

**Winter
1989**



Nature Detectives

Who's been here? What were they doing and why were they doing it? When did it happen? Nature detectives try to answer questions like these by looking for clues and evidence of the activities of creatures in the outdoors.

Have you ever wondered about teeth marks on the trunk of a tree, or strange footprints in the snow or mud? If you have, then you are already a nature detective.

Theme:



Birds in Winter

Winter is harsh. The fierce winds blow. Storms rage in from the mountains, bringing a thick blanket of snow. Plants will not grow again until spring.

That's fine for most people. We live in warm houses. We wear warm sweaters and jackets. We buy groceries from the store.

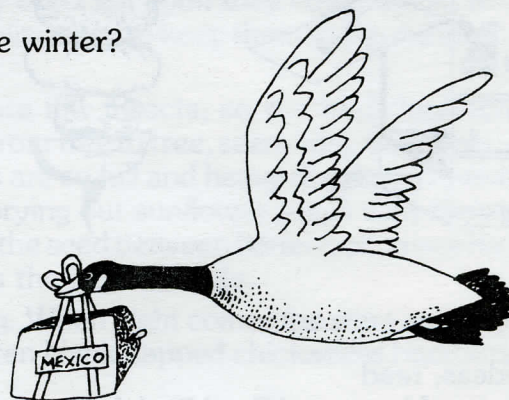
But what about the birds? How can they survive the winter?

Some birds don't stay around. They fly south to winter homes, warmer places where they can still hunt for their favorite foods. Migrating birds risk long journeys, full of dangers, rather than stay in an icy climate.

Other birds fly shorter distances. They migrate from the high mountains to woodlands and shrubby places in the foothills and plains. Here they find winter shelter and spend the short days foraging for scarce food.

A few kinds of birds stay here all year. They adapt in winter to what food they can find. They eat dried berries from leafless trees, seeds from the cones of pine trees, and a few insects hibernating under tree bark or in rotting wood.

A good way to study birds in winter is to set up a BIRD CAFETERIA at home or school. While the birds eat, you can identify them and see how they behave. Please read on for details.



BIRD CAFETERIA

Peanut Butter Pine Cones (for chickadees, tree sparrows, and juncos)

Tie a piece of string around the top of a large pine cone. Then spread some peanut butter around the pine cone and roll it in bird seed. Tie the string to a tree branch and let the cone hang.

Suet Bird Feeder (for woodpeckers, brown creepers, and nuthatches)

You can get suet from any meat store. Make a suet basket holder 3x3x10 inches out of 1/2 in. wire mesh. Nail this basket to a tree. Place suet inside the basket.

Milk Carton Bird Feeder (for all seed eating birds)

Get a half gallon milk carton and cut out a square window on one side. Make 2 holes at the base of this window opposite each other and place a 6 inch stick or dowel (1/4 in. wide) through the holes. Make a hole in the top of the carton for a string. Put bird seed in the bottom of the carton and hang the carton from a tree branch.



For more ideas, read
How to Attract, House and Feed Birds by Walter E. Schutz

Birds need water to drink as well as food to eat. When natural water in ponds and lakes is frozen, treat the birds in your garden to fresh water. It can be as fancy as a bird bath, or as simple as a shallow pottery dish on a wall or window ledge. The birds won't care, so long as there is unfrozen water each morning.

Once the birds find your cafeteria, they will rely on it for food and drink. Please be faithful. Serve breakfast EVERY DAY.



FRUIT CUPS

Fill half a grapefruit rind with chunks of citrus, apple, banana, some berries and raisins. Place on a platform feeder or wedge in the crook of a tree.

BIRD CAKES

Mix: 1 part peanut butter
1 part melted suet
6 parts cornmeal

Spoon into paper-lined muffin tins and cool. Remove paper and place cakes on a platform feeder or in a suet feeder. Freeze extra cakes.

SHISHKABOBS

String pieces of bread (including biscuits, bagels, muffins, etc.), meat scraps, apple chunks, orange sections, peanuts (in shell), and any dried fruit on lengths of twine. Tie to branches close to the trunk.

