

The

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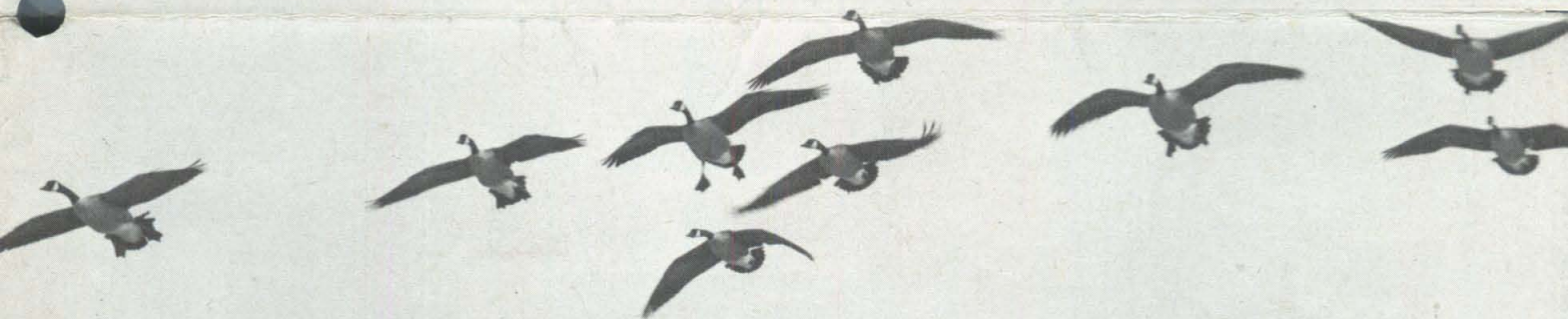


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The Living Prairie



By Yorke Edwards

Canada Geese in flight

I once believed the prairies to be a dull and empty part of Canada. I had no idea what I was talking about, for recently I walked through prairie that was wild, and beautiful, and filled with living things.

A great wildlife show is on stage every year on the prairies, and a good place to see it is in Saskatchewan at the north end of Last Moun-

tain Lake. It is the best wildlife show that I have ever seen.

The actors are mainly birds. When winter leaves the plains with their many ponds and marshes, a rush of wings sweeps north. Prairie waters are home to most of North America's waterfowl, and places like Last Mountain Lake are resting areas and gathering grounds for more birds

than most people see in a lifetime. So numerous are the birds there that the Canadian Wildlife Service sows many acres of grain about the lake to feed them, and to attract them away from the crops of nearby farmers.

One April there I was told that birds would be much more numerous

Continued next page

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A flock of Canada Geese sweeping north.

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in May, yet at any time I could stand on the open plain and see large flocks of geese, or cranes, or ducks like smudges of smoke drifting across the distant sky. There were white-fronted geese and Canada geese and Sandhill cranes in thousands. There were hundreds of snow and blue geese, mallards and pintails. There were many other kinds of ducks, white pelicans, and whistling swans. There were dancing sharp-tailed grouse, hundreds of migrating snow buntings, and horned larks were singing everywhere. The world seemed filled with wings and songs and flights of birds.

One evening I hid in a ditch along a fence, between the lake and the fields where birds were feeding. In the fading red light the geese and cranes, flock after flock, swept low

overhead, the powerful rush of their great wings filling the air as they passed. I might have stood and touched them, but I could only crouch and wonder at the endless parade.

