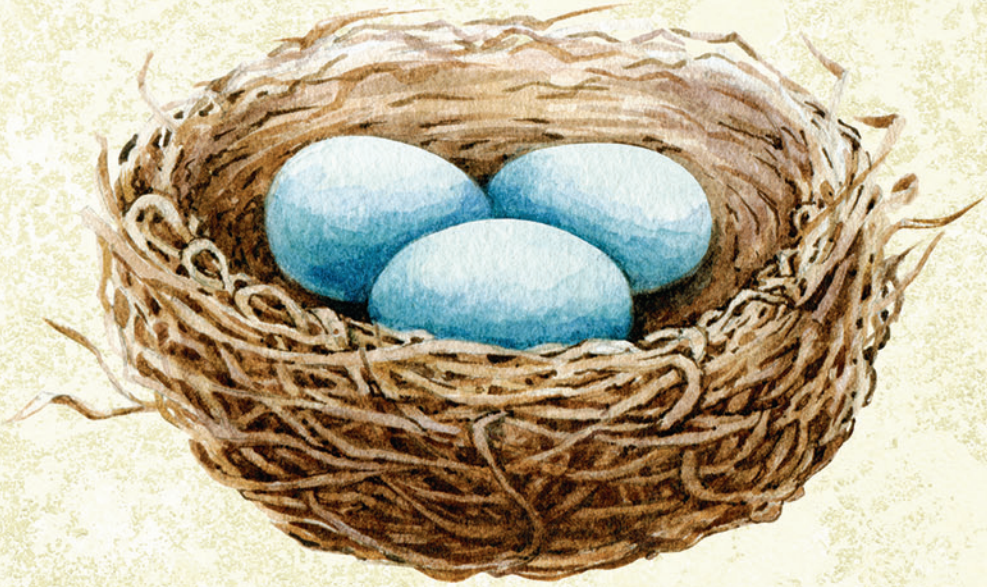
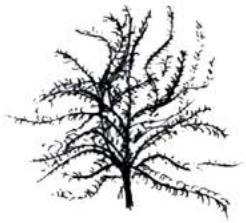
THE FIRST BOOK OF BIRDS



WRITTEN AND ILLUSTRATED BY

MARGARET WILLIAMSON



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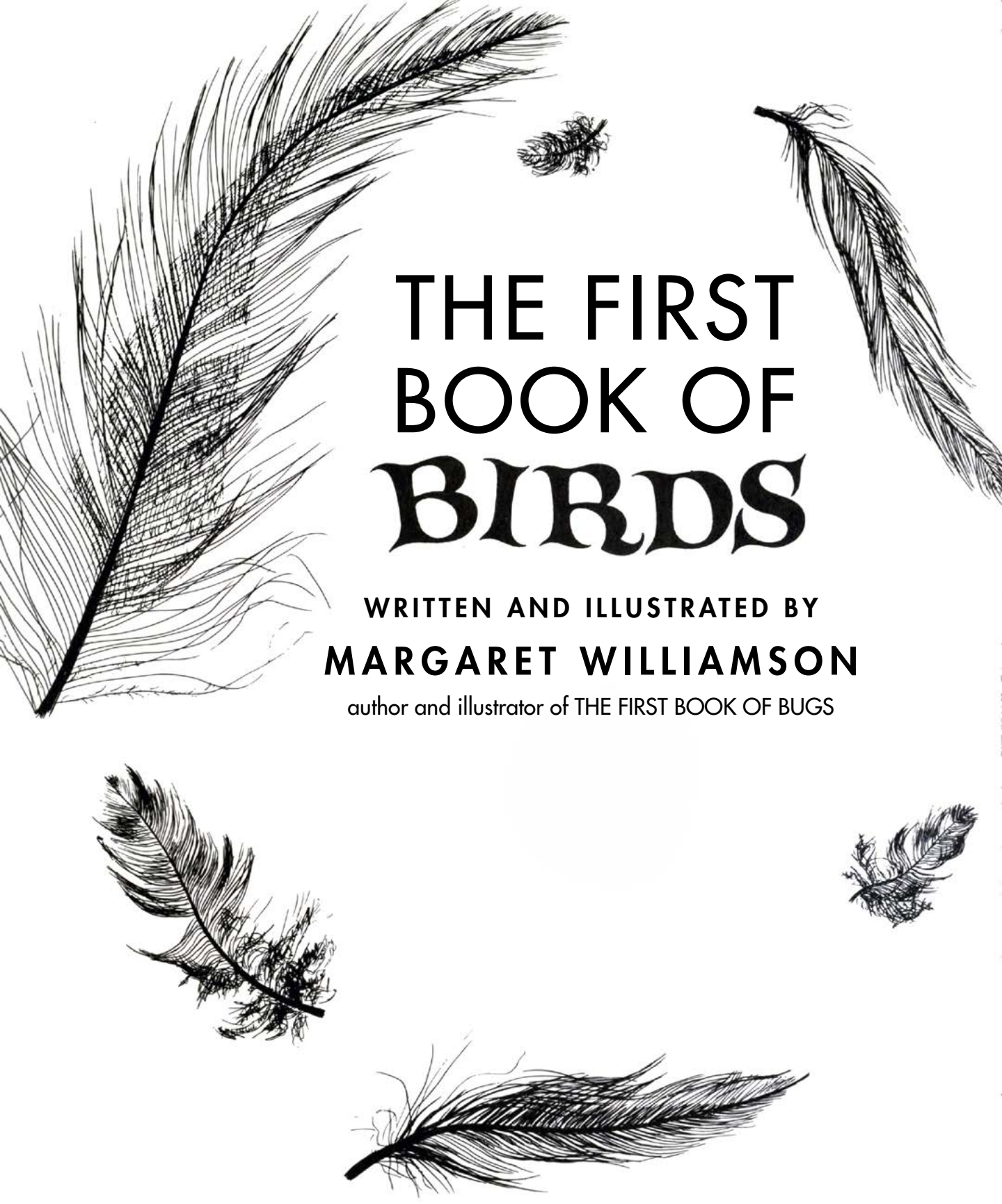


