appear to be one third larger than what they actually are, and they also appear to be closer than what they actually are.

Marine life shown in Mr. Morris' films included various types of coral, stone fish, trumpet fish, squirrel fish, barracudas, morray eels, lobsters, and many other unidentified fish and other organisms.

His films also included some shots above water. These showed that the topography of Guadaloupe and the Bahamas to be very different; Guadaloupe being very rugged, while the Bahamas consist of low, flat stretches of sand, covered with some species of pine. One joke has it, that the highest point in the Bahamas is the speed bump in front of the Holiday Inn in Freeport.

Two other Newcastle men took part in these expeditions. Danny Fitzpatrick accompanied David on his trip to Guadaloupe, while Jan Truka accompanied him to the Bahamas.



# Rare mineral sighted in Heath Steele ore

Here is an item that might be of interest to rock-hounds, prospectors, and such types.

Out at Heath Steele Mines, Paul Stewart was preparing some ore samples for assay when he found a small slab of metallic looking material in one of them. He took it to Angus MacDonell, who had it assayed. It turned to be metallic bismuth.

Busmuth has long been known to occur in Heath Steele ore, in minute amounts. It continually shows up in assays on the ore. Assays also indicate that, in the mill, the bismuth tends to go along with the lead. The lead concentrate assays higher in bismuth than any of the other mill products. Also, a recent microscopic investigation (carried out by the Dept. of Energy, Mines, and Resources, in Ottawa) indicates that part of the bismuth occurs in the native metallic state, while part of it occurs in a combined state.

However, no one had ever before seen a bismuth mineral, in the Heath Steele ore, with the unaided eye. The Geology Department confirmed this.

Metallic bismuth is almost white in colour, with a slight pinkish or bronze tinge. It is a soft, heavy metal similar to lead. But, it has some very unusual properties which makes it of value for certain special purposes.

It has a very low melting point (271 degrees C.) and for this reason it is used in the manufacture of electrical fuses, fire sprinkler systems, and in some solders.

Because it conducts electricity less readily when it is placed in a magnetic field, it is used in instruments designed to measure the strength of magnetic fields.

It is the most diamagnetic of all metals, diamagnetic meaning

that is repelled by a magnet. A puzzling thing is recorded in one reference book. It says that a certain alloy of copper, manganese, and bismuth is distinctly magnetic, although all three of its component metals are diamagnetic.

Whereas most metals expand when they are heated, bismuth shrinks when it is heated.

Liquid bismuth expands as it solidifies. This is also true of its sister element antimony, and it is true of water; but, the opposite is true of almost all other sub-

stances. Because of this property, bismuth and antimony yield castings of exceptionally sharp outlines, for they expand into every crevice in a mold.

Among the stable elements, bismuth is the most impenetrable to X-rays; and, therefore, it and its compounds are used in certain X-ray examinations.

Although it is a valuable metal when it can be economically separated from an ore, it is just a nuisance element at most mines, for it ends up as another impurity in saleable product produced there.

Harry Walker

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An old issue of the **Western Miner** lists New Brunswick as leading all the other provinces of Canada in the production of both bismuth and antimony for the year 1977. Bismuth is produced from Brunswick's lead concentrate as a by-product at the Beldune smelter. Antimony is mined at the Consolidated Durham Mine near Harvey.

Nov. 14/80

# Uniqueness on isle

Mercury Island is situated in the main Southwest Miramichi near Blissfield. Why this island has such a unique collection of plants growing on it, is difficult to say. It just looks like any other gravel bar in the Miramichi.

Jim Carpenter and my son Ian, made a quick inventory of the plants while we were visiting with L. Page and Margaret Brown, who have a ~~camp~~ there.

CAMP  
The island is about a third of a mile in length, and has a small clump of trees growing at one end.

Much of the rest of the island is covered with poison ivy, and this explains how the island got its name: poison ivy is locally known as "mercury."

Scattered over the island was a generous sprinkling of Harebells, and these were in bloom at the time of our visit in mid July. Other plants found to be growing quite plentifully on the island were sand cherry, wild chives, milkweed, and showy-tick trefoil; while on the mainland, across from the island, the following trees were found growing wild - red oak, silver maple, butternut, and ironwood (or hop horn-beam).

Poison ivy is quite a rare plant in New Brunswick, but it is found in a few places.

## BITTER CHERRIES

Sand cherry and showy-tick trefoil were new plants to all of our party, and we had to resort to our books in order to identify them.

Sand cherry is a very low shrub, its branches lying right against the ground. The cherries were green at the time of our visit, whether or not they are edible was not definitely stated in our books, but they were described as being bitter.

The showy-tick trefoils that we saw were about 2 or 3 feet tall, and were topped with spikes of colourful, pink, pea-blossom-shaped, flowers.

Harebells are rare, and we had never seen them growing so plentifully before. The leaves of this little flower are very narrow, almost hair-like, in fact, I had assumed all along that its name was Hairbell, rather than Harebell, thinking that it got its name from its narrow leaves. Its bell-shaped flowers are blue, and look like small Scotch Blue Bels. A few years ago, two that were found growing from a crevice in

Harry Walker

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the cliff face, east of Ritchie Wharf, were in bloom on Oct. 19.

Of course, while the flowers were attracting a lot of attention, the birds were not entirely neglected. It was still early summer, and the birds were still singing with great enthusiasm, so they could hardly go unnoticed. Marge Brown is herself a bird watcher, and I have heard recently that she is working on a book about birds. Berton Whitman of Brunswick, Maine, was also on hand, and he is another bird-watcher.

There were many birds about, but the ones that were most popular were a Scarlet Tanager, a Lincoln's Sparrow, and a Winter Wren. The Scarlet Tanager is, as most of you know, an eye-catching beauty; while the other two are exceptional singers. There was a family of young kildeers running about the island, still not quite ready to fly. And Cedar Waxwings were especially plentiful.

## WEDNESDAY MEETING

You are invited to attend a meeting of the Miramichi Naturalist Club, to be held at the Miramichi Valley High School in Newcastle, on Wed. Nov. 19, meeting starting at 8:00 p.m.

Dan Busby of the Canadian Wildlife Service will be speaking. He has been head of a research team studying the effects of the budworm spray on the white-throated Sparrow, and he will be telling us about his team's findings.

Two years ago, Mr. Busby spoke to our group on this same subject. Since it was an on-going project and we found his talk very interesting, members requested that he be invited back again.

Back in the spring of 1978, when Dan's group started this study, he emphasized that they were not trying to prove that the spray kills birds, and that they were not trying to prove that it does not kill birds.

For two summers, this group stayed in Bernie William's camp in Sevogle. All are welcome. A special invitation is extended to Dan's friends out in Sevogle.



## A day in Buffalo

# Into the past

I was in Buffalo, a little annoyed at having to come here. You see, I was on holidays, and had intended to go directly from Newcastle, to Stayner, Ontario. That is where my mother Mrs. Wilbert Walker lives.

However, my son Stewart had recently been on a trip to Europe, and, on returning to Toronto via New York one piece of his luggage disappeared. He had spent a few days in Toronto and then started a new job in Sackville, New Brunswick, and he had asked me to check on his luggage.

At the Toronto Bus Depot, I was informed that the luggage had been held up at the Canadian Customs, and that the only way I could get it was to go to Buffalo and pick it up.

Once there, I had one and a half hours to kill before I could get the next bus back to Toronto. On my way down, I had kept reminding myself that in all bad situations, there are good by-products that can be derived from them, so long as we are alert to the opportunities that present themselves.

### LIKE ANY CITY

First I took a short walk in the downtown section of the city, but it just looked like any other big city to me, and I soon returned to the bus station.

Then I thought of my Uncle Jim Kitson. He had lived in Buffalo, but he and Aunt Lizzie had been killed in a car accident about 50 years ago. I was very young at the time, not even having started to school yet, but I remembered Uncle Jim quite distinctly.

My memories of those early years have no continuity, but certain events stand out like mountain peaks through a mist. One of these memories is of Uncle Jim's last visit to our place. He was an old man at that time; for, he was really my mother's uncle, not mine.

We had lived in a little old log house, and moved from this house on the very day I started to school. Back of the barn stood a big pine stump. Out of this stump, had grown a birch tree, which, in turn, had grown into a big tree.

Here, perched on top of the pine stump, was this tree. There were no other trees around. It stood there all alone in a rough, boulder-strewn piece of pasture.

Well, Uncle Jim had a peculiarity. Every time he came to our place, he went down to look at this tree. What it symbolized to him, or why it held such a fascination for him, I do not know; but I accompanied him on his last pilgrimage to see it.

Uncle Jim was killed shortly after this, near the start of the depression. I suppose, at that time everyone's thoughts centered on how to survive, and no one had time to think about distant relatives. I knew that

## Harry Walker

## WILDLIFE



Uncle Jim had a fairly large family and that the name of one of his sons was George.

### IN THE BOOK

Well, here I was in Uncle Jim's city, and Kitson is not a very common name. I looked in the telephone directory. There were nine Kitsons listed and the name of one of them was Richard. This seemed a likely possibility since my grandfather's name was Richard Kitson.

After trading a bit of Canadian money for a few American dimes, I dialled the number and got Mrs. Kitson. The conversation was brief and simple. I learned that Richard's father's name was George, but he was dead.

Richard's grandparents had been killed, but that was long ago, and Mrs. Kitson thought that they had been in some kind of horse drawn vehicle instead of a car.

Mrs. Kitson thought that Richard's grandparents originally came from Canada.

She then suggested that I call Leslie Kitson, an older man, and when I was unsuccessful and called her back, Fred Kitson of East Aurora.

### ANCIENT

I tried this second call, it turned out to be a long distance number. I was out of American change and my bus was soon leaving, so, I dropped the project.

My conversation with Mrs. Kitson left me feeling rather ancient. I seemed to know more about her husband's grandparents than she did. When I got up to Stayner and told my mother about this, she told me that she remembered George Kitson visiting his Stayner relatives before she was married.

George had several small children with him, and the name of one of them was Leslie. She could remember this name because she had another cousin with the same name.

When I was a boy, Buffalo was a big city somewhere on the other side of the world. We seldom travelled farther than the end of the four miles of dirt road that led into Stayner. Occasionally we visited Uncle Melville, who was a barber in Meaford. This was a long trip.

Now Buffalo is only about 200 miles away, so the Kitsons there and the ones here, are really separated by time rather than space.

There are now few people who bare the name Kitson in this area, but there are quite a number of people who are descendants of Thomas and Susanah Kitson, who came to this country from Yorkshire England about 130 or 140 years ago.

## Strawberry duck might be melanistic

# First Nordin Mourning Dove

Since it is time to activate our bird feeders again, here is the recipe for a bird treat that you might like to try.

### BIRD SEED CAKES

Combine in top of a double boiler:

- 2 cups of sugar;
- 2 cups of ground suet;
- 2 cups of cracked wheat;
- 1 cup of cornmeal;
- 1 half cup of water
- 1 cup of raisins.

Heat 20 minutes or until suet is melted. Pour into containers, cool, and then hang the cakes in trees.

My wife has used this recipe, more or less, for several years; but she usually cuts down on the sugar considerably. She often substitutes scratch feed for cracked wheat, or waste fat for the suet, or other alterations, depending on what is available.

The Mockingbird and the Downy Woodpecker, which came regularly to our feeder last winter, especially enjoyed this treat. Incidentally, a Mockingbird has shown up at our feeder a couple of times this fall again.

### NEW TO AREA

A Mourning Dove has been coming to Sybil Anderson's feeder in Nordin. Hopefully we may be able to get this bird on our Christmas bird Count. To do so would be a first for us. The count will take place on Dec. 27, weather permitting.

For the past two years a Cardinal has come to Mrs. Anderson's feeder, but she says, so far it has not shown up this year. This is the only Cardinal that we have ever recorded on our Christmas Bird Count.

That strange black-coloured

Harry Walker

**WILDLIFE**



puddle duck, which was hanging around with the Black ducks of Strawberry Marsh, seems to have disappeared. This duck was reported in this column about a month ago.

### MELANISM

When I described this duck to Carl Perry of Craigville, he gave me two possible explanations for it.

He said that he has seen some tame bird ducks that were similarly marked, and perhaps someone's tame duck had escaped.

The second possibility was that it was a melanistic Mallard, which is similarly marked.

In case you are unfamiliar with the word malanistic, it refers to a rare dark phase that occurs in some animals. We are familiar with the occurence of an albino, or pure white specimen, in many species of animals. So also, there occasionally occurs a melanistic phase, or a very dark specimen, in many species of animal.

Just as albinos occur more commonly in some species than in others; melanistic specimens occur more commonly in certain species than in others. For example, black foxes, or melanistic red foxes, are not uncommon. Black panthers and black squirrels are other common examples.

The black squirrel is only the melanistic phase of the grey squirrel; in certain parts of its range, the black phase much predominates over the normal grey phase.



# Sparrows living at Fenitrothion brink

Dec. 5/80

Dan Busby of the Canadian Wildlife Service says that New Brunswick has the dubious honour of having the most insecticide sprayed on it of any place in the world.

However, he also says that to spray or not is no longer a question since foresters are convinced that this application of insecticide is necessary in order to save our forests, and these forests account for 25 percent of the province's gross national product.

Mr. Busby spoke to members of the Miramichi Naturalists Club at a meeting held in the Miramichi Valley High School on Wednesday evening, November 19. For the past few years he has been head of a team of researchers studying the effects of the budworm spray, fenitrothion, on the White-throated Sparrow.

This bird was picked so that information could be gathered in detail on species.

It is a well known fact that the fenitrothion and other insecticides affect not only the target species alone, but also a broad spectrum of wildlife. For instance, Dan says that after an area was sprayed, they were able to work in comfort, with their sleeves rolled up, for the black flies were gone.

To begin the white-throated sparrow study, two plots of clear-cut were selected. One plot was sprayed twice during the season, while the other plot was not sprayed at all. The White-throated Sparrows on both plots were studied before and after the spray was applied, and the two groups of sparrows compared.

To determine the amount of spray reaching the ground, glass slides were distributed throughout the sprayed plot, and the residue on these slides were analyzed after each application of spray.

## AFFECTS NERVES

Fenitrothion is a

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Cholinesterase inhibitor. Any creature affected by it will therefore exhibit a deficiency in cholinesterase, an enzyme that concentrates in the brain and is necessary for the proper functioning of the nervous system.

In the 1978 study, it was found that the sprayed plot actually received a very much lighter application of insecticide than was intended. The sparrows on the sprayed and unsprayed plots showed only minor differences. Reproductive success was the same on both plots.

The sparrows on the sprayed plot showed a reduction of cholinesterase in the brain of only 5 to 10 percent. However, nestlings on the sprayed plot showed a slightly slower growth rate, and left the nest weighing slightly less than nestlings from the unsprayed plot. This difference was significant since unhealthy birds have a much poorer chance of surviving after leaving the nest.

These observed differences could not be definitely attributed to the spray, as they could have been due to some other unknown factor such as differences in the food supply on the two plots.

## DOUBLE KILLS

In the 1979 study, one plot was purposely given a double application of spray. The result was that very few sparrows survived. Some of the adult birds perished immediately after the spray was applied. There were several observations of sick birds. There was a reduction in the amount of singing done by the males, and there was also a change in the structure of their songs.

The females became inconsistent at brooding their eggs. They left their eggs for

longer periods, so that they became cold. Some nests were abandoned altogether. Some of the eggs hatched, but most young birds died within 2 or 3 days. 11 percent of the nestlings survived to leave the nests, while the corresponding figure for the control plot was 58 percent.

Some of the nestlings that did survive to leave their nests were less healthy than those from the control plot. Collected birds from the sprayed plot showed a reduction in brain cholinesterase of up to 66 percent, with an average reduction of 42 percent.

## GROWTH HALTED

In other 1979 experiments, some nestlings were given food that had been injected with minute amounts of fenitrothion (amounts equivalent to what would be expected in food from a sprayed area), while other nestlings in the same nest were not given any dosed food.

The result was that there was an interruption in the growth rate after each feeding of dosed food, and these birds left the nest weighing less than those that were not given any dosed food. It was also found that the younger the nestlings were, the more susceptible they were to these small doses of insecticide.

Mr. Busby concluded that there is a threshold level of concentration of fenitrothion, above which it becomes very lethal to the white-throated Sparrow. This threshold is not much above the normal dosage used on our forests.

These studies also indicated that this spray does not land very uniformly on the ground, and this threshold is therefore exceeded in parts of the sprayed area. This probably accounts for the fact that dead birds are sometimes reported after an area has been sprayed.

## Fisheries in trouble

# Acid rain threatens

There are some excerpts from an address on acid rain by Tom McMillan, M.P. for Hillsborough riding in Prince Edward Island. It was delivered to the 17th Biennial Conference of the Conservation Authorities of Ontario, on Sept. 15, 1980, at Trenton, Ontario.

"Acid rain is a popular term used to describe precipitation - rain, snow, sleet, mist - that is more acidic than normal. The deadly compounds that cause it are emitted from a number of sources - mainly more smelting industries, coal-fired power stations, automobiles, and other motor vehicles. Some areas in Canada now receive precipitation 5 to 40 times more acidic than natural rain.

"Particularly alarming is that acid rain often falls miles, even countries, away from the original source; so, a region can be vulnerable even if it is not in the industrial heartland of the country.