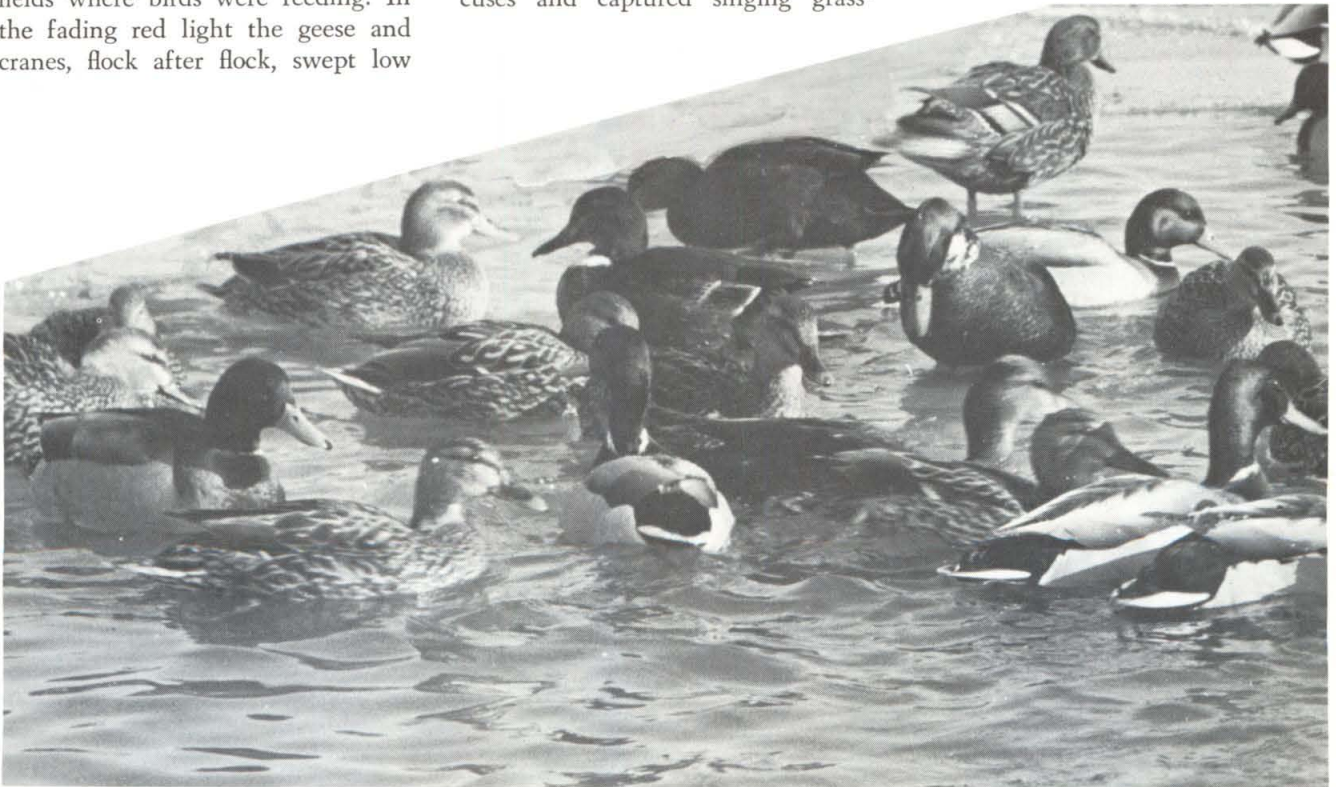
I returned in June. There were eleven kinds of ducks on the lake, and big noisy shorebirds like willets, avocets and marbled godwits along its shores. Sprague's pipits were singing their endless songs while fluttering almost invisibly overhead. There were clay-coloured sparrows and Baird's sparrows everywhere, with chestnut-collared longspurs, Swainson's hawks and black-crowned night herons.

That spring I found prairie crocuses and captured singing grass-

hoppers; I collected snail shells along the shore and at night I spied on spawning suckers; in the grey dawn I met a skunk homeward bound from a night of hunting, and I found a boulder polished by centuries of itching buffalos. This was the sea of grass, and like the sea it overflowed with life.

But it was the birds that seemed to have taken over the earth — and perhaps they had. I often wonder what they were like in 1887. That was when part of Last Mountain Lake was made a bird sanctuary, the first federal sanctuary in North America.

The end.