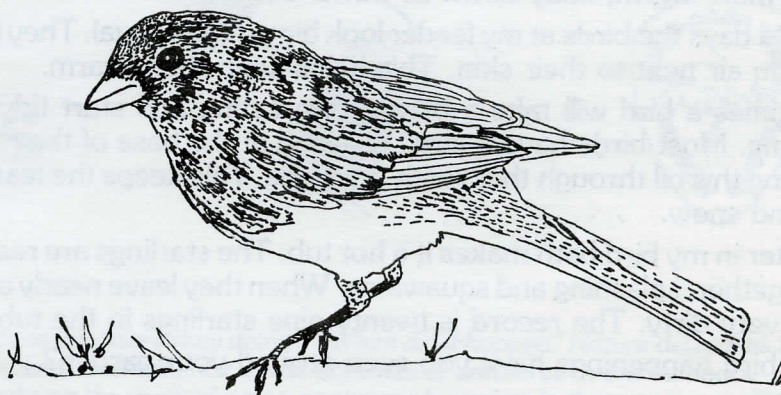
Choose a place for your bird feeder carefully:

- * Are there trees or shrubs nearby? Birds need perches and places to escape danger.
- * Is this cover so close that cats can lurk there?
- * Is your feeder out of reach of pouncing cats?

WHO'S WHO AT THE FEEDER

These are some of the birds you might see at your feeder.
Check the box when you see the bird.

- Song Sparrow ☐
- House Finch ☐
- Starling ☐
- Junco ☐
- Robin ☐
- House Sparrow ☐
- Hairy Woodpecker ☐
- Downy Woodpecker ☐
- Steller's Jay ☐
- Magpie ☐
- Brown Creeper ☐
- Red-breasted Nuthatch ☐
- White-breasted Nuthatch ☐
- Pygmy Nuthatch ☐



Books with pictures to help you identify the birds:

National Geographic Society *Field Guide to the Birds of North America*

Roger Tory Peterson *A Field Guide to Western Birds*

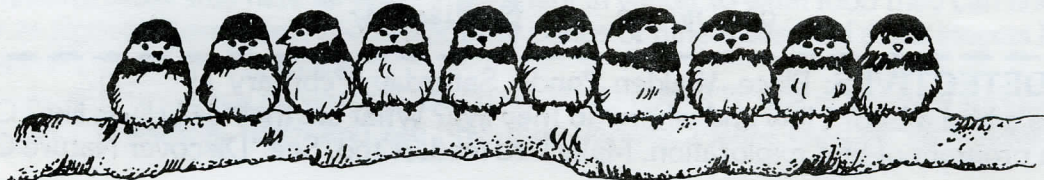
TEN LITTLE CHICKADEES

Snow is falling on a winter morning. Brrr, it's cold. Deep inside the branches of a spruce tree, ten black-capped chickadees are waking. They huddle close together, their feathers all fluffed up to make warm "coats". It has snowed all night, but the spruce branches are thick and the chickadees have only a dusting of snow on their backs.

The birds are very hungry! As soon as it's light enough to see, they shake off the snow, say "dee-dee-dee", and dart from the tree in search of food. If they don't eat soon they could freeze to death, because all the energy from the food they ate yesterday was used to keep them warm during the long night.

In summer, chickadees eat insects. In winter there are few insects, so the birds look for dried berries, seeds, and sweet pine nuts. They fly together from tree to tree, searching. Suddenly, one of them spies a row of sunflower stalks whose seed-heads are so full and heavy they bend towards the ground. Soon all ten birds are hanging upside-down, prying out sunflower seeds with their beaks. When a bird gets a seed he flies to a tree branch, holds the seed between his feet, and uses his sharp beak to hammer the shell open. Then he quickly eats the kernel inside.

They search and eat all day long. The snow stops falling. When night comes the stars are bright and the air is colder than the night before. Once again, the ten black-capped chickadees huddle deep in the spruce tree asleep.



WATCH THE BIRDIE

My bird-cafeteria was a busy place last fall. The birds ate and ate and ate. A bird's fuel for flying and keeping warm is stored as a layer of fat under its skin. Especially before migrating, birds eat and grow fat so they have enough energy for the long flight south.