"In Ontario alone, some 140 lakes have been declared biologically dead - unable to sustain either fish or plant life. Some 48,000 more threatened. One half of those are expected to die within the next decade.

"One of the most worrisome facets of the problem is that the effects of acid deposits are frequently irreversible. Many heavy metals toxic to fish are leached from the soils by acid rain and concentrated in lakes, making it impossible for fish to survive - even if the acidity is later reduced.

"The end result is a crystal clear lake that is deceptively attractive because it is really a graveyard.

### SALMON MEAN TOURISM

"Although the impact on most Canadian commercial fisheries is not yet critical, serious trouble is predicted for sport fisheries and, hence, for tourism in general. We

in the Atlantic Provinces have great cause for alarm, particularly with respect to the salmon fishery. Eight of the major salmon rivers in Nova Scotia no longer produce salmon.

"Although public attention had been focused on sparkling, lifeless bodies of water, acid rain is also having a devastating impact on the land which produces our food and lumber and which, indeed, sustains human life itself.

### FOREST EFFECTS

"Some observers believe that the decrease in forest growth in the Northeastern United States and Scandinavia amounts to as much as 10 percent per decade and that acid rain is a primary cause. Similarly, Canada's most productive forests are located in areas most vulnerable to acid rain.

"When the acidity level of a lake falls below a PH of 5.6, the deterioration has begun. Most fish cannot survive below a PH of 4 for any length of time. Below that level, lakes are biologically dead. The worst recorded case of concentrated acid rainfall was in Scotland, measuring 2.4, the acidic equivalent of vinegar. The second worst was in Nova Scotia.

"Fortunately, the soils in some parts of Canada are naturally alkaline, so they are "buffered" against the effects of acid rain. Many soils in Canada, however, are already naturally acidic and thus are particularly vulnerable.

### INTENT, NOT WILL

"Canada and the U.S. have recently signed a Memorandum of Intent to curb acid rain on both sides of the border. I am encouraged by that initiative. But even the most generous critics lament the apparent lack of political will to deal with the crisis. Politicians, industries, and labour groups tend to equate pollution control with job losses.

Harry Walker

**WILDLIFE**



So, many of them tend to oppose action.

"Yet the question remains: can we afford not to act? For example, the erosion of buildings by acid rain is estimated to inflict between \$2 and \$3 billion a year worth of damages in North America. The Lincoln Memorial in Washington, as well as the Statue of Liberty in New York, are decomposing at a much faster rate than normal. The Parthenon in Greece and Rome's Coliseum are now in danger of crumbling in Europe's acid rain.

"But much worse than mere landmarks, however historic they may be, is the fact that acid rain has the potential to alter much of life on earth. It is affecting all realms - the air we breathe, the water we drink and the soil from which comes our food.

### PRESS OFFICIALS

"It is clear that each of us has a vested interest in seeing to it that governments at all levels, in every jurisdiction, provide the leadership required to combat this crisis.

"For its part, the Canadian government should, among other things, substantially increase funding for acid rain research. Far too little is known, for example, about the effects of acid rain on forest, growth, on agricultural crops, and on human health. Nor has enough scientific research been devoted to the mitigation of the adverse effects of acid rain."

Tom McMillan is the Environment Critic for the Official Opposition in Ottawa, and is a member of a special all-party sub-committee of the House of Commons dealing with acid rain.



# Teaching 'Too-Too'

Dec. 19/80

This is the story of Nicole La Plante's canary. Nicole is 10 years old and lives in Newcastle.

Last summer her father and mother, Gilles and Lydia, bought her a young canary while they were in Quebec City. They were told that the bird should start to sing within two or three weeks. However, this time elapsed, and much longer, but it still did not sing. Since only male canaries sing, they began to think that perhaps this one was a female.

A small booklet about the care of canaries was obtained, and from this they learned that the males and females are practically identical in appearance. But a number of problems that might prevent a male canary from singing were also pointed out. If they were moulting, or if they lacked a proper diet they would not sing.

Also, a canary must be taught to sing. It must hear another canary sing, before it will be able to sing itself.

Nicole's canary, "Too-Too" was not moulting and he had had lots of song food; so, there did not appear to be any problem in these respects. Perhaps Too-Too needed to be taught to sing. A recording of a group of canaries singing with an organ accompaniment as found and bought for him.

This was periodically played to him, and one day, about two or three weeks later, Nicole's mother was working in the kitchen, when, to her surprise, Too-Too suddenly began to sing.

## SINGALONG

After that Too-Too would sing along with the record, or he would sing by himself when the record was not being played. And, it was found that he did not respond to his record except when the volume was turned up fairly loud.

Nicole's canary is now moulting and therefore is not singing, but I have an invitation to come and hear him when he starts singing again.

Harry Walker

**WILDLIFE**



Most people are inclined to think that birds simply sing by instinct and therefore do not need to be taught to sing. The above story reminded me of a couple of experiments that I have read about in connection with song birds.

In one experiment, the eggs of different species of song birds were taken from wild bird nests and then hatched in an environment in which they had no contact with other members of their own species. The result was that when they grew up, some bird species could not sing a note of their proper songs until they had heard other birds sing it. Some other species would sing their proper songs even though they had never before heard those songs.

Other species fell in between these two extremes, and could sing some notes of their proper song, but could not sing them well until they had heard others sing for them.

## EAST MEETS WEST

In another experiment, eggs from an Eastern Meadowlark's nest were put in a Western Meadowlark's nest; and, eggs from the Western Meadowlark's nest were put in the Eastern Meadowlark's nest. When the birds from these eggs grew up, they sang songs of their foster parents, rather than the songs of their true parents.

Eastern and Western Meadowlarks differ only slightly in appearance, but their songs are very different.

Canaries are native to the Azores, Madeira, and the Canary and Cape Verde islands. From these wild canaries many different tame varieties have been developed by selective breeding.

# A Lonely duck

For the past nine years members of the Miramichi Naturalist Club have been conducting an annual Christmas Bird Count. The area covered by these counts is a circle, 15 miles in diameter, centered at the Chatham bridge. This circle extends, therefore, from about the Bartibogue bridge in the east to about the Anderson bridge in the west.

This year's count took place on Saturday, December 27th, on which date nine observers scouted the area looking for birds. Another 21 recorded the birds visiting their feeders.

When the birds from all of these sources were added together, the following totals were obtained for this year's count.

	Previous Counts	Total Counted
House Sparrows	594	8
Starlings	147	8
Blue Jays	126	8
Pigeons		
(Rock Doves)	103	8
Evening Grosbeaks	78	7
Black-capped Chickadees	74	8
Common Redpolls	74	4
Ravens	68	8
Snow buntings	56	7
Herring Gulls	56	7
Great Black- Backed Gulls	26	8
Bohemian Waxwings	22	4
Pine Grosbeaks	18	6
Tree Sparrows	15	6
Downy Woodpeckers	10	8
Hairy Woodpeckers	7	7
Golden-crowned Kinglets	7	2
Boreal Chickadees	6	7
Gray Jays		
(Moose Birds)	5	7
Slate-coloured Juncos	4	4
Ruffed Grouse (Birch Partridge)	3	5
Iceland Gulls	2	2
Pileated Woodpeckers	2	1
Black-backed Three- toed Woodpeckers	2	0
Crows	2	8
Red-breasted Nuthatch	1	6
Sharp-shinned Hawk	1	3
Black Duck	1	2

The above list includes 28 species and when all nine years are put together, 54 species have been recorded on these counts. The greatest number of species recorded on any one count was 33, obtained on the 1976 count.

The results of that particular count contrasted markedly from this year's count in that many summer birds stayed behind and failed to migrate. In the 1976 count, five Robins, five Grackles (Blackbirds), eight White-throated Sparrows (Old Tom Peabodys), two Song Sparrows, and two Cowbirds were recorded. None of these were obtained on this year's count.

## WANDERING DUCK

The bird which seemed most

Harry Walker

## WILDLIFE



out-of-place in this year's count was the Black Duck, for there was practically no open water to be found at the time. This duck was seen in the Strawberry Marsh area.

Field observers taking part in this year's count were, Jane Arsenault and Timmy Clark of Ferry Road; Rick Wedge of Douglastown; Vernon Goodfellow of South Esk Road; Des Cousens of Halifax; Florent Lannan, Lyle Walker, Ian Walker and Harry Walker of Newcastle.

Bird feeder reports were obtained from Edith Boudreau, Margaret Adams, Bill Bucher, Phyllis Crowe, Phyllis Jardine, Carole Dickson, Mrs. Gordon Steeves, and Mrs. Jac Van Leeuwen of Chatham; Mrs. Hazen Lobban of Loggieville; Thomas Flynn of Douglasfield; Theresa Ross of Lower Newcastle; Monica Charnley, and Jack Shea of Ferry Road; Mrs. Robert Bransfield of Douglastown; Roy Bourke, Graham Crocker, Don Hod-dinott, Len McDonald, Winnie Walker, and Margaret Wheaton of Newcastle; and Sybil Anderson of Nordin.

## RARE SPARROW

Although not recorded on the day of our bird count, a Field Sparrow was a regular visitor to Margaret Wheaton's bird feeder for a while this fall. It was at last seen on Dec. 24. This is a rare sparrow first recorded in New Brunswick in 1935, and first recorded breeding here in 1972.

Since 1935, it has occasionally been recorded in widely separated locations throughout the province, and is most frequently seen in fall or winter. It looks like a Tree Sparrow, but is smaller, lack the dark spot in the center of the breast, and has a pink bill. This is a species that I have yet to see personally; and, which, to my knowledge, has never before been recorded closer to Newcastle than Renous.

On January 3, Margaret Wheaton had a Mockingbird visit her yard - another species not recorded on this year's count.

Marion MacDougall reported a Grackle coming regularly to her feeder in Burnt Church (December 31); and Vernon Goodfellow reported a Great Blue Heron at a small area of open water at the mouth of a creek along the South Esk Road on January 1.

Doug Underhill of Ferry Road saw a large flock of Geese headed south on December 17, and Mrs. Forbes Harris of Sunny Corner saw migrating flocks of Geese on both December 16 and 17.



Jan 16/81

# Bohemians visit area

Real Robichaud of Neguac is a very enthusiastic bird watcher and naturalist. He is 15 years old, and during the last two summers he has participated in the Living Rivers Program on the Tabusintac.

After taking part in this year's program, Real wrote to me and described his experience there as being "really terrific". While on this program his group visited Kouchibouguac Park; the Rocks on the Bay of Fundy; and Mary's Point, where the migrating shore birds congregate in immense numbers during migration.

He told me about the many different species of birds that he saw while on the program, and mentioned that he heard a Whippoorwill for the first time at Kouchibouguac Park.

More recently, being unable to get into Newcastle for our Christmas Bird Count, Real decided to run his own little count out at Neguac. Alone, on his skis, he took a five hour trip through the woods, and recorded seven chickadees, five crows, five gray jays, and one woodpecker.

At noon he made a fire and three gray jays were attracted to it. He put a piece of bread in his hand and a jay came and took it. He then put a piece on his head and a jay landed on his head. Real was so interested in the birds that he forgot that he had his camera with him. He says that he enjoyed his trip even though he was freezing.

By now Real is probably hooked on this game called a Christmas Bird Count, and I predict that he will be running one every year. If you live on that way, maybe you could join him next year. Or, if you have a bird feeder you could let him know about it.

In the meantime, I hope that Real will be able to join me on some song bird counts or shore bird counts.

## NEWCASTLE BOHEMIAN VARIETY

I have received a number of reports of Bohemian Waxwings in Newcastle. Rick Larmond reported that a large flock visited his yard on Dec. 27 and stripped

## Harry Walker WILDLIFE



all the red berries from a shrub in his front yard.

Liz Crocket had one come and sit on her windowsill, and Hudson Gremley and Don MacMillan reported a flock around their places on Jan. 11.

Earlier, about Nov. 29, Hubert Sherrard reported a flock of waxwings at his place in Whitneyville. These were thought to be Cedar Waxwings.

Cedar Waxwings and Bohemian Waxwings are quite similar, but the Bohemian variety is the one most likely to be seen in winter. It is a western bird during the summer, but spreads east to the Maritimes during the winter. Its appearance in the east has become more frequent in recent years.

The Cedar Waxwing is generally seen only in the summer. However, being rather erratic in its behaviour, it also, on rare occasions, may be seen here in the winter.

The Bohemian Waxwing is slightly larger than the Cedar Waxwing, and has a quite noticeable rusty area below the tail which is absent in the Cedar Waxwing. Also, the Bohemian Waxwing has some red, white, and yellow markings on the wings; the Cedar Waxwing has only a small red mark here.

## WED. JANUARY 21ST

On Wed., Jan 21, there will be a meeting of the Miramichi Naturalist Club, in the James M. Hill Memorial High School in Chatham.

The meeting is to start at 8:00 p.m.

Rick Larmond, a rock-hound, will be our guest at this meeting. He will be telling us about his hobby, and will have some specimens on hand. He will also be there to answer any questions you might have about rock collecting. He is especially interested in Crystalline varieties.

The general public is cordially invited to attend this meeting.

Jan 23/81

Harry Walker

**WILDLIFE**



# Editor's from Sevogle

Here is an article from "The Mycelium", the newsletter of the Mycological Society of Toronto. It was written by one of its members, Muff Mills.

## THE M.S. of J. VISITS THE ROYAL

"Twenty-two members of the M.S. of J. were treated 'Royally' by Mr. Sien Yau Wong and Mr. Tak Chen on a recent tour of the the Royal Mushroom Company, which produces *Lentinus edodes* (Shii-Ta-Ke). The visit culminated in a gourmet session presided over by Chef Tak Chen.

"The Royal's extensive premises are spotless. The initial stage of the production happens in a cement mixture (!) where maple wood chips are mixed with nutrients. This mixture is then packed in poly-urethane bags and formed into logs that become the growing base.

"Later the logs are placed in one of four large gleaming sterilizers and are subjected to a pressure of 15 PSI at a temperature of 250 degrees F for two hours. They are then removed to the sterile environment of the cooling room and in about eight hours are ready to be inoculated with the spawn.

"Next the inoculated logs are taken to the growing room - about the size of a small hockey arena - where light, temperature and humidity are closely controlled. We estimated that there were about 10,000 logs in various stages of production - a great place for a foray!

Each log has a production period of about 10 months, during which it produces about 2 and one half lbs. of mushrooms. They are harvested twice daily.

"The Royal Mushroom Company is new to this area, having just opened in July 1979. Its first crop was sold commercially in May of 1980. The M.S. of T. wishes Mr. Wong and his associates every success, and takes this opportunity of expressing our thanks for the informative tour."

## EDITOR PRIOR

The editor of The Mycelium, Mrs. Muriel Prior, will be well known to many people of this area. She is the former Muriel O'Shea, who first lived in Sevogle, and who then moved to Douglastown with her family when she was still a little girl.

I first met Mrs. Prior a few years ago when she was visiting her relatives in this area. At that time, she, my son Ian and I were out on an excursion looking for wild plants.

Thanks to Mrs. Prior, my family and I are now receiving a year's subscription to the Mycelium, and a year's membership in the Mycological Society of Toronto.

The Mycelium is a unique little newsletter. Its artwork is quite unusual. In addition to containing articles such as the one above, it is also liberally illustrated with elves and goblins, as well as with mushrooms and other fungi. According to the heading on its front page, it was "established



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The above article particularly interested me, because I had never heard of any mushrooms being grown commercially, except the meadow mushroom or "*Agaricus bisporus*." some of the other wild mushrooms that I have eaten are, in my opinion, superior in flavour to this common commercial species.

of the other two scoters in our ar

# There's money, fun in rock hounding

Jan 30/81

Rock hound is the name applied to anyone who collects rocks and minerals as a hobby and a growing number of people are taking up this hobby says Rick Larmond, himself an enthusiast participant in it.

At the last meeting of the Miramichi Naturalists Club held in the James M. Hill Memorial High School in Chatham, Rick spoke to us about this hobby and had on display part of his rock collection.

He grew up in Virginiatown (or V-town) Ont., the home of Kerr-Addison Gold Mines where his dad worked underground. (Incidentally that is where my wife and I lived when our first two sons were born).

Since then Rick has worked at the Geco Mines in Manitouwadge, Ont., and also at the Lake Shore Mines near Casa Grande in Arizona. He is now in charge of the warehouse at Heath Steele Mines, and is living in Newcastle.

No doubt this connection with the mining industry has helped to spawn his interest in rocks. He says that he often gets kidded about his pet rocks, or about having rocks in his head.

## NATURAL INTEREST

Some people are interested in polishing rocks to make jewellery and other ornaments from them. However, Rick's interest lies in natural formations rather than in lapidery. His favourite specimens, and those most valued by rock hounds, are the crystalline varieties.

These large mineral crystals may be in the form of cubes, tetrahedrons, hexagons, or many other geometric shapes; and are found, in greatest degree of perfection, in vugs. Vugs are cavities or hollows in rocks; and mineral crystals grow inwards, from the walls of these cavities, toward the center of them.

Such a cavity or vug may be very small, or it may be big enough for a man to walk into it; and it may be full of air, or it may be full of water.

In mines, most of the mineral crystals in such vugs are damaged or destroyed by blasting and other mining operations, for the mining companies are interested in the metals to be recovered from the mine rather than in the mineral crystals.