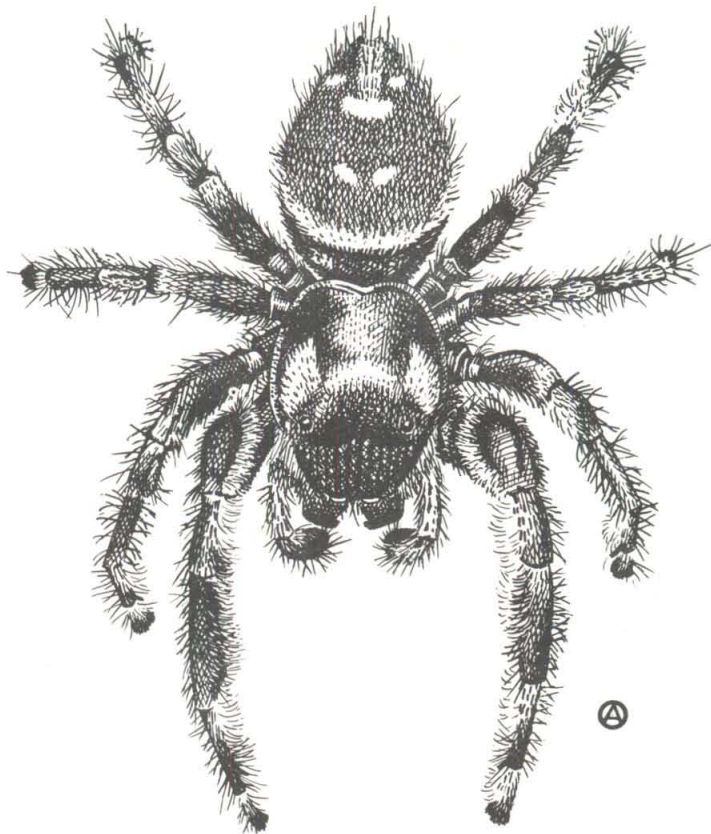


The lakes are resting places for migrating ducks.

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THE WONDERFUL WORLD OF THE SPIDER

By Russell J. Rutter



Jumping Spider

Sketch by
Anker Odum

Most of us are at least a little bit afraid of spiders. This is because we have been told that they are poisonous, and perhaps we have known someone who showed us a sore spot on their skin and said it was a "spider bite." As the spider is one of the most common animals all over the world and may be found anywhere, either indoors or outdoors, everybody should know if its poison is dangerous, if it has any harmful habits or is of any use to us, and if any part of its life history is interesting enough to be worth special attention.

It is true that all spiders have a poisonous bite and this is used to kill flies and other insects. But the amount of poison a spider is able to deliver is so small that on a human being it is not likely to be more serious than the bite of a black fly. Besides, you will be bitten by thousands of black flies before you are bitten by one spider. They are designed for killing insects, but have no instinct to bite anything else, and almost always run away and hide if they are molested.

Spiders can be a nuisance in the house by making webs in dark corners to collect dust, but these are easily

looked after, and such a small offence is more than made up for by their destruction of countless flies and other harmful insects. Outdoors they do nothing but good and add much to the scenery by hanging their delicate webs on trees and bushes where they glisten like strings of diamonds in the morning dew.

As for interesting habits, it would be hard to find any animal about which more could be said. In its built-in silk factory it is able to produce silk thread of different sizes and quality, any strand of which is stronger than steel thread of the same size; it has no wings, but by making a little sail of silk it can fly for great distances, sometimes as high as 5000 feet above the earth; it can build many kinds of traps and snares for catching insects, and when it has caught them it kills them by quickly injecting into their bodies a poison it manufactures itself; it can dig a burrow straight down into the soil and cover it with a hinged lid; it can live in a tropical jungle or in the thin air 22,000 feet above sea-level on Mount Everest; and I know it can stand a great deal of cold, because I have found one in my outdoor woodpile in winter that

seemed to be dead. but when I held it in my closed hand for just a few minutes it came to life and ran about as lively as in summer.