Underneath a bird's flight feathers are soft feathers called down, which keep his body warm. He grows more warm, fluffy down as winter comes.

On cold days the birds at my feeder look bigger than usual. They fluff up their feathers to trap a layer of warm air next to their skin. This helps keep them warm.

Sometimes a bird will take a break from eating and start tidying up his feathers. This is called preening. Most birds have a large oil gland at the base of their tails. They preen their feathers by combing this oil through them with their bills. This keeps the feathers waterproof, so they can shed rain and snow.

A heater in my bird bath makes it a hot tub. The starlings are real partybirds. They all cram into the tub together, splashing and squawking. When they leave nearly all the water is gone, and the little bit left is very dirty. The record is twenty nine starlings in the tub. I'm waiting to see thirty.

What bird happenings have you seen around your garden?

A WINTER VACATION?

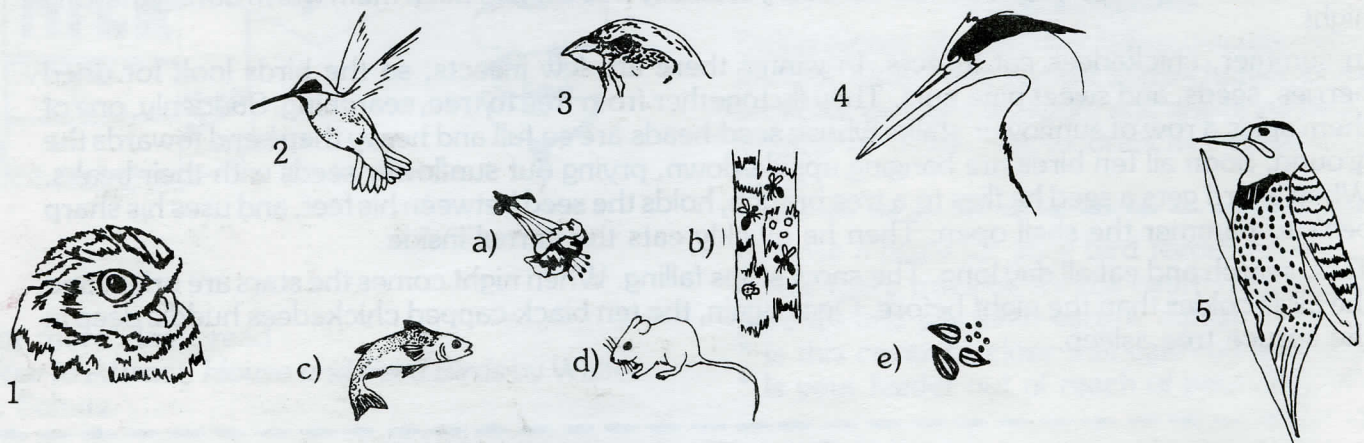
The greatest adventure in a bird's life is migration. In order to spend the winter months in a warm climate where food is plentiful, many birds fly south in the fall. The broad-tailed hummingbirds that zoom from flower to flower in Colorado, during the spring and summer, fly all the way to Mexico or Guatemala!

How do birds find their way when migrating? Several sets of clues can help them. They follow land formations -- mountain ranges, coastlines and rivers. They navigate by the changing positions of the sun and stars. Some birds can feel the pull of the earth's magnetic field, and some even use smells to find their way.

This year keep an eye out for the return of migratory birds. You'll know it's spring when you see the first hummingbird searching for flowers full of nectar, or a bluebird swooping to the ground to catch insects.

FILL THE BILL

The shape of a bird's bill is a clue to what the bird eats. Long, thin bills can suck nectar. Short strong beaks can crack open hard seeds. Can you match the food with the beaks that eat it?



Answers: 1d 2a 3e 4c 5b

NATURE DETECTIVES: Place, Walden Ponds. Saturday, February 11

What makes a bird a bird? How and where do they live? What are their daily lives like? Come and find out in a program of bird exploration. Make bird feeders too. See "Discover Nature Calendar" for details.