## MORE MONEY IN VUGS

In some mines, vugs are quite common, and Rick says, that at one time, some of the miners in the Wawa mine were making more money selling rock crystals than what they were making as miners. Later the mining company put a stop to this practice.

There are more than 3,000 types of minerals in the world, and Rick suggests that some good way to add to one's collection are,--to visit rock dumps at old abandoned mines, or to take tours of existing ones.

Often when taking such tours, a rock hound can get permission from the management, to look for specimens, or he may be given

clues as to where to look for them. He also says that the Bay of Fundy area is a very good place in which to look for minerals as there is quite a variety to be found there, including quartz, amethyst, and agates.

He built up his collection by trading with other rock hounds. This seems to be very much a part of the hobby as there are rock hound conventions

## ROCK HOUNDS FATHER

The closest such convention is held at Parrsboro, N.S., every year in mid August. A very large convention is held in Tucson, Arizona every February. Here, rock hounds from all over the world gather to trade with one another.

Rick found a lot of amethyst crystals in the area north of Lake Superior, and these he has used in his trading.

Rick suggests using a chisel in conjunction with a geology hammer in order to remove specimens of crystals from rock cuts or rock faces. Safety glasses are also a must while doing this job, as otherwise the hobby can turn into a disaster if one gets hit in the eye with a rock fragment.

Another suggestion is to lay a jacket or some other type of cushion below the specimen being

removed, so that when it falls, it will not be scratched or damaged in any way.

If one attempts to remove a specimen, using a geology hammer alone without the chisel, then he will probably miss the mark on some blow and ruin his specimen before he has gotten it removed from the rock face.

## CONSULT BOOKS

Rick says that he has been helped by talking to geologists, and he recommends "The Audubon Society's Field Guide to North American Rocks and Minerals" for identifying specimens. Another, more comprehensive book for this same purpose is "The collector's encyclopedia of rocks and minerals" edited by A.F.L. Deeson.

Another useful book for this area is Rocks and Minerals for the Collector, Bay of Fundy area (paper 64-10, Dept. of Energy, Mines, and Resources) by Ann P. Sabina. This book tells in what geographical locations in which to look for certain types of minerals.

One curious specimen that Rick had on display was called a Mexican Geode or Thunder Egg. Apparently these are fairly plentiful on beaches in Mexico

Harry Walker

WILDLIFE



and in the south-western states.

On the outside, these thunder eggs look quite uninteresting, being a dull earthy gray colour; but when sawed in two, the inside is found to be hollow and the sides of the cavity to be lined with crystals of quartz or amethyst, and with usually a layer of agate at the base of the crystals.

When found, these thunder eggs can be identified by the hollow sound they give out when tapped. They were originally vugs in a soft type of rock found in that part of the world. The soft rock wore away, but the agate and quartz being very hard remained intact. The specimen that Rick had, had been sawed in two, and then polished across the cut face.

## NEAT PETS

Pet rocks may not be as affectionate as some other kinds of pets, but they nonetheless have other qualities to recommend them. After all, who can have as many pets as Rick has, and still maintain a neat and orderly household.



# Bird's eye view from England

Feb. 6/81

The following article was written by Mrs. Audrey Wilkinson of Whitwell, on the Isle of Wight in England. Mrs. Wilkinson is the daughter of Mr. and Mrs. Edmond Robichaud of Newcastle.

After my visit to my home town of Newcastle in October, 1979, I thought it may be of some interest to readers, if I could elaborate a bit on the birds that were seen. With a visit to my family long overdue, the added opportunity of checking up on the local birdlife on the opposite side of the Atlantic, stirred me to great excitement.

As my interest in the avian world, to a serious degree, began in England, most of what I would see (other than the few familiar species I well remember seeing in the back garden as the robin, starling or song sparrow) would be new species to add to my life list. That is, all except those species, which being holarctic in range, can be seen on both sides of the Atlantic and further.

Waders, to me, undoubtedly form one of the most fascinating groups of birds. This is due not only to their beauty but also to their adaptation to feed without creating too much competition with their close relatives feeding nearby. Each feeds in its own niche, using its specially evolved bill, be it slight or heavy, long or short, straight, decurved or slightly uptilted, for probing out its favored food. And so it was to Strawberry Marsh that I made my many visits.

One of the first delights to catch my eye was the Greater Yellowlegs. I had an enlarged picture of this Nearctic species on my study wall, subtitled "the bird I left behind." This desire had stemmed from my familiarity and admiration for its Palearctic counterpart, the Greenshank, a truly beautiful, graceful wader which breeds in the north of Scotland.

Other waders seen, on a few occasions, were the dunlin (red-backed sandpiper) a holarctic species which winters here in the south of England in large numbers, sometimes reaching a thousand at a time at my local estuary, and also, all new on my list, pectoral sandpipers (up to eleven), a Wilson's snipe, and a spotted sandpiper.

The spotted sandpiper, which I understand is a very common bird in your area, is the nearctic counterpart to our "common sandpiper," which I expect can be said to be equally distributed.

## TWISTING SNIPE

The Wilson's Snipe was seen on two different occasions, although snipe are birds which one usually just chances to see while they twist in swift flight up and away

Harry Walker  
WILDLIFE



normally occurs here only as a regular winter visitor on the east coast of England, frequently being seen with Lapland Buntings (Longspurs) and Snow Buntings.

The last named bird made for a fine surprise as I strolled along the shoreline, when suddenly I noticed just yards in front of me, sitting quite at ease, despite my near presence, a snow bunting. He allowed an excellent view, as he showed no apparent desire to fly away. The following day three were seen flying around together, all, of course, in winter plumage.

## A REAL LOON

On the waters, I saw a few teal, black duck, two hooded mergansers and a common loon - all new to me. The last named species is here known as 'the great northern diver' a name which in no way recalls to mind that most evocative of sounds of the great northern wilderness, as does the Canadian name.

A nester of the far northern regions, this diver appears around our coasts only during the winter months, returning north in the spring then it can sometimes be seen on migration from a coastal point near here called St. Catherines Point. Sea watching can be a most rewarding and fascinating study of bird movements, when one is armed with telescope and high powered binoculars.

With the blessings of a strong south-easterly gale, one sits, and staring out to sea carefully notes the species and numbers of birds passing eastwards in singles, strings or flocks of fifty to a hundred on their way up the channel. They head for the North Sea and their breeding areas in the far northern latitudes, after having spent the winter months in more prosperous feeding areas as the Bay of Biscay, or further south down the Atlantic coast or on African shores.

## GEESE

### AND GANNETS

One sees birds such as dark-bellied Brent geese, winging their way to the barrens of the siberian tundra; scoters, strung along like black beads in swift, steady flight low over the water heading for their Scandinavian breeding grounds; gannets soaring over the crest of the waves, with their near motionless wings, all aiming for the various islands scattered around the British coast; waders in huge flocks looking like black smudges appearing from the far distant horizon and soon passing out of sight in their annual return to their northerly breeding

# You have no idea

Feb. 13/81

Harry Walker  
WILDLIFE



For you people who complain about how long and cold our Canadian winters are, here is an account which should help to awaken you to some appreciation of them, and bring you to some awareness of how rich and fortunate you are.

And, for you people who flee to the south as soon as there is a bit of frost in the air, this account should make you realize what you are missing, and open your eyes to the fact that you are really just cheating and robbing yourselves.

Let's look at our winters from the perspective of one Major W. Ross King, who visited Canada from England many years ago. He had never before witnessed this wonderful event. Here are a couple of excerpts from his book "The Sportsman and Naturalist in Canada," published away back in 1866.

**"All the rivers are frozen over; even the broad and rapid St. Lawrence is arrested in its course, and like the streets is covered with horses and sleighs arrayed in rich furs, and with figures dressed in blanket coats, red sashes, and moccasins.**

**"The wonderful and glorious sunsets of this season cannot fail to strike the inhabitants of our dull cline with astonishment. The period associated in our minds with dreary afternoons and leaden clouds, is here a constant succession of gorgeous evening skies, suffusing the snow-fields with a rosy tinge.**

**"The moon too, shines with a brilliancy, and the stars doubled in apparent magnitude, flash with tints unknown in skies less clear; while the aurora shoots nightly across the heavens in ever-changing rays of prismatic hues."**

## BRIGHT AND AZURE

**"The raw sloppy weather, the half-melted heaps of dirty snow in shady corners, the mud and slush, and dripping trees, characteristic of the British winter, are almost unknown miseries. From month to month the snow rests pure and bright as on the day it fell, the azure sky is without a cloud, and the weather is often so indescribably clear and brilliant, and the atmosphere so exhilarating, as to impel one to almost boisterous mirth. It is probably this that makes the winter so pre-eminently the season of gaiety and enjoyment."**

Now who would leave all this, to go south to become lazy and lethargic from the heat, or to lie on

some beach and get scorched by the relentless rays of the hot burning sun!

On Feb. 1, Rick Larmond reported a Snowy Owl perched on Aime Gionet's TV aerial on Edward St. Lindsay Matchett said that, earlier in the day, it was sitting in the field across from his house. A group of ravens were pestering it. A few days earlier, a number of people saw this, or another, Snowy Owl near the corner of Castle and Pleasant Streets.

Snowy Owls normally live in the Arctic, where they live on Lemmings; but, a few of them wander south each winter.

Every fourth year, when the lemmings reach a low point in their population cycle, they come south in greater numbers than usual. This is referred to as a flight year.

A check with David Christie of the NB Museum in St. John revealed that this is not a flight year, and that our Snowy Owl was only the sixth one reported in NB this winter. The last flight was two winters ago.

## ELECTRIC RAVENS

Bruce Ferguson of Newcastle says that when he worked at Faro in the Yukon, the Ravens used to sit on the street lamps to keep warm.

Even in the middle of the day, during cold weather, all of the lamps might be on, with a Raven sitting on top of each of them. The Ravens could, by sitting on top of the photoelectric cell on top of the lamps, cause them to come on.

Well known author and naturalist, Mary Majka will be at the next meeting of the Miramichi Naturalist Club to be held in the Miramichi Valley High School on Wednesday, Feb. 18. The meeting is to start at 8:00 p.m. Mary Majka formerly ran a TV program on nature, which was carried over to Moncton station. She is now president of the NB Federation of Naturalists and has expressed a desire to visit each naturalist club in the province during her term of office.

David Christie, former curator of Natural History at the NB Museum is also expected to attend this meeting. Members and non-members are equally welcome to attend.



interest to readers, if I could elaborate a bit on the birds that were seen. With a visit to my family long overdue, the added opportunity of checking up on the local birdlife on the opposite side of the Atlantic, stirred me to great excitement.

As my interest in the avian world, to a serious degree, began in England, most of what I would see (other than the few familiar species I well remember seeing in the back garden as the robin, starling or song sparrow) would be new species to add to my life list. That is, all except those species, which being holarctic in range, can be seen on both sides of the Atlantic and further.

Waders, to me, undoubtedly form one of the most fascinating groups of birds. This is due not only to their beauty but also to their adaptation to feed without creating too much competition with their close relatives feeding nearby. Each feeds in its own niche, using its specially evolved bill, be it slight or heavy, long or short, straight, decurved or slightly uptilted, for probing out its favored food. And so it was to Strawberry Marsh that I made my many visits.

One of the first delights to catch my eye was the Greater Yellowlegs. I had an enlarged picture of this Nearctic species on my study wall, subtitled "the bird I left behind." This desire had stemmed from my familiarity and admiration for its Palearctic counterpart, the Greenshank, a truly beautiful, graceful wader which breeds in the north of Scotland.

Other waders seen, on a few occasions, were the dunlin (red-backed sandpiper) a holarctic species which winters here in the south of England in large numbers, sometimes reaching a thousand at a time at my local estuary, and also, all new on my list, pectoral sandpipers (up to eleven), a Wilson's snipe, and a spotted sandpiper.

The spotted sandpiper, which I understand is a very common bird in your area, is the nearctic counterpart to our "common sandpiper," which I expect can be said to be equally distributed.

#### TWISTING SNIPE

The Wilson's Snipe was seen on two different occasions, although snipe are birds which one usually just chances to see while they twist in swift flight up and away from you. This bird allowed us a distant view of it feeding on the marshy ground.

Of the passerines, it was the sighting of my first Lapland Longspur (in winter plumage) that lifted my spirits as I strolled across the fields bordering the shoreline. Fortunately I obtained two days fairly good viewing. This required a bit of patience as it fed on the ground, skulking amongst the long grass. Although this bird is holarctic in range, it was not known to breed in the British Isles.

However, in June 1977, the bird was discovered "to be breeding in a Scottish mountain". In fact, they were found in six sites, although not all were successful in rearing young (British Birds: 72, 53-58).

Equally interesting was the flock (ranging from four to ten birds) of horned larks, another species ranging on both sides of the Atlantic, that was only proved to breed in the British Isles in 1977. This palearctic bird is mainly a tundra breeder and

are missing, and open your eyes to the fact that you are really just cheating and robbing yourselves. Let's look at our winters from the perspective of one Major W. Ross King, who visited Canada from England many years ago. He had never before witnessed this wonderful event. Here are a couple of excerpts from his book "The Sportsman and Naturalist in Canada," published away back in 1866.

#### A REAL LOON

On the waters, I saw a few teal, black duck, two hooded mergansers and a common loon - all new to me. The last named species is here known as 'the great northern diver' a name which in no way recalls to mind that most evocative of sounds of the great northern wilderness, as does the Canadian name.

A nester of the far northern regions, this diver appears around our coasts only during the winter months, returning north in the spring then it can sometimes be seen on migration from a coastal point near here called St. Catherines Point. Sea watching can be a most rewarding and fascinating study of bird movements, when one is armed with telescope and high powered binoculars.

With the blessings of a strong south-easterly gale, one sits, and staring out to sea carefully notes the species and numbers of birds passing eastwards in singles, strings or flocks of fifty to a hundred on their way up the channel. They head for the North Sea and their breeding areas in the far northern latitudes, after having spent the winter months in more prosperous feeding areas as the Bay of Biscay, or further south down the Atlantic coast or on African shores.

#### GEESE AND GANNETS

One sees birds such as dark-bellied Brent geese, winging their way to the barrens of the siberian tundra; scoters, strung along like black beads in swift, steady flight low over the water heading for their Scandinavian breeding grounds; gannets soaring over the crest of the waves, with their near motionless wings, all aiming for the various islands scattered around the British coast; waders in huge flocks looking like black smudges appearing from the far distant horizon and soon passing out of sight in their annual return to their northerly breeding habitats, plus various auks, gulls, skuas, terns, divers, and grebes.

My list is coming to an end, with a few birds, which are apparently quite commonly seen the white-throated sparrow and slate-coloured junco, and also a fox sparrow, which I understand is a bird of passage.

The white-throated sparrow is another bird that I had hoped to find on that visit, for to me, it represents vividly what I remember of the Canadian outdoors. As a youngster I used to go for long walks with my father in the woods adjacent to my home. After all these years, I can still hear its call ringing through the trees, as it sang as if in tribute to the land which provided its home -- "O-o-o-h Can-a-da, Can-a-da, Can-a-da."

I expect that by now you will have come to detect the obvious irony in my life that I should come to live in the chalk downlands of southern England in order to discover the marvels of the boreal forest of my native country.

ward St. Lindsay Matchett said that, earlier in the day, it was sitting in the field across from his house. A group of ravens were pestering it. A few days earlier, a number of people saw this, or another, Snowy Owl near the corner of Castle and Pleasant Streets.

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"All the rivers are frozen over; even the broad and rapid St. Lawrence is arrested in its course, and like the streets is covered with horses and sleighs arrayed in rich furs, and with figures dressed in blanket coats, red sashes, and moccasins.

"The wonderful and glorious sunsets of this season cannot fail to strike the inhabitants of our dull clime with astonishment. The period associated in our minds with dreary afternoons and leaden clouds, is here a constant succession of gorgeous evening skies, suffusing the snow-fields with a rosy tinge.

"The moon too, shines with a brilliancy, and the stars doubled in apparent magnitude, flash with tints unknown in skies less clear; while the aurora shoots nightly across the heavens in ever-changing rays of prismatic hues.

#### BRIGHT AND AZURE

"The raw sloppy weather, the half-melted heaps of dirty snow in shady corners; the mud and slush, and dripping trees, characteristic of the British winter, are almost unknown miseries. From month to month the snow rests pure and bright as on the day it fell, the azure sky is without a cloud, and the weather is often so indescribably clear and brilliant, and the atmosphere so exhilarating, as to impel one to almost boisterous mirth. It is probably this that makes the winter so pre-eminently the season of gaiety and enjoyment."

Now who would leave all this, to go south to become lazy and lethargic from the heat, or to lie on



# Sweeping the marsh for mice Feb. 20/81

My personal experience with owls is very limited, but my resource books have information about these birds.

In the "New Brunswick Checklist of Birds, there are 11 species of owls. Of these, seven are known to have nested here. However, none of these species seem to be very plentiful, even the most common ones being rather uncommon.

In W. Austin Squire's book "The Birds of New Brunswick," four of the above 11 species are listed as uncommon, three as being rare, two as being very rare, and the remaining two as being casual or accidental.

The four **uncommon species** are the Saw-Whet Owl, the Short-Eared Owl, the Great Horned Owl, and the Barred Owl.

The first of these is the smallest owl found in New Brunswick, measuring only 7 to 8.5 inches in length; the second is a medium sized owl; and the last two are big owls. All four of them nest in New Brunswick.

