



There's No Place Like Nest

Birds build many types of nests using natural materials and their incredible bird brains.

By *Mary Hoff*

When you think of a bird nest, you probably picture a bowl-shaped basket made from grasses or twigs. And many bird nests are just that—a soft, round, protected place for a mother bird to lay and incubate her eggs. But that's far from the only design that birds use.

Some birds dig holes for their nest. Some make their home in a hollow

tree. Some even construct nests out of mud! Hummingbirds craft a nest the size of a golf ball, while bald eagles cobble together huge sticks to make one the size of a dining-room table.

Minnesota birds are home builders extraordinaire. Come along to learn about their clever nest designs and tour a few of the many structures birds make to protect their families.

DOMINIQUE BRAUD

Snack time! A mother robin feeds her babies from a cup nest made of sticks and dried grass.



A ruby-throated hummingbird puts the finishing touches on her tiny cup nest.

A Sudden Urge to Build

Most birds get by without a home when it isn't breeding season. The urge to build a nest kicks in when chemicals inside their bodies, called *hormones*, tell them it's time to get ready to lay eggs.

How does a bird know what to do to make a nest? Is it guided by instinct—instructions it already had inside its brain when it hatched? Or does it learn how to build the kind of nest that's typical of its kin?

The answer is—yes and yes! Based on lots of observations and experiments, scientists have concluded that birds start life with an inborn sense of what they need to do to prepare a home for their young. Over many generations, the offspring of birds that successfully protected their eggs from wind, rain, preda-

tors, and other threats using materials at hand in their habitat were more likely to survive than the offspring of birds that didn't. Nest-building ability became a characteristic trait of a bird species as it evolved, much like its color and song.

Each bird species has its own way of building a nest. Individual birds within a species often make very similar nests.

Although birds are guided by instinct, they also get better with practice, tweaking their nest design based on how well it works to protect their young. And some birds adjust how they build their own nests after they watch another bird build theirs.

On the pages ahead, we're going on a home tour! Come along and check out examples of the nine main kinds of nests that Minnesota birds build.

STAN TEKIELA



Nest Type: Platform

Home of: Bald Eagle (*Haliaeetus leucocephalus*)

Imagine building a nest that's five feet across and weighs more than a snowmobile. That's what bald eagles do when they're getting ready to start a family. They gather sticks with their talons and place them in a fork in a tree. They intertwine the sticks to form a platform.

Over the course of several weeks, the big birds put more sticks on top until they've created an area big and solid

enough to lay their eggs with space on each side to keep them from rolling off. They add grass, moss, and feathers to make a soft bed for their babies.

The same eagle pair may nest in the same location for many years, adding more material as needed to expand it and keep it in good repair.

Other Minnesota birds that build platform nests include ospreys, great blue herons, and white egrets.

Fun Fact: A bald eagle nest in Florida measured about 10 feet across and weighed more than 2 tons.

MICHAEL FURTMAN



Nest Type: Scrape

Home of: Killdeer (*Charadrius vociferous*)

“Killdeer! Killdeer!” A mottled brown bird calls loudly as it swoops down to the ground in a rocky field. Its camouflaged coat makes it almost disappear as it settles onto four speckled eggs nestled in a small hollow in the ground.

This noisy bird and its mate build this simple nest together in a not-so-simple process. First one scratches away at the



ground while the other watches. Then the second bird takes over and the first one stands at its side, calling out and tossing bits of gravel in the air. Over the course of nearly a week, they carve a hole big enough for their little ones to call home.

Other Minnesota birds that build scrape nests include ring-billed gulls, mallards, and turkey vultures.

Fun Fact: If a predator approaches a killdeer nest, the parent that’s tending the eggs or young will move away from the nest while appearing distressed and calling out. This “broken wing” display lures the predator from the nest, saving the offspring from harm.

LEFT: MICHAEL FURTMAN, RIGHT: TAMMY WOLFE.



Nest Type: Hole/Cavity

Home of: Wood Duck (*Aix sponsa*)

Plop! Plop! Plop! One by one, baby wood ducks drop from a hole almost 20 feet above the ground in the side of a dead tree. Their mom chose the hole, which had been hollowed out by woodpeckers, as a place to lay her eggs a month before this momentous day. She lined the rough cavity with soft feathers, then laid a dozen eggs at the bottom.

After wood ducklings hatch, they climb

Fun Fact: Burrowing owls also nest in holes—but their holes are in the ground rather than in a tree. They place animal poop around the entrance to their tunnel. Biologists think the decaying poo might bring in insects that the owl can eat.

LEFT: STAN TEKIELA, RIGHT: TAMMY WOLFE.



up and over the edge of the cavity, dropping to the ground. Their light weight helps them avoid hurting themselves as they trade life in the hole for life on the pond. If all goes well, the mother wood duck may use this same hole next year to shelter her next family.

Other Minnesota birds that build hole or cavity nests include northern flickers, barred owls, and chickadees.



Nest Type: Floating

Home of: Red-Necked Grebe (*Podiceps grisegena*)

For red-necked grebes, nest building is a mom-and-pop operation. These birds stay with the same mate for many years.