THE FIRST BOOK OF BIRDS

WRITTEN AND ILLUSTRATED BY

MARGARET WILLIAMSON

author and illustrator of THE FIRST BOOK OF BUGS

A BIRD IS ITSELF

A bird could never be mistaken for a dog or a lizard or a butterfly. A bird is simply a bird. Although there are many kinds of birds, they look and behave so much alike you can always tell them from other animals.

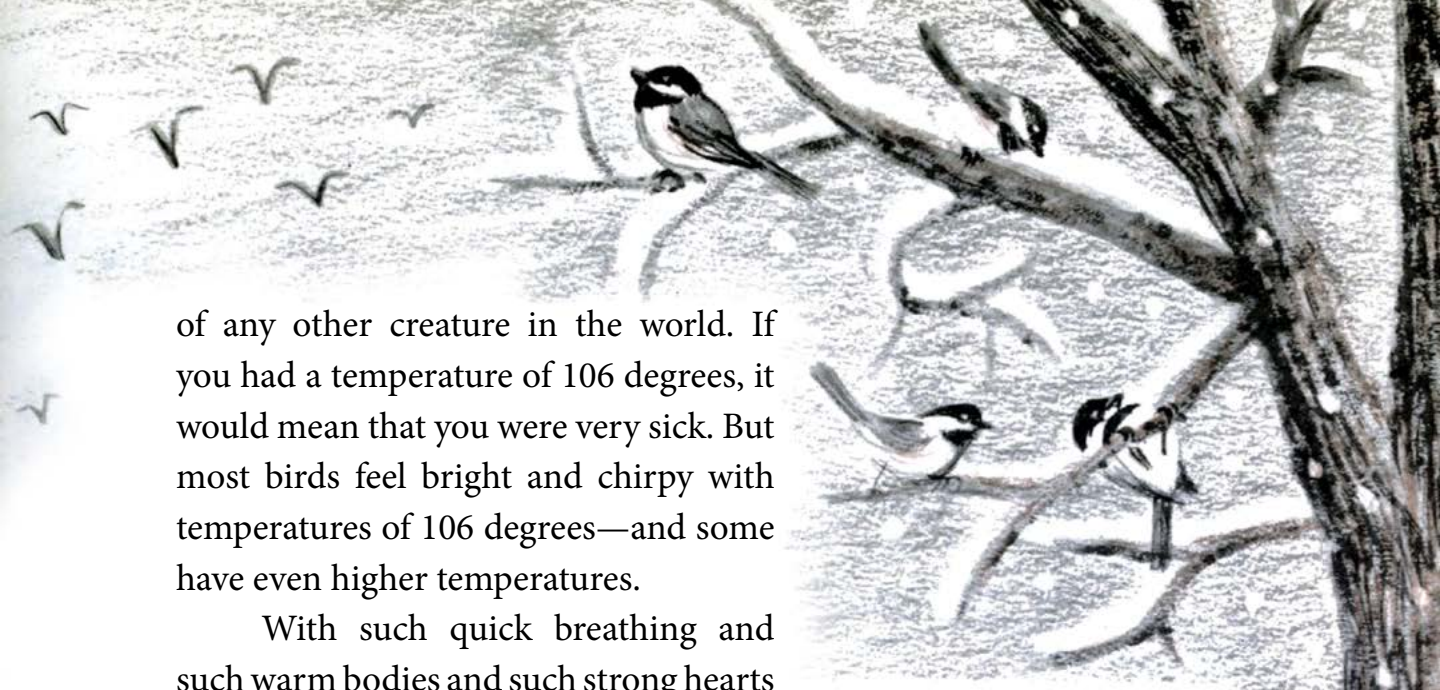
You might think a bird is different because it flies. But some birds—penguins and ostriches, for example—cannot fly at all. And some other animals can. Bats and insects do.