The three **rare species** are the Long-Eared Owl, the Hawk Owl, and the Snowy Owl; the first two being medium sized owls, and the last one being a big one.

The Long-Eared Owl is known to nest in our province, and a couple of Hawk owl nests have been found in the extreme northern part of our province. The Snowy Owl nests only in the high Arctic, and comes here as a winter visitor.

The Hawk Owl is also a northern species, and is more likely to be seen in winter than in summer.

The two **very rare species** are the Boreal Owl and the Screech Owl. Both are small owls, only slightly bigger than the Saw-Whet. On two occasions, the Boreal Owl (also known as Richardson's Owl) has been found nesting in our province; but, it too is a northern species, and is more likely to be seen in winter than in summer.

On the other hand, the Screech Owl is a southern species and has never been known to nest here. It has ear tufts and comes in two colour phases, a red phase and a gray phase, and, incidentally, it does not screech.

The two **accidental species** are the Barn Owl and the Great Gray Owl.

The Barn Owl is a medium-sized owl and has been recorded in the province three or four times. It is a southern species that normally is not seen very much north of Boston.

The last named species, the Great Gray Owl, is the largest species to be seen in this province, measuring 25 to 33 inches in length. It is a western species which occasionally wanders eastward in winter. The few occasions it has been recorded here have always been in winter or late fall.

None of the owls make long migrations. During the winter, some of them withdraw somewhat from the northern limits of their breeding range, to wander considerable distances outside their normal ranges. These wanderings seem to be prompted by a lack of food within their normal ranges, and have no regular pattern.

There seems to be more species of owl in New Brunswick during the winter than during the summer. All those that nest here,

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except the Short-Eared Owl, are permanent residents, while several other species wander into the province during the winter.

Even the Short-Eared Owl remains in the province during some winters, if the snow is not too deep, and the mice are plentiful. During other winters, it disappears entirely. The Screech Owl, which normally lives beyond the southern borders of our province, seems to have been seen in this province as often in the winter as in the summer.

Some owls are more nocturnal than others. The Snowy Owl hunts during the day: and, of course, this must be the case; for, in the high Arctic where it nests, the sun never sets during much of the summer. This owl, although not as plentiful as some other species, is, nonetheless, often seen when it does visit us. Not only does it hunt during the day, but it also perches in very conspicuous places. It hunts in open fields, and even in towns and cities, rather than in the forest.

The Hawk Owl is another diurnal species, but it generally avoids civilization. It hunts in open areas, in isolated places such as bogs and burnt-over forest.

## AT THE MARSH

The Short-Eared Owl hunts anytime during the day or night, and it is occasionally seen sweeping over Strawberry Marsh in its search for mice. Since it often hunts during the day, and also since it hunts over marshes and meadows (rather than in the bush), it is more likely to be seen than are most owls. However, in flight, it could easily be mistaken for a hawk of some kind. (The ear-tufts on this species are too small to be of much help in identifying it.)

The rest of New Brunswick's owls hunt almost exclusively at night, although some may start to hunt earlier in the evening than do others. In the mating season in late February, the Great Horned Owl may be heard hooting in the middle of the day. The Screech Owl and Barn Owl, both of which are unlikely to be seen here; are commonly found around buildings, living in close proximity to man. The other nocturnal owls live mainly in the deep forest. The tiny Saw-Whets live in wet parts of the bush, such as alder thickets, tamarack bogs, and cedar swamps.

Although all of our owls have quite a varied diet consisting of mammals, birds, insects, amphibians, reptiles, and sometimes fish, they all seem to prefer mice and other small rodents to anything else. The Great Horned Owl, however, will pounce on almost anything, big or small. It kills ducks, crows, partridge, rabbits and skunks. The skunk's odour does not bother it because, like other birds, it has little, or no, sense of smell.

The Barred Owl, which is almost as big as the Great Horned, contrasts strikingly with it, and concentrates on much smaller prey.

What a revelation!

Feb. 27/81

# A dream of a bird

The most unusual bird sighting in this area recently was one that I made myself. If anyone else had reported this bird to me I probably would not have believed them; however, I saw this bird myself at close range.

When I first saw it, it was sitting in a tree. It was quite large and mostly brown in colour, but with a few white patches on its back and a somewhat downcurved bill. When it flew, it came directly toward me, and for an instant I thought that it might fly right into me. However, it missed me by a few inches. When I turned around I found it had alighted on the ground behind me.

I could now see that was an exceedingly large bird, much larger than I had at first realized.

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The bird then fanned out its tail, which was just like a peacock's. Unfortunately, before I was able to observe any further identifying characteristics of this bird, I woke up.

I have tentatively put this bird down as a cross between a cuckoo and a peacock, although it also had some of the characteristics of the Great Rock that Sinbad the Sailor saw. If anyone else has seen this bird, perhaps you could fill me in on some of the details that I have missed.

# Waking bears eat anything

Mar. 6/81

The warm weather has brought some of the bears out of hibernation. Mona Curtis of Whitneyville reported that two of them were seen out on the river there during the last week in February.

Black bears are not sound sleepers compared with some of the other mammals which hibernate for the winter. During this sleep, their body temperature drops only a few degrees; while their breathing, heart-beat, and metabolism slow down to a much lesser extent than is the case with most other hibernators. They can be awakened by prodding, or even by shouting. During mild spells, they will sometimes come out of their dens and wander about.

Old males den up alone, and remain alone, except for a very brief period during the mating season.

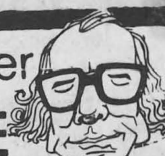
Females go into hibernation earlier, come out of hibernation later and are much less likely to be abroad during the winter. They mate every second year, and the helpless little cubs are born in the middle of the winter.

The following winter, these cubs den up with their mother again, but are left to fend for themselves when their second spring rolls around. These abandoned cubs may, however, den together for their third winter. My guess is that the two bears at Whitneyville were two cubs from the same litter that had denned together. They were probably two years old, and will, no doubt, go back into hibernation again if the weather gets cold.

## HALF POUNDERS

When cubs are born they weigh little more than half a pound, or about one two-hundredths of the mothers weight. This is relatively small compared with that of most other mammals, and they are

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naked and blind at birth. They grow rapidly, however, and are quite active when they leave the den with their mother in the spring. This usually happens when they get flooded out of their den during the spring run-off.

Bears will eat almost anything. According to A.W.F. Banfield in his book, The Mammals of Canada, they eat twigs and leaves along with berries. At garbage dumps they eat paper, cardboard, rags, strings, and pieces of wood, as well as the waste food to be found there.

## LARGE MENU

They also eat roots, grasses, many different weeds and berries, apples, corn, nuts, honey, grubs and insects. Fish, mice, groundhogs, and many other mammals are eaten when the bears are lucky enough to catch them; however, fish and mammals that are caught live, constitute a very small part of the bear's diet. In early spring they eat spruce needles and animals that have died during the winter.

They prefer their meat to be somewhat rotten rather than fresh; and, having a keen sense of smell, they are easily able to find winter kills. They will sometimes stand on their hind legs and sniff the wind in order to pick up such odours. They also have a keen sense of hearing, but their eyesight is poor.

Studies indicate that the Balck Bear's diet is about 75 to 80 percent vegetable matter, and the remainder mostly carrion and insects.



## Provincial bird

# Four in running

When Dr. Mary Majka, President of the New Brunswick Federation of Naturalists, spoke to the members of our local Naturalist club, on Feb. 18, she expressed a hope that the various naturalist clubs in the province would have become more visible in their communities.

A few days' later I attended the Boy Scouts father and son banquet at the Lions Recreation Center in Newcastle. At this meeting it occurred to me that one way in which our Naturalist Club might become more visible in the community would be to work with other outdoor groups. We might be able to give them some assistance in the area of nature study.

Dr. Majka also spoke about the 1983 annual meeting of the Canadian Nature Federation, which is to be held in Fredericton on Aug. 19 of that year.

This meeting will be hosted by the New Brunswick Federation of Naturalists (NBFN) and will be a first for New Brunswick, as the Canadian Nature Federation has never held its annual general meeting here before.

Already plans are being made for this event, which will be preceded by a week of field trips to various parts of our provinces.

Another project of the NBFN is to sponsor one or two young people to attend the Living River's Program at the Mic Mac Lodge on the Tabusintac River this coming summer.

Assisted by David Christie, Dr. Majka gave a slide presentation showing the progress of the seasons beginning with winter and ending in the fall: Picutres of snow laden trees, opening buds, and migrating shore-birds; as well as pictures of outdoor activities of naturalist groups.

She mentioned that although many people feel that the winter season is a low point for naturalists, it nonetheless offers its own unique pleasures. These include the feeding of birds, the study of animal tracks, and the Christmas Bird Counts.

## DOWN TO FOUR

For those who may be wondering about our provincial bird, the contest has now been narrowed down to four species, - the Gray Jay, the Black-capped Chickadee, the Robin, and the White-throated Sparrow.

On Feb. 11, Monica Charley reported a Purple Finch at her bird

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feeder in the Ferry Road area. One of her neighbours, Doug Underhill, reported a Purple finch at his feeder on Feb. 20 and 21. Doug also reported a Pileated Woodpecker in his yard early in March.

Out at Sillikers, Mrs. Moses Travis reported that she has had a Red-winged Blackbird coming regularly to her bird-feeder ever since last November. She says that although this blackbird did not sing during the early part of the winter, it has now started to sing, a sign that spring is not far away.

## DUCK TIME

Bob Allen of Newcastle has been watching the open stretch of water between Vye's beach and Beaubear's Island. Ducks first appeared on this water on Feb. 19 - six of them, thought to be Mergansers, but not positively identified. On the next day there were 18 Mergansers; and on Feb. 28, 50 of them. On March 2 and 3, Bob saw four Black Ducks on the ice beside this open water, and he says that this is about a month earlier than he usually sees his first Black Duck.

Neither Purple Finches, Red-winged Blackbirds, nor Mergansers were picked up on our Christmas Bird Count last fall; and the above reports of them are the only ones that have been received this winter.

Pine Grosbeaks seem to have been fairly plentiful during the winter. A number of people reported them, and a number of other people described seeing birds that were probably of this species.

There has been an obvious increase in the number of crows in our area, which has become apparent ever since the warm weather in late February. That's another sign of spring.

## PLANTING TIME

It is time to start planning your garden, and gardening will be the subject of our next Miramichi Naturalist Club meeting. The speaker will be **Royal Sturgeon** of Blackville, and the meeting will be held at the James M. Hill Memorial High School in Chatham, on Wednesday evening March 18, starting at 8:00 p.m. All are welcome.

# For the eagle - eyed

On March 14, Bob Allen alerted me to a Bald Eagle sitting on the ice at the far edge of the open water between Vye's Beach and Beaubear's Island. This eagle had a completely white head and tail, indicating that it was a fully mature bird.

Back in 1974, Doug Underhill made a similar sighting of a Bald Eagle in almost the exact same place, and at almost the same time of year (March 24). This earlier bird had a mottled white and brown head indicating that it was immature.

I suspect, but of course cannot prove, that these two eagles were really the same bird; and that it was following a habitual yearly pattern.

The young Bald Eagle has a completely brown head and tail, the same colour as the rest of the body; but, on each successive molt, it gradually attains more white in the feathers of the head and tail, until, after about four years, it, at last acquires the completely whitehead and tail of the adult bird.

There were originally two subspecies of Bald Eagle to be found in the Maritimes, but, one of these, the slightly smaller southern subspecies, has disappeared, or, at least, has almost done so. It visited the Maritimes only during the summer, and did not nest here. Rather, it nested in the south during the winter (mostly in Florida).

The numbers of this southern subspecies declined very sharply after the second world war when the use of D.D.T. as an insecticide became widespread.

## MARITIMERS

The northern subspecies has fared somewhat better. It nests here in the summer and stays in the Maritimes all year round. However, it also migrates to some extent. An account in one of David Folster's Neighbourly News broadcasts last fall stated:

The mouth of the Shubenacadie River in Nova Scotia is a major wintering ground for the Bald Eagle. According to the **Hants Journal** almost 100 eagles, most of them young, arrive in the area between December in January and remain as late as April.

This has come as a surprise to

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biologists, alerted by a local former. They have found more eagles here than they expected to find. But they have also found that increasing development and pollution is threatening the sanctity of the eagles winter home. The saddest part of all this is that they've even found dead eagles, their bodies riddled with pellets from the rifles of the hunters.

So, biologists are recommending establishment of a protective zone in the area. The quality of the water in the Shubenacadie is important for eagles. For hundreds of years, the great birds have perched in tall trees along the steep river bank and watched for fish forced out of the water by shifting ice.

## NOT EVERYDAY

A gathering of eagles isn't something that happens everywhere, and some kind of protective effort will be needed to keep it happening along the Shubenacadie.

Now to return to the southern subspecies:

Back in the 40's a retired Canadian banker, Charles Broley, spent much of his time studying Bald Eagles in Florida. He visited many nests each year, and banded over 1000 young eagles.

He found that although most Bald Eagles live almost entirely on fish, the odd one develops a taste for other food. He said that the birds in nest No. 35 were partial to Scaup Ducks; and that the birds in nest No. 86 had an appetite for Great Blue Herons and Brown Pelicans. An account of Broley's experiences is contained in Roger Tory Peterson's book **Birds Over America**.

Bald Eagles of this southern subspecies came to New Brunswick in considerable numbers until about 30-35 years ago.

Margaret Wheaton just reported that she had two Red-winged Blackbirds at her feeder today (March 15). Since there have been no other reports of Red-winged Blackbirds in Newcastle this winter, these would appear to be new spring arrivals.



# Come join our safari to mole land

Here is a project that you might like to help with. It is simple enough that a child of eight could do it, but, on the other hand, it might appeal to someone who is eighty.

This is the project:

Vernon Goodfellow is making a study of the small mammals on the Miramichi: mammals that are mouse-sized or smaller. There are probably about 15 such species, the most common being the Red-backed Vole, the Meadow Vole, and Deer Mouse; but, there are also 5 or 6 species of Shrews, 2 species of Jumping Mice, 1 or 2 species of Moles, 1 or 2 species of Bog Lemmings, the Rock Vole, and, of course, the House Mouse.

Some of these are found in the bush, others in fields, still others along stream banks, etc.

If Vernon could find a number of people who would like to live-trap these mammals, it would assist him in this study. One method of live-trapping them is to bury a juice-can in the ground, so that the top of the can is flush with the surface of the ground, then put a little peanut butter inside of it. The odour of the peanut butter will attract these mammals, which then, fall in and cannot climb out.

The more trappers that can be recruited for this project, and the more widespread they are; then the more different types of habitat that can be sampled and the better the information will be.

Vernon would like to get pictures of all of these mammals, and also gather information about them, such as their relative abundance, habits, food, and the habitat they are found in. Eventually the pictures will be put together in the form of a set of coloured slides, accompanied by a running commentary about them.

The set will then be placed in the New Brunswick Museum in St. John, along with other similar slide collections on other natural history topics. These slide collections are known as The W. Austin Squires Memorial Series, and are, or will be, available to schools or other groups that may be interested in using them.

## CARDIAC SHREWS

Vernon can tell you what to do, and what not to do, once you have trapped any of these small mammals. He says that the shrews take heart-attacks very easily if frightened. Also they will starve very quickly, and are likely to kill other mice or shrews that may fall into the can with them. Mashed Shrews, and Pigmy Shrews, both of which should be found in this area, are very tiny, weighing only

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about four grams.

If interested in helping with this project, contact Vernon Goodfellow of South-Esk, telephone 622-7914. Or, if you know someone who might be interested, show him, or her, this article. You could find it both fascinating and educational, and it could be done in the bit of bush or field back of your house.

However, if the above project does not interest you, then here is another one.

David Christie, Associate Curator of Natural History at the New Brunswick Museum in St. John, sends the following notice.

## HAWK OBSERVERS WANTED

"The Hawk Migration Association of North America wants volunteers in Atlantic Canada. Any time you could devote to watching and reporting migrating raptors would be useful, but the week-ends of April 25-26, May 2-3, August 29-30, September 12-13, and October 3-4 are suggested for special attention so we can obtain simultaneous reports from a number of sites. For full details write to David Christie, R.R. No. 2, Albert, NB, E0A 1A0.

"The Hawk Migration Association was formed in 1974 to promote and coordinate studies of raptor migration in North America. The association's newsletters contain summaries of spring and fall migration in 13 regions of the continent, news of special projects and recent publications, notes on hawk watching techniques, etc.

"To join, send \$8 U.S. (\$5 students) to the treasurer, Nancy Clayton at 95 Martha's Point Road, Concord, Mass 01742, but you don't have to belong to participate; what we need most in this region is observers."

From talking to David earlier about this project, I understand that most of the hawks migrate at such great heights that they generally pass by unnoticed. To participate in this hawk watch is primarily a matter of scanning the sky very carefully, and often, on the week-ends listed above.

At the heights that they fly, it may not be possible to identify them as to species; but, from their outlines, they can usually be separated into the following groups - buteos, accipiters, and falcons.

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# Standing up for redpolls

• Redpolls have been common on the Miramichi this winter, and have been present at many bird feeders. This has been especially true during the latter part of the winter.

The Common Redpoll is a small, streaked, light coloured finch that has a notched tail and a stubby bill. It has a bright red patch on the forehead, and some, but not all, of the males have a pinkish breast. It is a little smaller than the ordinary House Sparrow.