When it comes time to lay eggs, a pair of grebes work together to build a nest in a quiet corner of a lake or pond. The couple gather plant materials that float, such as reeds and dead branches, into a stack. They pile dead materials on top of them

and shape a shallow bowl at the top of the heap, forming a nest 1 to 4 feet in diameter.

When the nest is ready, the mom grebe lays three to five eggs in the middle. After a little less than a month, the eggs hatch. The baby birds hop into the water, and the family leaves the nest behind.

Other Minnesota birds that build floating nests include coots and gallinules.

Fun Fact: The male grebe often does more of the nest-building work than the female does.

Nest Type: Cup

Home of: Ruby-Throated Hummingbird (*Archilochus colubris*)

One of the world's tiniest birds' nests is the nest of the ruby-throated hummingbird. Fully formed, it's about as big around as a golf ball.

The female builds the nest. She starts by finding a tree branch in a secretive spot. She gathers soft materials such as dandelion seeds and sticks them to the branch

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with tree resin or spider silk. Over the course of a week or so, she adds more soft materials along with other plant bits such as bud casings and pieces of leaves, weaving them together with spider silk. When the stack of stuff is big enough, she hops into the middle and shapes it all into a bowl shape by pinching the sides between her beak and her chest. For finishing touches, she glues bits of lichen around the outside, making it almost indistinguishable from the branch it's attached to.

Other Minnesota birds that build cup



nests include robins, yellow warblers, and goldfinches.

Fun Fact: The cup nest is the most common nest type in the bird world.

Nest Type: Dome

Home of: Ovenbird (*Seiurus aurocapilla*)

If you've ever seen a domed pizza oven, you know what an ovenbird's nest looks like. In the spring, mom ovenbird builds a nest in the dead leaves scattered on a forest floor. She starts by clearing the vegetation from a small area to make a shallow opening. She gathers other plant material such as grasses and tiny twigs into a circle around the chosen spot.

Standing in the middle, she weaves the plant parts together into a spherical shape. By the time she is done, she has woven a structure that reaches over her head to form an enclosed shelter a little



smaller than a volleyball with a hole in one side for coming and going. Before she lays her eggs, she lines the bottom of the nest with soft material such as animal fur.

Other Minnesota birds that build dome nests include magpies and marsh wrens.

Fun Fact: Despite the amount of effort that goes into construction, ovenbirds use their nest for only one season.

TOP: STAN TEKELA, BOTTOM: MICHAEL FURTMAN

Nest Type: Mud

Home of: Barn Swallow (*Hirundo rustica*)

Build a home out of mud and saliva? This bird is on it!

When they're ready to have a family, a barn swallow couple finds a hard vertical surface, preferably with a little ledge that provides a starting point for a nest and something hanging over the top that will protect it from rain. The birds fly about, gathering little beakfuls of mud and carrying them to the chosen spot.

First they build a flat platform by dropping bits of mud off and letting them dry into a claylike surface. They add more mud to create a bowl shape about as big around as a baseball. Peri-



odically they add pieces of grass or other plant material that helps the mud bits stick together. It can take up to 1,000 mud-gathering flights to build a single barn swallow nest.

Other Minnesota birds that build mud nests include phoebes and cliff swallows.

Fun Fact: Barn swallows move their heads rapidly when adding new bits of mud to their nest. This helps pop any air bubbles that might get trapped and weaken the structure.

Nest Type: Woven

Home of: Baltimore Oriole (*Icterus galbula*)

Among the most elaborate nests that Minnesota birds make is the hanging basket that a Baltimore oriole weaves. A female oriole starts by finding a forked branch toward the outside of a deciduous tree such as an elm or a maple. She gathers grass, hair, and other stringy stuff. She tangles some of the fibers around a twig to create a



TOP: STANT KEKELA, BOTTOM: MICHAEL FURTMAN.

starting point for the rest of the structure.

Bit by bit she weaves more strings into that knot and then into each other, much as a human basket maker would weave fibers to make a basket. Once the shape of the nest is defined, she adds

more fibers to the inside to strengthen it. Finally, she pads the bottom with soft materials such as feathers, milkweed silk, and moss.

Another Minnesota bird that builds a woven nest is the orchard oriole.

Fun Fact: The stretchy materials the oriole uses allow the nest to expand as the eggs hatch and the young grow bigger.



Nest Type: Mound

Home of: Common Loon (*Gavia immer*)

For Minnesota's state bird, nest building is just one thing on top of another—literally. In May or June, a male loon finds a spot on an island, a peninsula, or the edge of a lake or pond that is sheltered from the wind.

Together, he and his mate heap up reeds, underwater plants, and other vegetation, picking up the items with their bills and

tossing them sideways onto the pile. One of the parents climbs up into the middle of the stack and smooths out a hollow by pushing down with its body and pulling up plant materials around it until it is big enough to hold two of their eggs, which are a little bigger than chicken eggs.

Another Minnesota bird that builds a mound nest is the sandhill crane. 

Fun Fact: A pair of loons will often reuse their nest the following year.



LEFT: RICHARD HAMILTON SMITH, RIGHT: TAMMY WOLFE.



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