So, although flying is important to most birds, there are two more important things that really make a bird a bird.

First, all birds live in a hurry. Everything about a bird is busy and quick. Even when it stops to rest or sleep, it breathes faster than any other animal on earth. Also, its heart beats faster. Our own hearts beat about eighty times a minute. But a canary's heart beats one thousand times a minute. When you hold a bird in your hands, you can feel its heart pumping faster than you can count.

A bird feels very warm, too. Its temperature is higher than that

Birds are busy—summer



of any other creature in the world. If you had a temperature of 106 degrees, it would mean that you were very sick. But most birds feel bright and chirpy with temperatures of 106 degrees—and some have even higher temperatures.

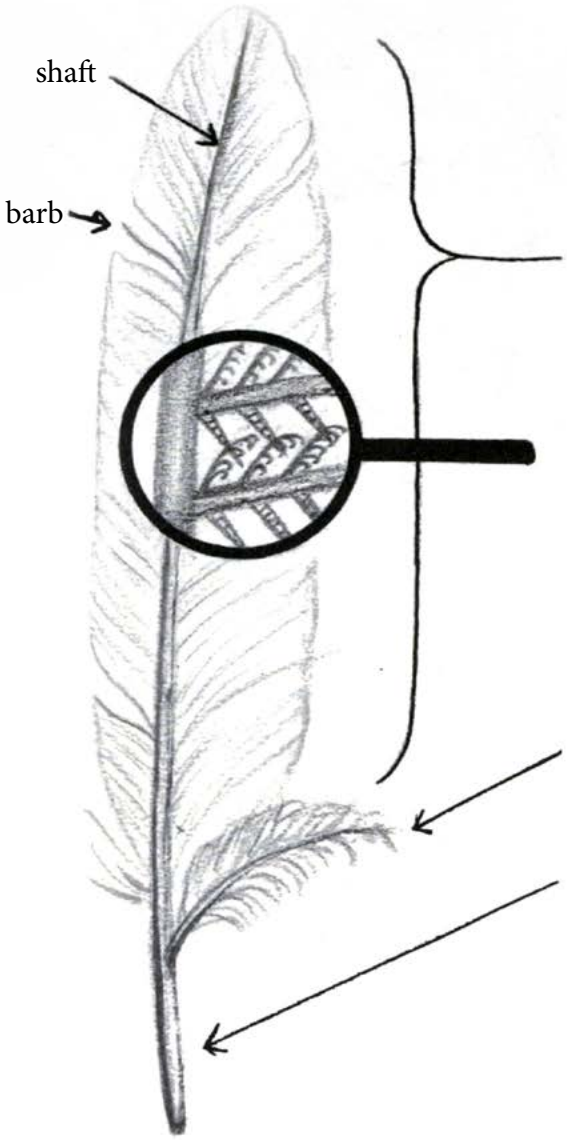
With such quick breathing and such warm bodies and such strong hearts beating so quickly, it's no wonder birds are lively.

To keep the warmth of their bodies from going off into the air, birds have feathers. That is the second important way to tell a bird from any other animal. All birds have feathers. They are the only animals that do.