Although these birds usually have the red patch on the forehead, there were some in our area early in the winter. Their patch was very small, or entirely lacking. Several people commented on this.

Redpolls resemble Goldfinches in many respects. They have much the same build, manner of flight, and feeding habits. Also, some of their song notes are much like those of the Goldfinch.

Redpolls generally travel in flocks, sometimes very large flocks, in which they keep up a continual twittering. Their favourite food is the seeds of the alder and birch, but they are also often seen gathering weed seeds from the tops of weeds sticking up through the snow.

When one hikes through areas of alder in the winter, it is sometimes quite obvious that a flock of redpolls has gone before. The many pieces of broken cones lying in the snow and the many little bird tracks under these bushes indicate their recent departure. These same tell-tale clues are also sometimes seen under a birch tree.

## REDPOLL POSING

I once read that by standing perfectly still, people could sometimes get redpolls to alight on them, apparently mistaking them for inanimate objects. Later, when I came upon a large flock in the early spring, I experimented with this. Although none of them alighted on me, they came and fed on the ground all around me.

In about a months time, the Redpolls will leave us, to return again next November. They have never been known to nest in New Brunswick, but they have been found nesting on the Magdalen Islands, and they also nest in Newfoundland. Most of them, however, go much farther than this, spending their summers in the Arctic and sub-Arctic.

A slightly different species, the Hoary Redpoll, is an even more northern bird. Its breeding range extends to the northern tip of Ellesmere Island, the most northern point in Canada. On a few rare occasions it has been identified in New Brunswick, mixed in with flocks of the Common Redpolls.

Another closely allied species known as Hornesmann's Redpoll lives in Greenland all year round. No other song bird (at least on this side of the Atlantic) spends its winter so far north. It only leaves



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Another closely allied species known as Hornesmann's Redpoll lives in Greenland all year round. No other song bird (at least on this side of the Atlantic) spends its winters so far north. It only leaves the most northern parts of Greenland during the period of complete darkness, between November and early February, returning again in the middle of February as soon as the sun reappears above the horizon again.

### HIGH SINGERS

The Redpoll is one of the very limited number of song birds (passerines) to be found in the high Arctic. The others are the Snow Bunting, Lapland Longspur, Water Pipit, Horned Lark and Wheateas.

A few more spring birds have been returning. Otto Peter of Newcastle reported seeing a flock of Geese while travelling to Moncton on the Rogersville Highway on March 14, and John Kating of Chatham reported a flock of 50 to 60 Snow Geese flying down the river in front of his place in the early morning of March 22. My wife reports a Grackle at our bird feeder on March 27, and there were 5 Cowbirds here on March 29.

The main migration route of the Snow Goose is much to the west of New Brunswick, and they seldom pass through our area. However Snow Geese have increased greatly in numbers in recent years due to conservation measures that were put into effect when the Snow Goose was threatened with extinction.

# Gardener to speak to club

The public is invited to attend a meeting of the Miramichi Naturalists Club, to be held at Miramichi Valley High School in Newcastle on Wednesday evening April 15, meeting to start at 8:00 p.m.

The subject of the meeting will be gardening, and the guest speaker will be Roydon Sturgeon of Blackville. Mr. Sturgeon is an experienced gardener and a graduate of the Dupage Horicultural School in Chicago.

No one could fail to notice the large flocks of blackbirds that have recently returned from the south. A number of species are represented in these flocks - grackles, cowbirds, red-winged blackbirds, and rusty blackbirds.

The cowbirds are especially plentiful in town. They are the smallest of the blackbirds and have very stubby bills. The males are a shiny black all over except for a brown head, while the females are greyish brown all over. They are handsome little birds and seem to have a pleasant disposition, but they are very irresponsible as parents.

The cowbird is the only bird in Canada that never makes a nest of its own, but habitually slips its eggs into other birds' nests. A few other species occasionally do this - the flicker does so occasionally, and some wild ducks occasionally slip eggs into other duck's nests.

The Cowbird will impose upon almost any other species of small bird. Cowbirds' eggs have been found in nests of 214 different species, according to Hal H. Harrison in his book "A Field Guide to Bird's Nests". Of these 214 species, 121 of them have been known to raise young Cowbirds successfully.

Different species react differently to finding a cowbird's egg in their nest. Robins and Catbirds will throw it out, Yellow Warblers will build a layer of nest over their eggs and start laying again, others will desert their nests, while still others accept it. Usually only one or two cowbirds eggs are found in any one nest, but as many as 9 have been found in a single nest - in this case the nest of the Wood Thrush.

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## GIVE AND TAKE

The Cowbird lays its eggs at dawn, and removes an egg of the host the day before or the day after depositing its own egg in the nest. Harrison found a red-eyed Vireo incubating 4 cowbirds' eggs, with no Vireo eggs in the nest.

Song sparrows and chipping sparrows are often victimized by cowbirds. I have seen chipping sparrows feeding young cowbirds that were twice as big as themselves. On the other hand, I once placed a song sparrows egg in a house sparrows nest. A check later revealed that the song sparrow's egg had disappeared even though the eggs of these two species are very much alike.

A number of other birds have returned to the Miramichi. Monica Charnley had a mourning dove at her feeder in the Ferry Road area on March 25. After dark on April 4, a Woodcock was calling in the field above King George Highway between Edward Street and Sweeney Lane.

## SKY DANCER

On the following evening, one was doing its sky dance above the railway station in Newcastle, a rather unusual location for such a performance.

On April 4 and 5, Robins, Kildeers, Song Sparrows, and Juncos were sighted in a number of places.

Out on the river, the vanguard of the Double-crested Cormorant (Black Shag) migration was seen on April 3. Soon these birds will be here in large numbers, riding down the river on rafts of ice - these small rafts packed solid with them, as they stand almost vertically on their tails and looking like black ten pins. Or they will fly in V-shaped flocks like geese, but having a different method of flight, alternating between periods of rapid wing beats and short glides, and always following along the river.

# 'Football' earns seals the name

Many people in the area saw the seals at Val Comeau a few weeks ago. I did not see them myself, and I have no personal acquaintance with seals, but I have gathered a bit of information about them from the literature.

Four species of seal are normally found in New Brunswick waters. These are the Harbour Seal, the Harp Seal, the Gray Seal, and the Hooded Seal; the first named species the biggest.

An average adult Harp Seal is about the length and weight of an average adult human being. The Harbour Seal is a little smaller, and the other two species are much larger -- the Hooded Seal sometimes reaching a length of 10 feet and a weight of 900 pounds.

The Harp Seal and the Hooded Seal are both migratory, and are found off our coasts only during the winter and very early spring. After their pups are born on ice floes in the Gulf of St. Lawrence or off the coast of Newfoundland, they then migrate north to Greenland and continue north along its coasts.

On their return trip they follow south along the Labrador Coast, and do not reach our latitudes again until late fall or early winter. These two seals normally keep well out to sea and they were seen on shore this year only because the ice floes that they were on drifted in, as the pups were being born.

Many Harp Seals are born in the Gulf of St. Lawrence, but only a few Hooded Seals are; most Hooded Seals are born off the north-east coast of Newfoundland.

## FOOTBALL ON MIND

The Harp Seal derives its name from the dark horseshoe shaped patch on the back of the adult male, while the name Hooded Seal comes from the following feature of that species -- the adult male has an air sac extending from the nostrils to the forehead, and this sac can be inflated at will.

When inflated, this looks like a black football sitting on top of the seal's head. The Harp Seal lives on small fish and macroplankton. The Hooded Seal's diet is not very well known, since it fasts during

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the breeding season when most specimens are taken.

The Harbour Seal and the Grey Seal do not migrate but remain off our coast all year round. The Harbour Seal is much more common species of the two, and the one that is likely to be seen in Miramichi Bay during the summer.

The Harbour Seal is very widely distributed, being found on both the east and west coasts of Canada, as well as along the coasts of Europe and Asia. It is never found very far from land. It eats a great variety of different fishes, and also some shellfish.

The Grey Seal population is very limited. A.W.F. Banfield, in his book The Mammals of Canada, estimates the world population at 40,000 individuals, most of these being in northern European waters. Only about 5,000 individuals live along the Atlantic coast of Canada.

## LOVE THE WATER

Grey Seals can remain underwater for 20 minutes, and can dive to depths of 450 feet. In these respects, seals, like whales, seem to defy two laws that govern other mammals.

For example, the record length of time for a man to hold his breath and survive is 6 minutes. Also, to descend to such depths, a man needs to be in a bathysphere or submarine, in order to protect himself from the effects of the great pressures to which he would otherwise be subjected.

Grey Seals live mainly on bottom feeding fish.

Other species of seal that live off our Atlantic Coast, but which never come this far south, are the Ringed Seal, the Bearded Seal, and the Walrus. These three species feed to a much greater extent of shellfish and crustaceans than do the four earlier mentioned species.



# Sturgeon's seed secrets

Here are some notes on gardening that were gathered during a discussion with Royden Sturgeon of Blackville.

**Fine Seeds** - When starting seedlings in a flat, Mr. Sturgeon just sprinkles the seeds on top of the soil and does not attempt to cover them. The soil is then kept moist; and, in order to cut down on evaporation, a covering of plastic is stretched over the flat forming a small greenhouse.

If earth is sprinkled over fine seeds, there is danger of burying some of them too deeply; and, when this happens, the seedlings die before they are able to get through to the light.

The seeds are given an application of a dilute liquid fertilizer, and the plants are given another application when they are transplanted.

**Old Seeds** - Most seeds that are left over from the previous year are still good if they have been stored in a cool dry place. The length of time that they can be kept varies with the species.

Most seed companies do not grow their own seeds. There are only 2 or 3 large seed producers in North America; the reason for this being that it is very difficult to produce pure varieties.

For instance, a particular variety of plant must be widely separated from all other varieties of plant with which it might cross-pollinate - a distance of at least a mile is necessary in order to ensure this.

## NEED BUFFER ZONE

This is accomplished by planting a buffer zone of some crop, such as rye, around a plot of flowers or vegetables that are being grown for seed.

The seeds for some other varieties of plants are produced by hand-pollination, and these seeds are expensive.

The seed companies that buy from these large producers may

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test the seeds before marketing them in order to make sure the various varieties are suitable for the climate in their regions.

**Tomatoes** - The variety of tomato planted is not very important. What is important is to obtain healthy plants that are reasonably well advanced by the time that they are transplanted into the garden.

Given these conditions, any of the common varieties to be found in the nurseries will produce plenty of ripe tomatoes, and will also have green ones left at the end of the season to be used for chow.

There are a number of recently developed varieties. One of these produces yellow tomatoes, another striped tomatoes, and still another has emerald green tomatoes when ripe.

Mr. Sturgeon has had some experience with the yellow variety, and says that it is a good tomato but that most people are reluctant to buy it. We are all accustomed to believing that a tomato must be red.

## STAKE FOR MORE

By staking tomatoes, more can be grown in a small area. Also the tomatoes are less likely to rot or to be attacked by slugs, and will ripen better in the latter part of the season.

Mr. Sturgeon removes the suckers from his tomatoes; and says, that if the tops of the plants are clipped off above the third set of blossoms, then larger tomatoes will result.

He recounted one experience in which he ordered a package of tomato seeds that turned out to be a very different variety to what he had ordered.

In this case the seeds had been put into the wrong package in the seed house. The plants looked quite normal when they were sold to be set out in gardens; and, it was only when the long thin weiner shaped fruits appeared, that the mistake became apparent.

## EASY SLICE RESULTS

The result was that Mr. Sturgeon had some dissatisfied customers. However, these long tomatoes had some redeeming features, -- they were easily sliced and made very good chow.

**Short Season** - The growing season can be lengthened by starting many plants indoors; but, the extent to which it can be lengthened is limited.

For example, if peppers come into blossom too early, these blossoms will simply fall off without producing any fruit.

The temperature should not drop below about 50 degrees F while the peppers are in bloom. Cucumbers are similarly affected by cool weather.

**Bedding Plants** - Petunias are by far the most popular species of flower sold both here and throughout most of eastern Canada and the eastern United States.

Asters and pansies were formerly more popular, and pansies are making a comeback. The three different sizes of marigolds are also very popular.

## MORE OF OUR OWN

**Outlook** - Mr. Sturgeon feels, that here in the Maritimes we should be making more use of the land, and be growing more of the food that we eat.

He has some doubts about the safety of insecticides and believes organic gardening will eventually be practiced more widely.

Mr. Sturgeon is a graduate of the Dupage School of Horticulture in Chicago, and has a greenhouse in Blackville.

## Burdock soup?

As the new spring growth appears, Gladys MacLean of Whitneyville is again making use of what God provides in the way of wild edibles.

Even as early as April 14, when I talked with her, she said she had stinging nettle soup for supper that night, and a delicious day lily omelet for breakfast that morning.

Other spring greens that she had utilized in her cooking up until that date were, - chickweed, strawberry leaves, caraway, clover, young burdocks, and a few small dandelions.

She also said she would not need to buy any vegetables until the snow comes again in the fall.

She explained that the stinging nettle loses all of its stinging properties when it is cooked, and that it is very nutritious, containing iron and protein, and also vitamins A and D.

Every year, at this time, I have the job of carting boys and their canoe up to the Miners Bridge, or out to the Barnaby or Bartibogue, or some other stream, and then picking them up at the end of their run.

The intervening hours, between dropping them off and picking them up, are often spent in the wilds, just looking for birds and plants and generally enjoying the arrival of spring.

### SPOTTING STRIDERS

On Saturday, April 25, my son Bruce and his friend Ryan Green put their canoe into the Muzrall Brook, south of Doaktown. There in a relatively quiet pool at the edge of the brook, was a group of about a dozen Water Striders.

Water Striders are those insects that skate or glide on the surface of the water, and never even get their feet wet.

They have long thin bodies, and long thin legs, and look like stiff-legged spiders.

Their feet are densely covered with very tiny hairs which repel the water.

Each foot makes an indentation on the surface of the water; and, although these indentations cannot be seen directly, they can often be seen on the shadow that these insects cast on the bottom of the pool. Water Strider, or Pond Skaters, as they are sometimes

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called, are help up by surface tension.

The Water Strider stands on his four back legs; and uses his two front legs, which are shorter, to pick up little insects that happen to fall on the water. These constitute its food.

Even in the same species, some Water Striders have wings, while others are wingless. The winged ones are able to fly off to colonize other ponds or streams.

### RIDE BIG WAVES

I have read there are some species which live far out on the ocean. Surprisingly, they are able to ride on the big waves, and even to weather heavy storms without being drowned.

Philip Anson was able to supply this interesting piece of information about Water Striders.

They, or certain species of them, are able to produce a liquid, which, when distributed on the water behind them, lowers the surface tension.

The result is other predatory insects, having similar abilities to travel on top of the water, sink when attempting to capture them.

### BACK TO CANOES

Getting back to the canoe trip: I picked the boys up at the mouth of Muzrall Brook, where it empties into the Caines.

Here in the settlement of Shinnickburn, Wood Frogs were croaking back of Merlin Arbeau's barn.

Merlin said the first time he had heard them this spring, was about a week earlier.

The Wood Frog is the first frog to emerge from hibernation in the spring, and its voice is quite distinct from that of other frogs.

The boys said they had never before heard so many partridge drumming as they did during their canoe trip down Muzrall Brook.

There were many beaver huts along the way, but few dams. The brook is not fast, but it runs through small steep-sided valley.

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## Birds are fisher's friends

Two shore bird Surveys conducted at Point Aux Carr this spring have failed to produce any shore birds - it is still too early for them.

However, other birds recorded on these surveys include - Great Blue Herons, Mergansers, Loons, Doudle-crested Cormorants, Surf Scoters, and an Osprey.

These are mainly fish-eating birds, and therefore fishermen often regard them as enemies. However, we should be careful not to jump to conclusions.

Kathy Blanchard French of the Living Rivers Program, while speaking at one of our Naturalist Club meetings, mentioned the abundance of fish to be found around certain sea-bird colonies in the Gulf of St. Lawrence.

Her explanation for this was, that the birds' droppings fertilized the sea, thus causing many marine organisms to flourish and provide food for fish. The result was an increase in the number of fish, despite the fact that the sea birds were eating them.

### DOWNSIDE PHENOMENA

Roger Tory Peterson in his book, *Birds Over America*, observed this same phenomena on the downstream side of established heron rookeries. He describes one case in Tampa Bay, Florida where mullet were once plentiful but had declined almost to extinction.

At this time, a number of islands in the bay were made into a bird sanctuary; and, over the following twelve years, the number of herons increased from 2700 birds to an estimated 215,000.

The result was, that for miles around, the bare sand on the bottom of the sea became green with algae, grass, and water weeds; and small mullet, which grew bigger each year, became plentiful again. Fishermen again began catching mullet in large numbers like they had done half a century earlier.

What about the Common Merganser, or Fish Duck, that is plentiful here on the Miramichi, and which is sometimes accused of eating many trout and salmon?

Robie W. Tufts, in his book, *The Birds of Nova Scotia*, says that the merganser has no preference as to which species of fish it eats. It simply takes the ones that are available, and the ones that are most easily caught. These are predominantly slow moving fish which are themselves enemies of trout and salmon.