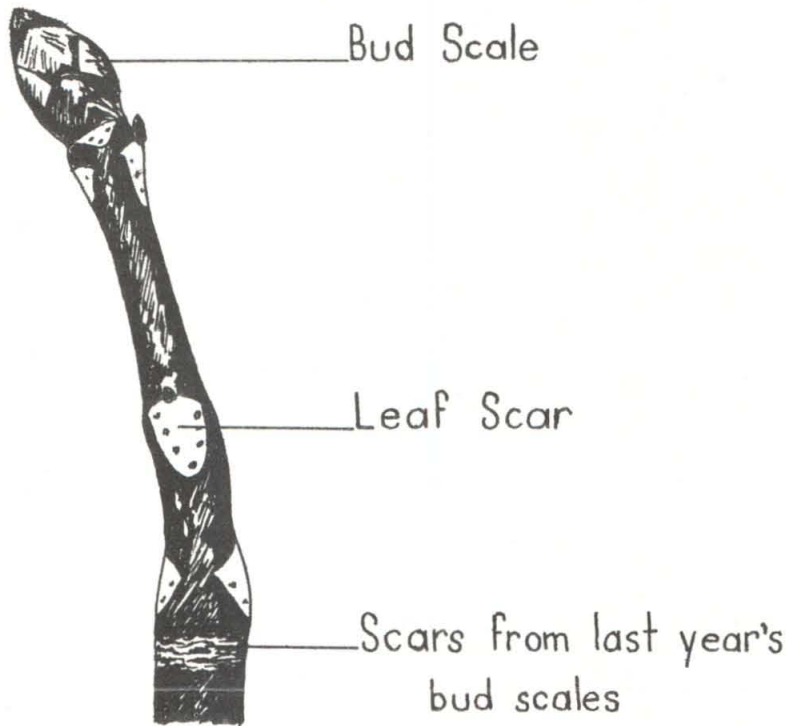
A spider is not an insect. It belongs to a group of animals called "arachnids" which includes scorpions and ticks. All spiders can make silk thread, but there are many that do not spin webs. Wolf spiders, which are very common, travel about hunting for prey just as real wolves do. When the female wolf spider lays eggs she puts them in a little sac that she makes herself and carries them with her until they hatch. Any spider that you see living on a web will be a female. Male spiders do not make permanent webs and are much smaller than females. The flower spiders are among the most beautiful. They live on flowers and are able to change their colors to match the flowers they are living on. They are also common, but you must look closely to see one.

These are just a few of the things that may be learned in the wonderful world of the spider, and I can't think of a more interesting group of animals to study.

The end

A WINTER CRADLE

By Patricia Weese



fleece you see might be called the blanket in the cradle, for it helps guard the tender shoots from outside cold. It also keeps them firmly in place and absorbs shock if the bud should be hit or pinched.

Probing carefully through the blanket will reward you with seeing the green leaves folded and tucked in their bed. There they lie in miniature, waiting for the spring sunshine to open the bud and wake them from their sleep. It is not long until they are full grown and covering the tree with fresh new growth. This new growth includes flowers: and if you are lucky, you may find a tiny undeveloped flower in the winter bud.