The color and shape of birds' feathers help us to tell one kind of bird from another. However, this book is about more than telling birds apart. It is about all the many things that make a bird a bird and all the fascinating ways birds have of living their own special kinds of lives.

ABOUT FEATHERS

Every bird has three main kinds of feathers: contour feathers that cover most of its body; an undercoat of soft, downy feathers; and a few hair-like feathers called "filoplumes."



CONTOUR FEATHER

CONTOUR FEATHER

SHAFT. Stiff and solid except for the hollow calamus, which fits into the bird's skin.

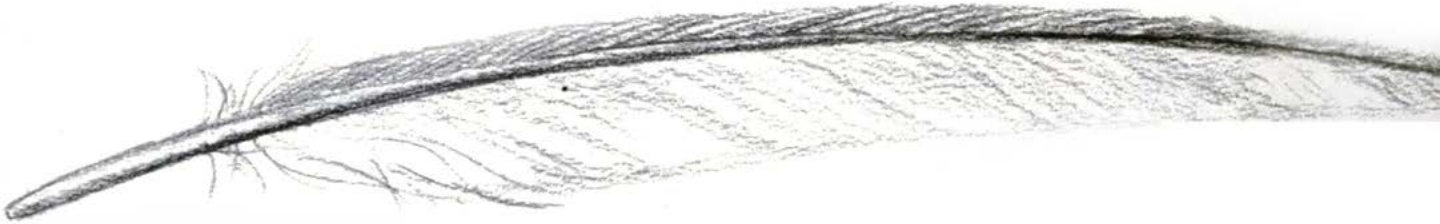
VANE. Looks like thin silky material lined with fine grooves. Really, it is made of two fringes of barbs, one growing out from each side of the shaft. Each barb branches into two rows of tiny branchlets. Hooks and notches on the branchlets fit together and lock each barb to its neighbors. It is as if the barbs were all zippered together to make a covering without holes.

AFTERSHAFT. A tiny duplicate of the main feather. Some birds don't have aftershafts.

CALAMUS. The hollow part of the shaft. The calamus fits into the bird's skin here.

The big contour feathers in a bird's wings are called flight feathers. Their barbs are especially well zippered together, making the feathers stiff and firm so that they act as a sail when they strike the air.

Some birds have contour feathers called plumes, for "show." An ostrich plume



FLIGHT FEATHER

ostrich plume

is soft and fluffy. It has long barbs and branchlets which are not zippered together. An egret plume is long and filmy. It has a long shaft with unzippered barbs.

Beneath the contour feathers on most birds there is a warm undercoat of soft fluffy feathers called "down." These do not have long stiff shafts. The barbs branch from the calamus like hairs from a paintbrush, and there are no hooks or notches to zip the barbs together.

Water birds, like ducks and geese, have especially thick coats of down feathers. These are like warm underwear, protecting birds from the cold water. The first feathers that most birds have are also down feathers. They are like the soft fluff of baby chicks.

Besides down and contour feathers, there are the long, hair-like feathers called filoplumes. No one really knows what these are for.

filoplume

There are also some short black prickles, particularly on the birds' wings. These are called "pin-feathers," but they aren't a different kind of feather. They are new feathers pushing out from / the birds' skin. The black prickles are hard coverings which protect the delicate new feathers until they are strong. Then the coverings split and peel off, and the barbs of the feathers unfold.

pinfeather

pinfeather unfolding

down feather

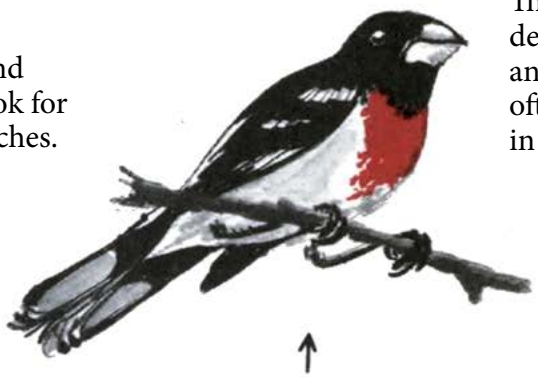
The Eastern towhee loves brushy places and is found over the eastern part of the United States and southern Canada. It sings its own name, "tow-hee."

The golden-crowned kinglet breeds in Canada and at high altitudes in the United States. Its nest is often in an evergreen tree.