### PLENTIFUL FISH

As he points out, trout and salmon are more plentiful in isolated places which are readily accessible to the fish ducks. What



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### **PLENTIFUL FISH**

As he points out, trout and salmon are more plentiful in isolated places which are readily accessible to the fish ducks. What Tufts has said about the fish ducks seems to be equally true for the loons.

Similarly, charges against the Black Shags or Cormorants, do not seem to be well-founded.

Tufts and Taverner both state that careful studies of their food habits indicate that they are not harmful to sport or commercial fishing. to quote Taverner - "Careful examination of about thirty specimens showed that the birds were eating fish of no economic value and no salmonoid remains were found in them.

Probably the eels, sculpins, and other fish taken by the cormorant make the species beneficial rather than harmful to the salmon, and may more than compensate for a few valuable fish that it occasionally takes."

The Surf Scoter, or Skunk Head, is a shell duck and although little information is available about its diet, it is probably similar to that of the other two scoters in our area -- the White-winged Scoter and the Common Scoter.

Kortright (talking bout the White-winged Scoter) states that the grinding power of its gizzard is almost unbelievable. Oysters and other molluscs are swallowed whole and many shells that require a hard blow of the hammer to break are readily ground and chemically disintegrated in its gizzard.

Osprey are not common enough to seriously affect fishing. They always fish in shallow water where the fish can be seen against the bottom.

According to the several sources that I checked, valuable fish (by fishermen's standards) do not make up much of their diet. Tomcod and flounders are commonly taken along the coast, as are suckers and perch in freshwater.

May 15/81

# Marsh Hawks take romantic dives

Life is grim for a Marsh Hawk, especially for a female that is mated to a polygamous male, or for a chick that is in the nest of a polygamous male.

The family life of Marsh Hawks is unorthodox, even by bird standards; or, even by hawk standards.

But, there is a reason for this state of affairs -- only half as many male Marsh Hawks live to reach maturity as do females.

Why this is so does not seem to be understood, but it results in a keen competition for the males. Despite this, some males remain monogamous; but others become polygamous.

## SINGLE HOUSEHOLD

Now, let us consider the household in which the male is monogamous. First, he attracts a mate by flying about, his flight being frequently interrupted by spectacular V-shaped dips and other aerobatics.

At this stage, male marsh Hawks have been observed to make over 100 of these V-shaped dips, one right after another.

Once he has attracted a mate, he then goes through the preliminary steps of building a nest, but soon breaks off to let his new-found mate complete the job.

Next comes the job of incubating the eggs. This is left entirely to the female; but, nonetheless, the male gathers food for her while she is occupied in this way.

However he does not bring the food right down to the nest; but rather, he transfers it to her while they are both in flight.

## FOOD DROP

This is accomplished by the female positioning herself slightly behind, and a little below him. When in position, he drops the food, she catches it and returns to the nest.

When the eggs have hatched, both parents gather food for the chicks, but the male continues to transfer the food to the female rather than feed the chicks himself. He apparently has little interest in seeing how his offspring are progressing.

## MANY WIVES

Now, let us visit the household of the polygamous male. The alpha female (or the one that the male first mates with) and her brood are cared for almost as well as the family of the monogamous male.

The Beta female and her family get some attention, but the 3rd and 4th stringers get no attention at all.

They must fend for themselves as best they can without any help from the male. (The record number of females for a male to be mated to during a season, is seven).

Such families are in a particularly bad situation during wet weather.

At such times, the female has two alternatives, - she can sit on the chicks and keep them dry, in which case they go unfed; or, she can forage for food, and let them get wet. Either alternative is bad for the chicks.

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## ATTACK OF PREDATORS

Marsh Hawks nest on the ground; and, about a third of their nests fall prey to predators.

These are mostly night prowlers such as foxes, mink, skunks, raccoons, and weasels; but, these predators themselves need to be careful, for the Marsh Hawk itself is a rather formidable opponent.

Life is rather precarious for all young Marsh Hawks; but, the survival rate for chicks in the nests of monogamous males is much higher than it is in most nests of polygamous males.

Marsh Hawks live largely on Meadow Voles, or field mice; but they also eat birds, and a variety of other creatures.

The mother does not waste any meat; and, if a chick dies in the nest, she may pull it apart and feed it to its surviving brothers and sisters.

## LOGIC OVER EMOTION

This is a very unfeeling thing for a mother to do; but, she has had a hard life, and her cold sense of logic over-rides her emotions.

The study of Marsh Hawks on the Tantramar Marsh, is a project that Bob Simmons has been working on as a requirement for his Masters degree at Acadia University.

Simmons came from the British Isles and started out as an astronomer, but later switched to biology.

Recently he gave a talk and a slide presentation at a meeting of the Chignecto Naturalist Club in Sackville.

## PASS THROUGH MEETING

I was passing through Sackville at the time, and was able to attend the meeting. The present article is based on information obtained from his talk.

Marsh Hawks are not plentiful in our area; but, sometimes they can be seen hunting over farmers fields, or over marshes.

They are never found in the bush. The males are a pale grayish colour, while the females are brown. Both have a very noticeable white patch on the rump.

They tend to circle fairly low over the fields, and to glide with their wings raised somewhat above the horizontal, thus forming a shallow V with them. The female is larger than the male.

## CLUB MEETS WEDNESDAY

There will be a meeting of the Miramichi Naturalist Club at 8:00 p.m. on Wednesday, May 20, the meeting to be held in the James M. Hill Memorial High School in Chatham.

At this meeting, coloured slides of many wild flowers, birds, and animals of the Miramichi will be shown.

These pictures were taken by my sons Ian and Lyle, and were recently shown to grades 3 and 4 in Gretna Green School in Douglastown. All are welcome to attend.



May 22 / 81

## Water Hyacinth

# Weed by any other name...

One dictionary definition of a weed is "a useless or unsightly plant."

But, a plant that is a weed in one situation, may be a valuable plant in another; or, a plant that is considered a weed today, may be considered valuable tomorrow. The Water Hyacinth is an example.

The Water Hyacinth is an aquatic plant that grows very prolifically in many of the warmer countries of the world.

It floats on top of the water, and its yellow-sotted, light-blue flowers are arranged on a foot-long spike.

The plant is kept afloat by air bladders, while the roots dangle in the water and do not attach themselves to the soil.

A 20 year old encyclopedia describes the Water Hyacinth as the "million-dollar weed", because of the great sums of money expended in attempts to control it.

This same encyclopedia says the plant grows so abundantly in the rivers of many warm countries as to obstruct the passage of ships.

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However, this same plant now shows great promise in the battle against water pollution.

It has a surprising ability to thrive on many pollutants, including toxic substances and heavy metals, thus purifying the water in which they grow.

This purification is brought about, not only through the plants metabolic processes; but, when many of these plants are grown together, their matted root systems act like a large strainer to filter out suspended solids and algae.

Their roots also harbour bacteria and other micro organisms that in turn contribute to the purification process.

The latest issue of **Chemical Engineering** describes some recently designed sewage treatment plants which utilize the Water Hyacinth's pollution fighting ability.

These sewage plants are treating, not only domestic

sewage, but also industrial wastes.

These are some additional features that make this approach to water treatment very attractive.

### FAST GROWING

The Water Hyacinth is one of the world's faster growing plants; and, when harvested, can be used to produce methane gas.

This gas can then be burned directly as fuel, or it can be used to generate electricity.

In some applications, the harvested Water Hyacinths can be used as animal fodder.

They are easily harvested, and there is no waste - roots and all being part of the crop.

The Water Hyacinth requires lots of heat and sunshine in order to thrive, and therefore, it does not hold much promise for Canada.

### HOW ABOUT CATTAIL?

However, another very common plant here, the Cattail, has a similar ability to purify water.

Possibly it will eventually be pressed into service in colder climates, but less experimental work seems to have been done with it, than with the Water Hyacinth.

# *The triumph of beauty and good*

The seven of us grew up in the same nest.

I was number 3, and she was number 5.

Her name was Winnie, the same a my wife.

We buried our little sister in the town of Stayner. (May 21, 1981)

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Harry Walker

**WILDLIFE**

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The flowering crab apple tree, which she gave to her mother, one

Mother's Day, was in bloom.

Having hope that God can salvage from this world all that is good and beautiful, it was not nearly such a sad occasion as what I had thought it would be.



June 5/81

# Travels with groundhog friend

While in Ontario recently, I went for a walk in the country, and came upon a groundhog's hole.

It was obviously still in use, for there was considerable evidence of activity around it, including some very distinct footprints in the soft mound of earth at its entrance.

Immediately beside the mound of earth, was a beautiful clump of white trilliums; and, a well travelled runway ran right beside them.

As the groundhog travelled along his runway, his back must have brushed against these trilliums, which were most decidedly the lushest piece of vegetation anywhere nearby.

Yet, not a leaf, nor a stem, nor a flower, had been nibbled upon, neither had any of them been trampled upon.

## LIKE OR DETEST

It would almost seem as though the groundhog appreciated having this lovely bouquet at his doorstep.

However, if we cannot attribute such aesthetic taste to a groundhog then we must conclude that his physical sense of taste is such that he does not appreciate the trillium.

Now, talking about physical sense of taste, a groundhog's seems to be very similar to that of a cow's.

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Both eat grass, and both are very fond of clover.

But, when it comes to trilliums, there seems to be a distinct difference; and this brings me to another story.

## TRILLIUM EATING COWS

My Uncle Les was interested in wildflowers. He farmed for many years, and on his farm were two woodlots in which many trilliums grew.

He told me, that when cows were allowed to wander through the woods, they would go out of their way to eat every trillium that they happened upon.

He figured, that although people were admonished not to pick these wildflowers, cows were much harder on them than were the flower-pickers.

The white trillium, or white lily, is the floral emblem of Ontario and although we do not have it here in New Brunswick, we do have a very closely related species -- the painted trillium -- which is in bloom at the present time.

## ALL IN THREES

The trilliums have everything in

threes. First there are three petals on their flowers.

Below these petals are three long, pointed, green sepals spaced midway between the petals.

Again, below these, and after a short piece of stem, are three symmetrical green leaves. All of which is mounted on a stem about a foot long.

In the case of the painted trillium, the flower petals are mostly white, with a roughly triangular red patch at their base.

Two other species of trillium are also found in New Brunswick. These are the red trillium, or wakerobin; and the nodding trillium.

The flowers of the wakerobin are a dark, perhaps purplish shade of red. The flowers are attractive, but their odour is somewhat disagreeable.

The flowers of the nodding trillium are usually white, but occasionally pink. They hang downward, instead of facing upwards like other trilliums.

The trilliums belong to the lily family, as do our domestic tulips and hyacinths.

The trilliums are perennials and each plant bears only one flower.

If this flower is picked the plant dies but if it is left unpicked it will bloom year after year.

June 12/81

# Orioles, Tanagers on wing

At this time of year, when birds are very much in evidence; more reports of unusual bird sightings are received. Some of these follow:

Baltimore Orioles seem to be here in greater numbers than usual. These brightly coloured, black and orange birds, are especially fond of tent caterpillars. Therefore there is an abundant food supply for them this year.

Its cousin, the Orchard Oriole, has also made an appearance in Newcastle.

Jackie King reported one at her place in the latter part of May. This species is more southern than is the former; and, to my knowledge, has never been recorded on the Miramichi before.

According to W. Austin Squire's book, **The Birds of New Brunswick**, which was published in 1976, the Orchard Oriole has never been known to nest in this province, and has only been recorded here on 13 occasions - always in the southern part of the province.

Scarlet Tanagers have been reported from three widely separated points. Marie Brophy saw two of them at Howard in late May, Rick Wedge saw one back of Douglastown on May 29, and another was seen up the Little Southwest, above Halcomb on May 30.

Talk about protective colouration: this term applies exclusively to the female of this species. (At least this is the case in the spring of the year).

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Her drab shade of yellowish green makes her blend in well with the surrounding forest where she makes her home.

She is seldom spotted by anyone, and draws little comment if she is. In contrast, her mate's flaming colours make him stand out very conspicuously.

### HERE BUT HIDDEN

The Scarlet Tanager arrives here at the time the leaves are opening up on the trees, and even the male is hidden from view much of the time by the foliage.

In late summer, he loses his scarlet coat. Although he retains his black wings and tail, he otherwise assumes the same garb as the female.

All the young resemble their mother, and the following spring the young males acquire their first red coat. However, this coat will not be as bright as it will be in subsequent years.

Scarlet Tanagers are far more commonly reported during migration in late May, than they are at any other time of the year. However, some of them do nest in our area.

Another red bird, and one that is even rarer than the Scarlet Tanager, is in the news. Ron Morrison of Newcastle saw a pair

of them on McCallum Street on June 2.

### CARDINAL PAIR

This is the first time that a pair of Cardinals have been reported here. A few scattered individuals have been seen before, but not a pair.

They have never been known to nest anywhere in our province. Perhaps this pair will nest here.

Another rare bird, the Connecticut Warbler was reported near Douglastown by Rick Wedge, on May 27; and out at Point Aux Carr, a pair of Red-necked Grebes were seen swimming near shore. Robie W. Tufts makes this interesting observation about the Red-necked Grebe -- "An expert in underwater manoeuvres, it can dive in a leisurely manner, or hastily in a flash, or merely sink slowly in a sitting position, depending apparently upon impulse."

### CUCKOO AT CARR

Also, out at Point aux Carr was a Black-billed Cuckoo. It, like the Oriole, has a special liking for hairy caterpillars.

All other species of N.B. birds have little appetite for these bristly creatures.

Finally, a Glossy Ibis, which had apparently overshot its destination during spring migration, ended up in Strawberry Marsh; and was seen there on May 25.



# Great bird survey

On Saturday morning, June 6, my wife and I rose at 3:45 a.m. in preparation for our annual Red Bank song bird survey.

We have been running this same survey for the past eight years. This survey covers a route that starts at Richard Connors farm, Boom road.

From here, it proceeds through Sunny Corner, Red Bank, Warwick, Quarryville, White Rapids and Gray Rapids, and ends up in the bush, two miles south of Becket Brook.

The route is 25 miles long; and, along this route, 50 stops are made during a 3 minute period at each stop, all birds that can be identified by sight or sound, are recorded.

I count, while Winnie records. Birds between stops are not counted.

Weather observations are made at the beginning and end, and at each tenth stop in between; for the weather will affect bird activity as well as one's ability to hear them.

Strong winds are especially troublesome in this latter regard. This is doubly true if one is standing near a clump of poplar trees.

Poplars are very noisy trees. The survey starts at exactly one half hour before sunrise (4:58 a.m.), and ends between 9:00 and 9:30 a.m.

It is always run in the month of June, when the birds are singing at their best.

## WARBLERS 32

Now, here are the birds recorded

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on our latest survey, in order of decreasing abundance:

Robins 59, Bank Swallows 36, Starlings 34, Tennessee Warblers 32, Crows 31, Ovenbirds 30, Barn Swallows 27, Chipping Sparrows 26, White-Throated Sparrows 24, Magnolia Warblers 21, Bobolinks 21, Veerys 20, Alder Flycatchers 17, Tree Swallows 17, Cedar waxwings 17, Yellowthroats 17, Cowbirds 17.

Redstarts 16, Myrtle Warblers 13, Blue Jays 12, Red-eyed Vireos 12, Yellow Warblers 12, Northern Waterthrushes 10, House Sparrows 10, Rose-breasted Grosbeaks 9, Song Sparrows 8, Cliff Swallows 6, Nashville Warblers 6, Canada Warblers 6, Grackles (Blackbirds) 6, Evening Grosbeaks 6, Purple Finches 6, Goldfinches 6, Lincoln's Sparrows 6.

Swainson's Thrushes 5, Wilson's Warblers 5, Pine Siskins 5, Spotted Sandpipers 4, Ravens 4.

Herring Gulls 3, Yellow-bellied Sapsuckers 3, Kingbirds 3, Yellow-bellied Flycatchers 3, Winter Wrens 3, Ruby-crowned Kinglets 3, Parula Warblers 3, Common Mergansers 3.

## TWO CHICKADEES

Black-capped chickadees 2, Warbling Vireos 2, Black and White Warblers 2, Cape May Warblers 2, Black-Throated Green

Warblers 2, Chestnut-sided Warblers 2, Bay-breasted Warblers 2.

Common Loon 1, Wilson's Snipe 1, Great Black-backed Gull 1, Belted kingfisher 1, Least Flycatcher 1, Catbird 1, Wood Thrush 1, Hermit Thrush 1, Blackburnian Warbler 1, Baltimore Oriole 1, Savannah Sparrow 1, Slate-coloured Junco 1.

There are 66 species, and 674 individuals in the above list, for an average of 13.5 birds per stop.

This survey is not guaranteed to have no mistakes in it, but it does give a reasonably good sampling of the birds along the route.

Any mistakes in identification are likely to be between closely related species.

For example, if a group of Tree Swallows or Bank Swallows fly overhead, it may be difficult to say which of the two species they are of, especially if it is in the half dawn.

If they happen to call out, then they are easily separated, for their voices are quite distinct. But, if they do not call out, then they may only be identified by inference.

For instance, if they are flying low and erratically about a human habitation, they are likely to be Tree Swallows.

On the other hand, if they are near a steep river bank or a gravel pit, they are more likely to be Bank Swallows.

I will be away on vacation; and therefore, there will be no Wildlife column for the next two weeks.