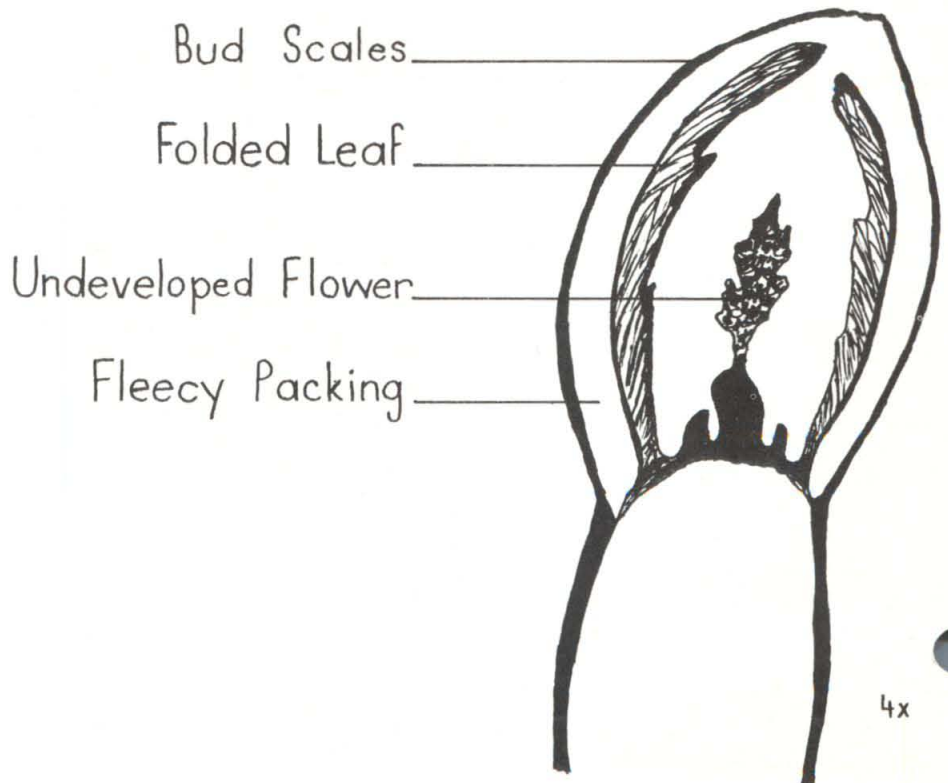
Look for winter buds on different trees in your neighbourhood. Are they all the same shape? Do they all feel sticky? On what parts of the twig can you find them? See if you can unlock some of the secrets of nature's "winter cradles".

How many times have you passed a bare tree in winter and thought how dead it looked? Don't let your eyes deceive you; for on each twig of that seemingly lifeless tree are green leaves. Nature protects them well from winter's freezing winds, so you will have to look carefully for their hiding place.

A horse chestnut tree is the best for your search. On the end of each twig you will find nature's "winter cradle". As a human's cradle contains a baby, so a tree's cradle holds young sleeping leaves.

It is made of strong overlapping scales that protect the contents from low temperatures, drying out, mechanical injury, and entry of harmful insects. Touch the scales. The sticky resin coating you feel keeps moisture from entering the bud and rotting the inside.

Ignore the resin (it can be washed off your fingers) and cut carefully through the scales. The soft white



THE SEALS OF THE ATLANTIC

By Douglas H. Pimlott



Harp Seals

March is a fascinating month on the Gulf of St. Lawrence or off the north coast of Newfoundland. It is fascinating because it is the month of the seals. At this time each year, hundreds of thousands of seals congregate among the ice floes after having completed their annual migration from the arctic seas of Canada and Greenland.

Two different species of seals are found among the ice floes; they are the harp seal and the hooded seal. The harp seal gets its name from the distinctive colour marking on the back of some of the adults. It is the common one and can be found on the pack ice in dense groups which may extend for several miles. The less common hooded seals are found only in areas where the ice is very rough. They do not seem to like company so are found scattered here and there over the ice floes.

Each winter the adult harp seals return to the area where they were born. Here they have their pups on the ice which forms on the sea during the late winter. The ice is important because the pups cannot live in the

water until they are a month old; if they are to survive, the ice must be strong enough to resist the ravages of storms and sun until at least the first or second week of April. Sometimes many die when the ice is broken up during severe storms.

From the time they are between 5 and 7 years old, female seals usually give birth to a single pup each year. The pup, which weighs about 20 pounds at birth, grows at a phenomenal rate and may weigh almost 100 pounds when it is deserted by its mother three or four weeks later. A good deal of the increased weight is in fat because seal's milk is very rich, specially designed, I guess, for a baby that has to get off to a quick start in life.

At birth the harp seals are covered by a dense, soft coat of white fur and are called "Whitecoats" by the sealers, who particularly seek them at this stage of their lives. This white fur begins to moult when the pups are about three weeks old. By the time they are ready to start swimming they are covered by a mottled coat of much stiffer fur. The Newfoundland

sealers refer to the pups as "Beaters" at this stage of their lives.