The cedar waxwing gets part of its name from the red tips on its wing feathers which look like drops of red sealing wax. It loves to eat cherries.

BIRDS TO LOOK FOR IN over most of

The yellow warbler likes open country with plenty of trees and bushes nearby where it can look for insects on the leaves and branches.



The chickadee sings "chick-a-dee-dee" as it looks for seeds and insects about trees. It is often seen around our houses in wintertime.

The rose-breasted grosbeak is a summer resident in woods and orchards of eastern North America. In fall, the male becomes somewhat streaked, a little like the female.

The screech owl comes in two colors. It may be spotted or streaked in rusty red or grayish brown. It cries "Oo-oo-oo" at night, and sounds very sad.

The redstart is easy to see darting through the green trees. The female is olive green where the male is black, and yellow where he is red.

The junco, or "snowbird," visits our woods and backyards in winter. In summer, it prefers to live in Canada because it likes cool weather.

WOODSY OR BRUSHY PLACES

North America

The downy woodpecker is found in our woods and also about our dooryards, winter and summer. Only the male wears the bright red patch on his head.

The white-breasted nuthatch often walks down a tree headfirst, looking for its dinner. It stays the year round, even in the cold snowy North.

The brown creeper creeps spirally up a tree, looking for insects and their eggs and larvae. It is seen mostly in cold weather.

preening

wiping bill

FINE FEATHERS MAKE FINE BIRDS

If you rub a contour feather up and down roughly the barbs separate and become tangled. The hooks have to be helped back into place. That is just what a bird does when it sits on a branch and combs its feathers with its beak after the wind has ruffled them. This is called "preening."

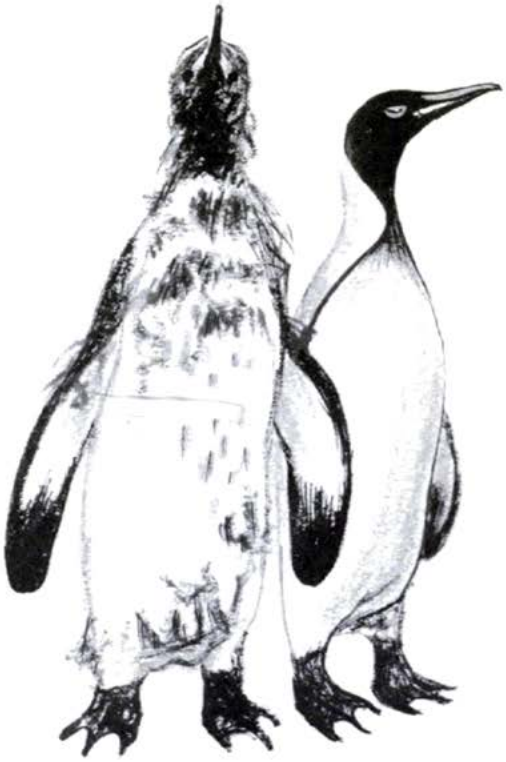
Most birds have a large oil gland at the base of their tails. They preen their feathers by combing the oil through them with their bills. Some scientists think that this keeps the feathers waterproof. That would explain why "water runs off a duck's back."

Birds are very fussy about keeping their feathers clean and tidy. Besides preening, some often take baths. They love to splash in the water, even in wintertime. They send splashes high in the air to make themselves a shower. Some birds prefer dry cleaning to a wet shampoo. They squirm and flutter in the dust. This probably helps keep them free of lice.

drinking

NEW FEATHERS FOR OLD

Feathers wear out just as clothes do. When they break and fray, the old feathers are pushed out by new ones that grow under them. This feather-changing is called molting. Most birds molt once a year, usually in late summer or early fall. Some kinds of birds take only a few weeks to do this. Other kinds take several months.



king penguin molting

Among flying birds, two wing or tail feathers usually drop out at a time—one on either side of the bird. A second pair falls when the pair before it is almost grown in. In this way, birds keep enough feathers to fly about and catch their food and dodge their enemies. Penguins, though, lose their feathers in handfuls at a time. So do ducks and geese, and they have to hide until they can fly again. As they are swimming birds, they manage to catch food even though they have lost their flying feathers.

Some kinds of birds molt twice: once in the fall and once in the spring. In spring, they do not usually lose their wing and tail feathers, but they grow new and brightly colored contour feathers.

bathing and shaking off