July 24/81

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## ***Triticale- cereal of the future***

For breakfast my wife served triticale porridge (pronounced triti-kay-lee)

If this is the first time that you have heard of triticale, it is not likely to be the last time. Triticale seems destined to take its place alongside wheat, oats, and barley, as one of the world's basic cereal grains.

Why? Because triticale, in the brief period since it has come into being, has proved itself to be a champion in a number of respects.

It is highly nutritious, and is also a very hardy plant. It will grow in poor soil, will stand up well under extreme changes in the weather and is resistant to disease.

Although triticale was originally developed by crossing wheat and rye, it is higher in food value than either of these, its protein content being superior in both quantity and quality. Also, most of the B-vitamins are present in greater quantity than is the case with either wheat or rye.

### **REPLACES MEAT**

This high nutritional value of triticale is especially important in parts of the world where meat is too scarce or too expensive to buy.

If the world population continues to grow, and if we continue to bury our best farmland under concrete, then continually more of the world population is likely to find itself in this same situation.

As Frances Moore Lappe points out in her book **Diet for a Small Planet**, a cow must consume 21 pounds of vegetable protein in order to produce 1 pound of beef protein.

Therefore, by utilizing directly the vegetable protein, a far greater world population can be fed. For this purpose she advocates the use of high protein crops such as soya beans and sunflower seeds.

Early efforts to cross wheat and rye resulted in plants that produced only sterile seeds. But, in 1954, the university of Manitoba went to work on the project. In 1965, they were joined by the International Maize and Wheat Improvement Centre in Mexico.

Success was eventually achieved after much research work. In 1974 triticale was being grown in over 50 countries, and for the past few years has been grown on a commercial basis.



## BISCUIT TREAT

Biscuits made from tritcale are now appearing in some of the super markets but, products made from tritcale are more likely to be found in the Natural Food Stores or Health Food Stores.

When I checked with our regional Agricultural representative, Mr. Lunnie, he said tritcale had not, as yet, been grown in New Brunswick.

He said it is planted in the fall like rye and fall wheat; and it yields about the same, in bushels per acre, as does wheat.

Unlike rye, tritcale can be fed to pigs. (Ergot, a fungus that infects a number of grains and grasses, is especially prevalent in rye, and this is poisonous to the pigs).

According to the literature, tritcale has a unique nut-like flavour, all its own, but is more nearly the flavour of rye than of wheat.

The tritcale porridge mentioned earlier, tastes very much like Red River Cereal.

In the cupboard is a box of tritcale biscuits. They are tasty, but it is not apparent that they are made from any new cereal.

July 7/81

## Hooded warbler

# Yeah, Yeah NB from Scarborough tops

"Yeah, Yeah New Brunswick" was the way that I was greeted one morning while on vacation in Ontario.

This salutation, in itself, might not be particularly unusual, except that it came from the tree-tops.

Naturally I was quite curious to find out who could be calling-out to me in this way, I searched through the branches, with my binoculars; and, at last I found him, a little Hooded Warbler, a bird that I had never seen before.

At the time I was taking a walk in one of the ravines of the Rouge River system in Scarborough. These ravines are still in a suprisingly wild state considering that the city has grown up all around them; and I spent considerable time exploring them, while visiting near by. They were an excellent place to look for birds, and it was also the prime time of the year - June.

Two other species, that were new to me, and which were seen in these ravines were the Yellow-billed Cuckoo and the Field Sparrow.

The yellow lower mandible of the cuckoo was clearly seen, thus distinguishing it from its more northerly cousin - the black-billed Cuckoo.

The greater amount of white on the tips of the Yellow-bill's tail feathers is another distinguishing mark. (I know what some of you are thinking - "You've got to be cuckoo to be inerested in such piddling little differences")

The Field Sparrow was in an area where the ravine widened and had been cleared for a field, but which had now been abandoned. The field had become dotted with small shrubs, and riddled with groundhog holes.

This bird was hard to locate. It would call from one side of the field; and, when I would get over there, it would call from the other side. This game of leap-frog continued for some time, but at last my persistence was rewarded.

The field Sparrow is rare in New Brunswick and, suprisingly, although its nesting area is well to the south of us, most reports for this province, are for fall and winter.

Margaret Whaton of Newcastle had one coming to her bird feeder

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last fall for a while, but I missed it. This was just shortly before our Christmas bird count.

Other birds that were fairly common in the Rouge River ravines were the Cardinal, Baltimore Oriole, and the Indigo Bunting.

During the latter part of my vacation I recorded another first. This was in an area of grassland near Brechin, east of Lake Simcoe. This area has been stripped of trees and is now used only for grazing cattle or ranching. It is probably quite similar to the original prairies. Here were a number of Upland Plovers (or Upland Sandpipers).

According to the literature, the Upland Plover originally inhabited the western prairies; and, at one time, were close to extinction due to over-hunting and destruction of habitat.

In recent years they have been making a slight comeback, and have extended their range east into suitable habitat. Their population is still scattered and local, and I felt privileged to have happened upon them.

Now, to get back to the first mentioned species - the Hooded Warbler. It is primarily a yellow bird, with a black hood that runs back across the top of the head, then tapers to a very narrow band that runs down the side of the neck, back of the ear, and then expands again to cover the throat and chin.

Even at Scarborough, it was at the extreme northern limit of its range. According to **Birds of New Brunswick**, the Hooded Warbler has been recorded only once in New Brunswick - that was in 1945.

I am wondering if this could have been the same bird that greeted me in Scarborough. I have read up on the Hooded Warbler, from several of my bird books. None of them say that this warbler says "Yeah Yeah New Brunswick".

I must therefore conclude that this was a special greeting for me. How that bird knew that I was from New Brunswick I'll never know.



# Cricket is nature's thermometer

The lazy sounds of August are heard once more. The fast tempo of spring and early summer is gone. All nature seems to have suddenly resigned itself to fate. Back in June and July, it was the

songs of birds that dominated nature's orchestra; but now these vocal artists are quiet, while the background music provided by insects rises in volume.

Now it is the violinists and other instrumentalists that have their day. The birds which sang with such enthusiasm earlier, now merely chirps and twitters, but grasshoppers, crickets, and cicadas come to the fore.

Occasionally a lone tree-frog pipes a few notes, but when none of his kindred join in with him, he soon lapses into silence again.

In evening, instead of hearing a chorus of frogs, and the long trill of the toad; it is the raspy music of katydids that we hear. These are the sounds of August.

## Nature's orchestra

Now let's introduce some of the instrumentalists.

The common short-horned grasshoppers produce their sounds by rubbing the inner surface of the hind leg, which is equipped with a row of tiny spines, against the outer surface of the front wing.

There are many species of short-horned grasshoppers and each species produces a distinctive sound. Also, some species can produce more than one type of sound.

The males do most of the singing, and this is done to attract mates but, in some species, the females also make some softer noises.

## Hum of hoppers

When we walk through a field of long grass at this time of year, most of the hum is produced by grasshoppers.

The crickets and katydids produce their notes by rubbing their two front wings together.

In the case of the cricket, his chirp is produced when the upper part of one front wing is rubbed against the lower edge of the other.

Granted, it is difficult to imagine how this action can result in the sound that we hear.

## Temp-a-chirp

The temperature affects the rate at which all insects sing. One authority has worked out a formula for calculating the temperature from the rate at which one particular species of cricket sings.

The temperature in degrees Fahrenheit is roughly equal to (the number of chirps per minute divided by four) plus 40.

Similar formulas have been worked out for katydids' songs.

Now for cicadas: their musical instrument consists of two drum-like organs on the abdomen. Over

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each of these a membrane is stretched, and when this vibrates it produces the sound that we hear.

The cicadas' long siren-like buzz can be heard in the hottest part of the day, its buzz rising to a peak and then tapering off towards the end. You always hear these little sirens when you are out picking berries.

Cicadas are also known as harvest flies, and they look much like very large flies, being one to two inches in length.

# Ross's gulls not alone in liking Churchill

Aug. 21/81

The following incident shows how our question can sometimes be answered in very unexpected ways.

One day last week I came upon an article in the Financial Post called Polar Bear Paradise by Fred Bruemmer. This article described how Churchill, Manitoba had become a very popular place for naturalists, the chief attractions being the bears, white whales, and the birds of many kinds.

It also noted that three pairs of Ross's Gulls were found nesting there last summer. This was the first time that this species had ever been known to nest in North America.

Before this, it had been known to nest only in the remotest regions of Northern Siberia.

When I read of this discovery I immediately thought this was an item for my column. But, before passing it on, I hoped to have this question answered, "Has the Ross's Gull returned this summer"?

My answer to this question came about three days later, in the following way.

Miss Lori Crocker, assistant minister at Newcastle United church, came to our door with a friend of hers, Anne Faraway. Miss Faraway was a bird watcher, and she had just come from Churchill where she had been employed by the World Wildlife Service.

## Quick answer

What was her job?

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Watching and guarding the Ross's Gulls and their nests.

Miss Faraway says that four pairs of these gulls nested at Churchill this summer.

She described the Ross's gull as being small, about the size of the Common Tern (or Pit-gar, as some Miramichiers call them); and, as having a wedge shaped tail, red legs, a black band about its neck and rosy pink underparts.

Miss Faraway originally came from Australia, but is now attending university in Toronto, where she is studying Environmental Planning.

Since coming to this country, her life-list of Canadian birds, seen and identified, has reached the 374 mark. (The total number of species ever recorded in Canada, up to the end of 1963, was 518).

## Double mosquitoes

One creature that is found in abundance at Churchill, and which is not popular with either naturalists or anyone else, is the mosquito.

Their population density was once said to be five million per acre, but Miss Faraway says there were 10 million per acre this year.

Despite this hazard, the area still attracts naturalists. Being on the tree line, as well as on the coast,

Churchill is home to birds of the tundra, birds of the boreal forest, and birds of the coast.

News of the Ross's Gull nesting here has brought even more bird watchers. They have come from all over North America, and even from Europe.

## More polars than anywhere

Now for polar bears: surveys carried out by the Canadian Wildlife Service indicate, that at certain times of the year, there are several hundred of them to be found along the hundred mile stretch of coast between the Churchill and Nelson Rivers.

This is the highest concentration of polar bears to be found in the world.

White Whales: according to Fred Bruemmer's article, one of their favourite gathering places is the Churchill River; and here they congregate in pods that often exceed 1,000 individuals.

One characteristic of these whales that makes them so fascinating to humans, is the great variety of sounds that they make, sounds that vary greatly in intensity, pitch, and quality. For this reason, old sailors nicknamed them Sea Canaries.

Some of you may recall that a Trout Brook man, Steven Daniels, spent a summer at Churchill, while taking part in a study of the Arctic Tern. Some of the findings of this study were reported in this column about a year and a half ago.



# Rare sightings reported

Reports of unusual finds or sightings have been coming in during the summer. Some have been of an extremely rare nature. Here are a few.

In early July, Gladys MacLean of Whitneyville, reported some plants that were growing behind the Glad Tidings Tabernacle in Nordin. The flowers on these plants were very much like those of a red clover, except that instead of being red, they were yellow.

I gathered a specimen, but was unable to identify it. It was thereupon pressed and sent to Prof. Hal Hinds of U.N.B. Here is part of his reply, "the plant you left here for me to identify is indeed *Anthyllis Vulneraria* or Lady's Fingers. It is introduced from southern Europe and has an old herbal usage as a vulnerary or astrigent. It was collected in the same area by Pat Roberts Picette in 1967 and without knowing this I collected it in 1977 at the old mill site just before the tabernacle. Incidentally the large purple clematis *Clematis verticillatus* occurs on the rocky ledges near there."

Not knowing what vulnerary or astrigent meant I consulted a dictionary and obtained these definitions.

Vulnerary - remedy for the healing of wounds.

Astrigent - a substance used to contract the bodily tissues and check discharge, as of blood from a wound: opposite of laxative.

## Pelican at Miscou

A white pelican recently visited Miscou Island. It was seen at close range by a number of bird watchers, some of whom had travelled from the south side of the province in order to see it. Whether or not it is still there I do not know.

According to *Birds of New Brunswick* there have been only four reports of this pelican having been seen in New Brunswick before this.

All four were shot between 1860 and 1900, and all were in the south of the province. It is a huge bird with a wing-spread of nine feet; and before indiscriminate hunting greatly reduced its numbers, it ranged over a much larger area than it does today. Its range, however, was always much to the south and west of our province.

## Doaktown swan

From Mercury Island, near Doaktown, comes a report of another large white bird - this time, a swan. Marge Brown says

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it flew along the river there one day last week (about the middle of August).

Referring again to *Birds of New Brunswick*: the Whistling Swan has been extremely rare in this province in recent years. Apparently it was more common in pioneer days, and was occasionally seen in flocks of geese.

## Bald eagle sightings

Marge and Page Brown also report they sometimes see a Bald Eagle along this same stretch of river at Mercury Island. And Rick

Wedge of Douglastown makes a similar report. He says he saw a Bald Eagle between Doaktown and Blackville while he was canoeing the river this spring.

## Brown skunk

A brown skunk has been seen by a number of cottagers at East Point. These sightings have been only about one half mile from Bob Currie's cottage where a brown skunk was seen last year.

Sept 4/81

# Tiger beetles like sun

These strange insects were plentiful on Mercury island.

As we walked along the footpath which crossed the island, they would fly up in front of us, then alight a little farther on.

When on the ground, they would run very quickly, then stop abruptly; and, when doing so they reminded me of spiders. But, of course, spiders do not fly.

Mercury Island is made up of gravel and sand and most of it is covered with low sparse vegetation. There are small bare areas completely devoid of vegetation, and it was in such areas that these insects congregated.

## Enjoy the heat

It was a hot sunny day, and so the sand was hot and dry, but the insects apparently enjoyed the heat.

The insects would not allow us to approach close enough to get a proper look at them, so we were puzzled as to what they were.

In order to solve this mystery, we had to catch one. This, at first, did not appear easy, for they were exceptionally wary and agile. However, my two companions, Margaret Brown and my wife Winnie, were the engineers that solved this problem.

Our first attempt at capturing them, was to try to throw a fine mesh fish net over them, but this proved futile. Trying to swat them with a fly swatter proved equally futile.

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However, it was observed that there were patches in the sand that were full of little holes, and occasionally an insect would disappear into one of them. They even seemed to bury themselves in the sand without going into any hole at all. Two were thereupon captured by simply scooping up some sand in an old jam jar.

It was now apparent that these insects belonged to the beetle family for their front wings were hard stiff casings that met in a straight line down the middle of the back.

These front wings are not used in flight, but are simply a protective sheath to cover the hind or flight wings when the latter are not in use.

The hard front wings also protect the soft hind parts of the body. It is from these wings that the beetles drive their scientific name Coleoptera -- this name coming from two Greek words meaning "a sheath" and "wings".

## Getting close look

The two captured beetles were examined with a hard lens. Their bodies were about one half inch in length, and their legs were almost as long as their bodies. Their two antennae were about half this length.

Their backs were brown and their front wings were also brown, but with a light sand coloured pattern on them.

Their undersides and legs were of an iridescent bluish or greenish colour, and there was a small patch of iridescent bronze on their sides.

They had two black beady eyes

that bulged out like those of a frog. They had a scattered growth of white hairs on the body and legs. They also possessed what looked like a strong pair of jaws.

## Now for a name

Using A Field Guide to the Insects by Donald J. Borror and Richard E. White, the captured beetles were identified as Tiger Beetles.

There are about 130 species of Tiger Beetles in North America, and just which species this was, was not determined.

However, since there are several hundred thousand different kinds of insects in the world, and since there are about 28,600 species of beetles, of all kinds, in North America, identifying these two beetles as Tiger Beetles, was narrowing the field considerably.

## Helpers to us

Tiger Beetles are beneficial to man for they eat other insects, grubs, and caterpillars. The larva of the tiger beetle is also a flesh eater.

Instead of running down its victims as the adult does, it rests at the mouth of its burrow ready to grab any passing insect.

The beetles in the jar became quite inactive when the temperature dropped in the evening, and only became active again after the jar had been placed in the sun long enough to get heated up again. When they dug into the sand, the sand would fly out behind them like it does from a dog digging in the sand.

It was on August 22 that we collected these beetles, and the Browns said they had only recently appeared on the island, apparently having only now developed from the larva into the adult stage.

Mercury Island is in the main Southwest Miramichi between Doaktown and Blackville.



Sept 11/81

# Province picks friendly, unpretentious bird

By now, many of you have no doubt learned that the Black-capped Chickadee has been selected as our provincial bird.

In the last round of balloting, there were four candidates still in the running: the Black-capped Chickadee, the Gray Jay (or Moose Bird), the White-throated Sparrow (or Old Tom Peabody), and the Robin. Apparently, the chickadee won by a wide margin.

Although I personally voted for the White-throated Sparrow; I, nonetheless, feel that the chickadee was a good choice.

I am pleased that we selected a friendly, unpretentious little bird, rather than something like the Great Horned Owl, that Alberta selected.

The Black-capped Chickadee stays with us all year round, and seems to enjoy the winter equally as well as the summer.

Even on the coldest days, his bouncy flight and cheery call, give the impression that he is bubbling over with enthusiasm.

## Rare robin

Here is a rare one -- a white robin with a red breast. It was photographed last June, at Cecil Hamilton's place, near the end of the Acadia Road, in Halcolm. The photographer was Leslie Somers, minister of the Little South West Baptist Church, in Silikers. He has several shots of it, some taken from opposite sides of the bird.