During two successive years I was on the ice for a few days in March when the seals were present. It was an exciting, interesting time for me. The first year the ice floes were broken up into relatively small pans and the pups were dotted all around the edges. When the female seals returned to feed their pups, they literally exploded from the water and landed on the ice. The next year the ice pans extended in an unbroken expanse for miles. Under these conditions, the seals kept breathing-holes open in the ice and often floated in the water with their noses bobbing up and disappearing under the water. There were often hundreds in sight at one time. It was a particularly impressive sight in the early morning or evening when the ice pinnacles, formed by pressure ridges, cast long shadows across the seemingly endless expanse of ice.

The behaviour of the adult seals to an intruder is quite variable. Most

Continued next page

frequently they flee into the water, but sometimes they are aggressive and move with surprising speed across the ice, making threatening noises as they come.

The adult seals breed soon after the pups are born. However, the fertilized egg does not implant in the uterus of the female for some time. Growth and development of the embryo are thus delayed for two or three months. This phenomenon is called "delayed implantation".

Before the sea ice finally breaks

ever, the industry moved to Nova Scotia in this century and in recent years men from Prince Edward Island and the Magdalen Islands have also taken part. After the Second World War Norway began to send ships and now has more sealers on the ice each year than Canada.

In "the old days" the seals were often spared the full impact of the sealers for at times the ships were unable to push through the ice. This does not happen very often now because many of the ships are built

they may not be acting quickly enough. Part of the reason seems to be that the sealing industry has spent a great deal of money on the ships it uses for sealing. Because of this, it does not want to reduce the kill of seals until it has earned its money back again. This is one of the sad things about the way men often behave toward animals and other things of nature. They seldom ask the question, "What will it mean to the animal?" but only "What will it mean to the amount of money we



Harp Seal

Paul Geraghty

up, all the seals, except the pups, congregate again to moult their old fur. The moult occurs very rapidly and during the process the skin of the seals becomes quite raw. When the new hair begins to grow, the seals go back into the sea. Soon after they are on their way back to arctic waters as far away as the most northerly islands in the Arctic Archipelago.

Sealing has been an important occupation for the people of Newfoundland for more than 100 years. For much of this time only Newfoundlanders were involved. How-

to break through heavy ice. In addition, when the ships do get stuck, the men are often flown to the ice floes by helicopters and small airplanes.

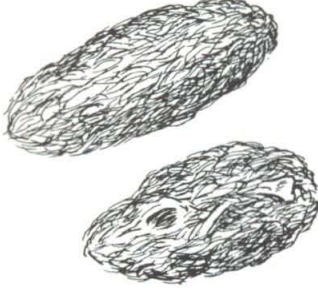
The increased efficiency of sealing has resulted in too many seals being killed. As a result, the herd that has its pups north of Newfoundland (the Front herd) is being seriously reduced in numbers. Some people fear that the seals in this area may be exterminated. Canada and Norway are trying to come to an agreement about how the kill can be reduced but

will earn?"

The future of animals such as seals was seldom given very much consideration by men even as recently as a hundred years ago. The fact that naturalists and others are thinking a lot more about such matters today is very important. It could result in changes being made in sealing, which will ensure that these interesting marine mammals will continue to make their breeding areas a fascinating place to be each year in March.


The end.

MARCH: focus on OWLS




OWL PELLETS

Not only does the finding of owl pellets indicate the presence of roosting owls and give you some idea of their numbers and kind; it also presents a unique opportunity to study in detail the owls' feeding habits and the animals upon which they have fed.




ROOSTING OWL

If you find the winter roost of Long or Short-eared Owl, the pellets you find scattered around will contain the whole story of the owls' hunting successes during the winter. The best time to find these winter roosts is in the early spring when the snow is melting.



WINTER ROOSTS

With exceptions like Snowy Owls — which live in open country, and Barn Owls — which prefer old buildings, most owls seek evergreen cover for their winter roosts. Pine plantations and shelter belts in farm country are top-of-the-list places to search.



IDENTIFICATION

For the job of identification concentrate on skulls and bones rather than fur and feathers. Compare your unknown material with the illustrations in your reference books. Use your hand lens to study the fine details of teeth etc.

Fourteen species of owls have been recorded at one time or another in Canada. Almost any area south of the arctic tree-line will have three or four kinds — their main difference being size. Generally the size of the owl's prey is somewhat in proportion to its own size. Small owls usually feed on small rodents and large insects. Owls usually eat their prey whole or if it is too big for this, in large chunks, fur, feathers and all. Since such hard parts as bones cannot be passed through the intestine, owls regurgitate the indigestible portions of their meals. In these 'pellets' sharp edges of bone are always found safely 'wrapped' in soft fur or feathers. Since owls are a largely nocturnal group — the 'night-shift' which carries on the good work done during the day by hawks, foxes and other predators that help to control our smaller mammal and bird populations — they spend their daylight hours roosting. It is during this period that they cough-up (with much neck-wriggling) their pellets.

ACTIVITY PROJECTS

YOU WILL NEED

- 1) Small bags or boxes to put pellets in.
- 2) Pair of forceps (tweezers)
- 3) A hand-lens.
- 4) A jar of water (add a little disinfectant)
- 5) A metric rule.
- 6) Your field note book.

References

Mammals of Eastern Canada by Peterson.
Mammals of the Great Lakes Region by Burt.

ACTIVITY PROJECT #1

When you have located the pellets make sure you record as much useful data as possible before you pick them up.

1. Where were the pellets found?
2. What kind of trees were used as roosts?
3. Do all pellets appear to be the same age? (Pellets bleach a lighter colour and begin to break up in their second year).
4. Are they all the same size and shape?

ACTIVITY PROJECT #2

Use your forceps or tweezers to dissect each pellet in turn. (Wetting with water will make this easier and avoid damaging delicate bones.

1. Record the contents of each pellet.
2. How many skulls?
3. How many long bones (leg)? etc.

ACTIVITY PROJECT #3

Now you can investigate for more information.

1. What species were eaten?
2. How many individuals to each pellet?
 - A. a *minimum* to each pellet.
 - B. a *maximum* per pellet.
 - C. an *average* per pellet.
3. Was the whole animal or some portion of it eaten?

EDITOR'S NOTE: This continuing series is designed to provide information and activity ideas for teachers who want to encourage their pupils to become actively involved in nature study as an exciting feature of their outdoor education program. Text by Don Baldwin, science master, Upper Canada College, sketches by Don Foxall.

Knowing Survival Rules Is Not Enough

Last fall I helped search for a deer hunter who had entered the bush the day before and failed to rejoin his companions. Flying in a helicopter we combed a tract of bush enclosing his probable whereabouts without success. Although the forest was mostly thick pines, there were many rocky openings and small marshes where a red-coated man would have been sighted quickly. But none of the openings revealed the hunter, and no smoke signal rose from among the pines, so we concluded he was either dead or disabled by illness or injury.