All indicate it was entirely white, except for the breast, which was the normal red colour.

At the time that these pictures were taken, it was building its nest, along with a normally coloured mate. However, this bird was not seen again after the day in which the pictures were taken.

## White raven

Now here is another rare bird of the same sort -- a pure white raven. It was seen by Jim and Terry Christie, of base Chatham, while on a trip to Cape Breton.

The Christies were also one of three parties that returned from Cape Breton with reports of Bald Eagles. The others were Ken

Daniels and Philip Anson.

Florent Lannan also reported seeing one of these huge brown birds, with the white head and tail, near Boiestown.

## Cleavers coffee

This tip comes from Gladys MacLean of Whitneyville. She has discovered that the seeds from the Cleavers makes a good coffee substitute. She says that this coffee is closer to the true coffee flavour than any other substitute that she has tasted.

Cleavers is a member of the Bedstraw or Madder family. It has a square stem, and has whorls of

leaves (usually in 8's) spaced at intervals along the stem.

It cannot stand on its own but reclines on other weeds or bushes. For this purpose, it is equipped with tiny hooks along the stem and on the underside of the leaf veins.

With these hooks it will cling, or cleave, to you, hence its name. It has small inconspicuous white flowers, and is found in the old fields, in openings in the bush, or along stream banks.

## Naturalists to meet

A meeting of the Miramichi Naturalist Club will be held on Wed. Sept. 16 at 8:00 p.m., in the

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Miramichi Valley High School, Newcastle.

At this meeting, coloured slides of wildflowers, birds, animals, fungi, etc., of the Miramichi will be shown.

These slides were taken by my sons, Lyle and Ian, and were earlier scheduled for showing at our May meeting which was cancelled.

All are welcome.

Sept 18/81

# Canada lags in biotech research

Biotechnology is defined as the utilization of a biological process, be it microbial, plant or animal cells, or their constituents to provide goods and services.

According to this definition biotechnology is not new. Yeasts, which are really tiny one-celled plants, are utilized in the production of breads and alcoholic drinks.

Other micro-organisms are used to convert milk into yogurt. Also, bacteria are used to break down human wastes in a septic tank.

So, we have long used biological processes to provide goods and services.

However, recent advances in the biological sciences, has brought us to the verge of a new age where the application of such processes may be dramatically extended.

On June 10, 1980, the Minister of State for Science and Technology, the Honourable John Roberts, announced the establishment of a Task Force on Biotechnology.

In so doing the Minister said "biotechnology held an enormous development potential and that it was essential that Canada take full advantage of the opportunities presented."

The report of this task force is now out. It continually emphasizes that Canada is lagging behind the rest of the world in research in this field. Unless we take immediate steps to change this, our economy will be in jeopardy.

The report says it is only in about another 10 years time that the impact of this new technology is expected to be felt in industry.

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The report acknowledges that Canadian scientists are contributing to the recent advances in the understanding of the biological processes involved. But, Canadian industry has shown little interest in pursuing the commercial opportunities offered by them.

The report says in addition to providing means for the development of new products, this new technology also offers new pathways for the production of old ones.

Some of the advantages of biotechnological processes over conventional ones are that they require less energy; are generally less polluting; and, in treatment of wastes, can result in the production of useful by-products such as feedstuffs or environmentally acceptable fertilizers.

It is said that bacteria, yeasts, fungi, and plant or animal cells, can be used to accomplish complex transformations which, when brought about by conventional chemical processes are extremely costly, time consuming and inefficient.

Some biotechnological techniques that offer much promise to industry are:

Genetic engineering whereby the properties of micro-organisms are changed so that they in turn can be utilized to bring about desired changes in other substances such as

those involved in fermentation.

Fused cell techniques whereby two plant cells can be fused together to result in hybrid plants.

It is envisioned, that by using these techniques, new plants may ultimately be developed that will exhibit more advantageous characteristics such as faster growth, greater disease and climatic resistance, atmospheric nitrogen fixing capabilities, etc.

These, and other biotechnological techniques may revolutionize agriculture and forestry.

They are also likely to bring about important changes in the production of chemicals, drugs, and pest-control agents.

They may hold the secret to the development of alternate fuels to replace oil and gas. Using microbial cultures, large scale production of single-cell protein for animal feeds is just beginning.

In the field of mining, bacterial leaching of copper and uranium from their ores is now being practised at some mines, particularly in warmer climates.

Through genetic engineering, it may be possible to extend this type of mining to the treatment of other ores such as nickel and zinc, or to improve it so that it will work more effectively in colder climates.

The possibility of leaching metal concentrates is also being explored.

If such innovations are successful, they will greatly reduce the amount of energy required for mining and smelting, while at the same time helping to alleviate the acid rain problem.



Sept. 25/81

# Insect miracles common

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When Mrs. Ann Powers delivered the large green hairless caterpillar to me, she said she thought it was the larva of a Hawk Moth.

She also said it had been a brighter green on the previous day, but now it seemed to be changing colour.

Since I was busy at the time, I took the box, containing the caterpillar to the basement, where I placed an old screen window over the top of it, then left it until the following day.

When I next looked into the box, the caterpillar could not be found. In its place was a dark brown pupa that had no resemblance to it. Beside the pupa was a thin, crumpled up caterpillar skin.

The transformation was incredible, yet such miracles are so com-



monplace in the insect world that we take them for granted.

The caterpillar was no ordinary one for it was exceptionally large, one of the largest that I had ever seen.

Though mostly green, it had a white pattern along the sides, and also a string of tiny yellowish-brown dots along each side.

## Reminded of tomato worms

It reminded me of the Tomato Horn Worms that were commonly found on tomato plants in southern Ontario, but which I have never seen here in New Brunswick.

As a boy I remember these tomato worms very clearly for they had a frightful habit that quite impressed me, and this was frequently observed when one was picking tomatoes.

When disturbed, the worms would let go of the tomato plant with their front legs, while still holding onto it with their back legs (or possibly it was vice versa).

Now dangling from the plant, they would swing back and forth like a pendulum, while at the same time uttering a hissing sound.

## Startling noise

This strange antic must have been designed to scare off certain predators or parasites, and it could startle anyone who happened to be picking the tomatoes.

This was often the first indication there were any worms present -- their green colouration making them blend in well with the tomato vines.

Although called worms, these tomato horn worms are really hairless caterpillars that later turn into a species of Hawk Moth, or Sphinx Moth.

Of all the caterpillars I have met, these are the only ones I can recall as ever uttering any sound.

The Tobacco Worm is the larva of another species of Hawk Moth.

Hawk Moths have large bodies in comparison to the size of their wings, and their front wings are much larger than their hind ones.

They are strong fliers, but must beat their wings very rapidly while in flight.

They generally feed on the nectar from flower, some species hovering in the air like hummingbirds, and some even being able to fly backwards. Most are nocturnal but some species are active during the day.

## Ten inch sucking tube

There are about 900 species of Hawk Moths in the world -- the smallest having a wingspread of one and one half inches -- the largest having a wingspread of nine inches.

One species has a proboscis (or sucking tube) that is 10 inches long; but, which, when not in use, is coiled up under the head.

I have no information on the food of the Hawk Moth caterpillars found in our area.

The adult moths are not infrequently attracted to the lights at the Heath Steele mill, so the caterpillars must feed on some plant, or plants, found in our forests.

Oct. 2/81

# Grey squirrel extension includes Miramichi area

The Grey Squirrel has been gradually extending its range. It is now reported in our immediate neighbourhood.

Last year Mr. and Mrs. Stirling Burchill reported seeing one as it passed through their yard in Nelson Miramichi. It was seen only on this one occasion.

Now another one is reported in Strathadam. Marie Hare saw it in her yard on Sept. 22. On the following day, her husband Perley reported it was feeding from the chicken trough, only about six to eight feet away from him.

Both the Burchills and the Hares are familiar with the Grey Squirrel, having lived in, or visited, areas where it is common.

If anyone else has seen these squirrels I would be interested in hearing from you.

The Grey Squirrel is much larger, and has a bushier tail than the Red Squirrel. It is commonly found in two different colour phases -- the normal grey phase, and the melanistic (or black) phase.

This latter phase dominates in certain areas; and, in such places, is commonly called the Black Squirrel (though not a distinct species). A rare red phase also occurs.

On a couple of occasions I have

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hard people express the belief that if the Grey Squirrel moves into our area, it will drive the Red Squirrel out. However, there seems to be little basis for this belief.

The Red Squirrel is a more northerly species than the Grey but, the ranges of these two species overlap by several hundred miles.

My old home town of Stayner, Ontario, has a large squirrel population and here the two species live in close proximity to one another.

On one occasion, while visiting there, I counted nine squirrels within a distance of 73 paces, stepped off along the sidewalk.

There were five Blacks, one Grey and three Reds. One of the Reds was feeding within about six feet of two of the Blacks.

None of them seemed to be at all concerned with any of the others. (Incidentally, at another location in the town, a strangely coloured Grey Squirrel, with a red tail and back, was seen.)

Further on this point, A.W.F.

Banfield, in his book **The Mammals of Canada**, has this to say -- "The relationship between the grey and the smaller red squirrel is an interesting one. The red squirrel is highly territorial in behaviour and drives all intruders from its territory, including the grey squirrel. The latter species, being indifferent to the defence of territory, readily gives ground, though it is not intimidated by the incident. If food is available in the area, the grey squirrels will gather to feed there, much to the frustration of the outnumbered smaller red squirrels on whose territory the harvest lies."

The usual habitat of the Grey and Red Squirrels differ. The Grey is never found in a strictly coniferous forest. There is always a considerable mixture of large hardwoods where it is found. Also, the presence of nut trees will do much to attract it.

In my own experience I have never found it to be nearly so plentiful in rural woodlots, as it is in towns and city parks.

So, it seems certain if the Grey Squirrel does colonize the Miramichi, it will never spread much beyond the main river valleys.



# ***Cleaver seeds to cure madness now make nice cuppa***

**Harry Walker  
Wildlife:**

I was interested to read in your column that Cleavers seeds may be used as a substitute for coffee.

Here's what the botany book Britton and Brown say about the species:

**Gallum Aparine** Cleavers Goode grass or Cleaver wort.

A weak annual scrambling over bushes, stems 2-5 feet long. The stems and branches covered with bristles pointing downward (retorse). Leaves in whirls of 6-8 cupped or cuspidate at the apex, the

margins and midrib very rough. Flowers borne 1 to 3 in cymes in the upper axils. The fruits (seeds) are 2/12 to 3/12 of an inch in width. Two fruits are borne in a pair, side by side. The fruits are densely covered with short hooked or curved bristles.

N.B. to Ontario widely distributed in temperate zone as a weed. Blooms May to Sept.

The following is what my French book "Flore Laurentienne" says:

In Canada called Gaillet gratteron. In France called Gratte-cul fruit 4 to 5 mm in diameter, bristling with

tubercular hairs at the base and these hairs are hooked at their tops. Flowers during the summer. Thrives in shady sites. Naturalized from Europe and now in many sites in Quebec.

In earlier times in Europe the plant was claimed to be beneficial against madness.

See page 527 in Flore Laurentienne and page 259 in Vol. 3 of Britton and Brown. Their book (3 vols is named) "Illustrated flora of the U.S. and Canada."

**Sincerely,  
Desmond Dolan**

# Field trip <sup>Oct. 16/81</sup> Saturday

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One of the oddities of the plant world is the Witch Hazel, for I know of no other plant that blooms after it has dropped its leaves in the fall. The Witch Hazel is a shrub, similar to the alder; and, during the spring and summer, it is quite inconspicuous. But, in the fall, its straggly yellow flowers stand out on its otherwise bare branches. Now, in the hunting season, is a likely time for someone to notice one of these shrubs.

Each flower of the Witch Hazel consists of a center with four stamens and four petals, the whole being yellow. These flowers occur in clusters of three or four, the flowers in each cluster being so closely packed together that they appear to be a single flower.

The petals are very long, narrow, and crooked; and, being few in number, the whole cluster resembles a long-legged yellow spider, the petals representing the spider's legs. Even, in the winter, after the petals are gone, the hard yellow centers of the flowers remain, and are quite noticeable. These later turn into the seed pods which brings us to another peculiarity of the plant; for, when the pods pop open, they will throw their seeds as far as 20 feet.

This has given rise to the name Snapping Alder. Another colloquial name is Winter Bloom.

## Northern fringe

The Witch Hazel is rare on the Miramichi, for we are on the extreme northern fringe of its range. I have found only one specimen, and it was in the Mill Cove area. Gladys MacLean of Whitneyville reported another one growing up on the Little South-west, above Halcomb. It is most likely to be found in rocky areas, or on cliffs.

Do not confuse the Witch Hazel with the Beaked Hazelnut, which is a similar, but more common shrub in these parts. The Beaked Hazelnut bears the edible Hazelnuts which can be gathered at this time of year.

## Provincial bird

Here are some details regarding the vote on the provincial bird, as recorded by Gayl Hipperson of St. John, at the last New Brunswick Federation of Naturalists, Board of Directors Meeting.

"Ballots were run in provincial newspapers during May and the first half of June. 2238 votes were cast. Leading the polls was the Chickadee with 990 votes (44. per cent), followed at some distance by the Gray Jay with 484 (22 per cent) and the Robin with 480 (21 per cent) the White-throated Sparrow finished last with 284 votes (13 per cent). All counties were represented: York, Saint John,

# Eel worms member of very large family

Here is how Peter McGrath of Newcastle described a strang worm which he caught while fishing in the south branch of the Sevgole.

It looked like the straw out of a broom. It would be a little over a foot long, was pale yellow in colour, and was uniform in thickness throughout its entire length.

When first seen, it was mistaken for a piece of grass waving in the water; but, upon picking it up, Peter discovered that it was a worm of some kind. However, unlike most worms, it was hard and firm.

Back home, with the help of his Merit Encyclopedia, Peter was able to identify his catch to be some species of eelworm.

Although the names eelworm, threadworm, roundworm, and nematode, all seem to be used interchangeably in much of the literature, the name eelworm is also used more specifically to refer to certain species of roundworms which may be either non-parasitic, or which may be parasites in plants.

The non-parasitic forms move about in the soil or water, and feed on bacteria, algae, and one-celled animals. The plant parasites are found in many crops - vegetables, grains, flowers - where they attack roots, stems and leaves, often causing serious damage. The eggs and young of eelworms can withstand cold or dry conditions for

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long periods; warmth and moisture making them become active again.

## 3,000 Species

If we use eelworm in the broader sense to mean all roundworms, then we find that there are some 3,000 species. They vary in length from about one-fiftieth of an inch to about four feet - the vast majority being at the small end of this range. Being very thin in comparison to their length, many of them are microscopic. To be exact, the body diameter varies from a maximum of one-thirtieth to a minimum of one three hundredth of the body length.

These worms are at present almost everywhere, including the flesh of animals, and the tissues of trees. They are present in both fresh water, and salt. They are found in hot springs, and in Antarctic ice. A handful of soil may contain 1,000 of them. You and I have eaten lots of them in our food without realizing it. But although found in a wide variety of habitats, the various species are quite uniform in structure.

Although they manage to propel

themselves over short distances - by wiggling like snakes, they are mainly carried about in a passive way, by wind, water, and animals. These animals include a wide spectrum, ranging from insects to mammals.

## No Skeleton

Roundworms have no skeleton. The fact they feel hard to the touch results from the combined effect of a tough external muscular layer and the high internal pressure of the body fluids. In some cases, this pressure reaches 225 millimeters of mercury.

In the case of animal parasites, vast numbers of young must be produced in order for the species to survive; for, due to their complex life cycles, only a very few will ever reach a suitable host in which to live and develop. For example, the hair snake lays its eggs in water. These hatch into larva which must then be swallowed by some insect. After reaching maturity, these hair snakes must again return to the water in order to reproduce.

Although some roundworms are among our worst pests, others are beneficial, for they play an important role in breaking down dead animal and plant material into a form suitable for re-use in nature's cycle.

Westmorland, Kings, Victoria and Gloucester particularly strongly.

The Gray Jay was heavily favored in Victoria County, and the Robin in Gloucester, but just about everyone else was solidly behind the Chickadee. David Christie will present the Chickadee to the legislature for official recognition as New Brunswick's provincial bird."

Sara Lounsbury of Chatham tells me, that in the first round of balloting (before the field had been narrowed to the above four species) Northumberland County voted for the Gray Jay, by a small margin.

## Coyotes

Rick Larmond of Newcastle reported that he saw three coyotes on the Urquart Road, about two miles from Wayerton on Sept. 6. He figured that the trio consisted of a female and two pups, although the two pups were almost full grown.

On Sat., Oct. 17, there will be a field trip, the purpose of which will be to try to identify weeds and wild plants in and around Newcastle. If interested in attending, be at the Ritchie Wharf at 2:00 p.m.

## Naturalists

On Wed. evening Oct. 21, there will be a meeting of the Miramichi Naturalist Club, at the James M. Hill Memorial High School in Chatham. At this meeting George Cadogan will be showing a collection of coloured slides of birds, plants, etc., taken in Strawberry Marsh; and also some other slides taken in Spain.

Anyone is welcome to attend either of these activities, whether or not you belong to the Naturalist club, or not.



WEDNESDAY AUGUST 13  
LIVING RIVERS PROGRAM

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