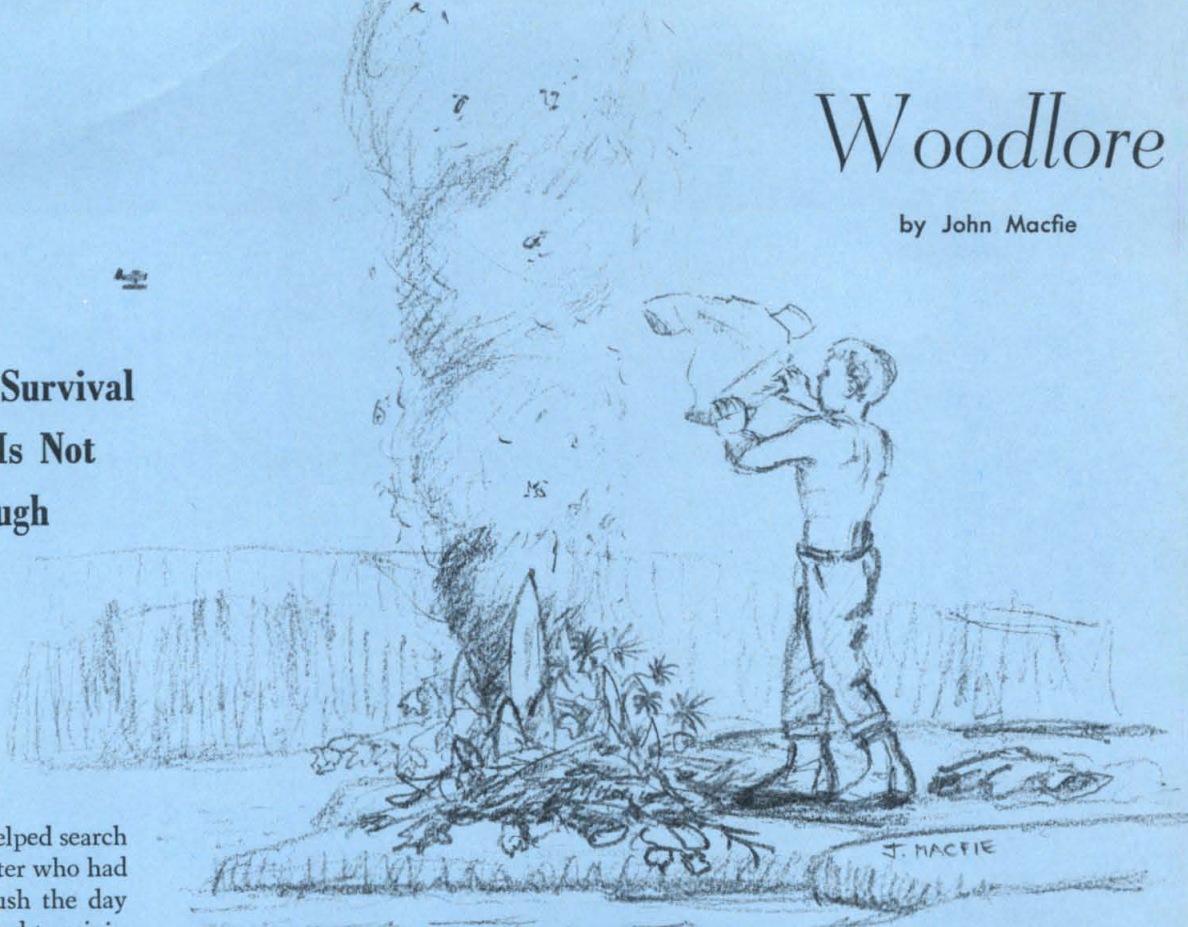
Yet it turned out he was down there somewhere, and still travelling, for on the following day some hunters chanced upon him, worn out from walking although only three miles from where he disappeared. He died on the way to hospital, evidently from exhaustion and shock.

It is likely this experienced hunter had heard the what-to-do-when-lost routine many times, and always

nodded in agreement. Yet when the chips were down panic prevailed over reason, and he broke them all. He started out with matches, compass, knife and gun, essential tools of survival, and ended up with none of them. Trains passed on two sides at frequent intervals, well within ear-shot. He got a fire going the first night, then, giving in to an understandable but unwise urge to help himself out of his predicament, left it next morning. On the second night his fire-making efforts failed. He reportedly told his rescuers he mistrusted his compass after it contradicted his opinion of where north should be. In any case, he travelled south instead of north toward the railway that was his destination.

Need I go further and state the moral of this unhappy story? Hardly, but evidently it cannot be repeated

too often. Trust your compass. If you become lost and someone who knows your general whereabouts is likely to be looking for you, find an opening in the forest, build a smoky fire and sit tight. Panic is hard to suppress at times like this (I know, having felt slight pressures of its grip) but panic is by far the most deadly threat that lurks in the forest. The margin of a lake, marsh or any opening in the forest is the best place to await rescuers. You and your signals are visible from afar, and searchers are likely to look here first. Make a hot fire and have a supply of green grass or boughs ready to pile on for white signal smoke. Three fires might draw the attention of someone who isn't even looking for you. Wave brightly coloured or white clothing, or splash calm water with a pole to attract a low-flying aircraft.



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