

STOP, LOOK & *Listen*



BLUE GRAY GNATCATCHER; PHOTO BY ETHAN MELEG

The art and science
of searching
for birds' nests

By Michael Henry

In spring, the scent of fresh new leaves unfolding mingles with the aroma of snow mould, worms and mud — not to mention hormones. A chorus of bird song welcomes the morning — a sure sign that *amour* is in the air.

I confess to being an unrepentant voyeur in the springtime. I like watching the boy serenading the girl in the nearby tree while she coquettishly flits around him. And nothing gives me greater pleasure than discovering the couple's nest.

There can be more than 1,000 birds' nests in a square kilometre of forest — there for the finding but rarely found. Sometimes they are hidden deep in the thickest brambles; other times they hang pendulously in plain sight, relying on a camouflage of bark, lichen, twigs or leaves to make them invisible.

Nests are as varied as their builders. Some birds weave materials together, others tie knots. Some glue their nest together with spider webs, others with sticky saliva (the secret ingredient in bird's nest soup). Although they have an inherited knowledge of exactly how to build their nest, birds also are surprisingly adaptable.

In the days when horses were still pulling our weight, birds often built or lined their nest with horsehair, which now has been replaced by fine plant down, lichens and other materials. And then there is the case of a Chihuahuan raven that built its nest entirely from barbed wire! Adaptable, if not always sensible.

The largest nests belong to the eagles. Sometimes over three metres



The female ruby-throated hummingbird selects a site, builds a nest and raises her young on her own.

JIM FLYNN

a hummingbird nest caused a Chilean architect to exclaim, "Some of our present day avant-garde architects could well profit by this example of art at its best, achieved by the greatest simplicity and not by orgies of form and colour."

Indeed, nests have much to show us if we choose to look. The first step to uncovering their secrets is to learn about the birds who make them. What is their nesting habitat? What materials do they use to construct their nest? Where do they like to build it?

Try to develop a "search image." Does the nest you're looking for resemble a few leaves caught in the fork of a tree? A small lichen-covered knob on a branch? Once you have an idea of what it looks like, the next step is to find the bird who made it.

Your ears will come in handy for this, together with a pair of binoculars. At dawn, the trees are filled with birds calling to their mates or staking claims to territory. By listening closely, you may discover clues to the nests that likely are concealed nearby.

The final and most important step is to stop and watch. The bird has much to teach you; try to understand what it is doing. If it's a male, is it mated or a bachelor? Both will sing; a partnered male calls to proclaim his territory, a bachelor to attract a mate. In many birds the songs are subtly

in diameter, six metres deep and weighing up to several tonnes, they may be reused for decades. The prize for longevity, however, must go to a European stork nest which was in use between 1549 and 1930 in Thuringia, Germany.

Hummingbirds have the smallest nests — less than five centimetres across and weighing under 30 grams. They are made of spider webs and plant down, and tiled on the outside with hundreds of flakes of lichen. Not just any lichen will do — the species is carefully chosen, and each flake is hooked onto the nest with velcro-like attachments found on the lichen's underside. The perfection of

Yellow warblers frequently nest in garden shrubbery, usually between one and 2.5 m up from the ground.



JAMES M. RICHARDS

different. If he has a mate, sooner or later you will see her; she is often the one you want to observe.

Depending on the species, the female will do some, or all, of the nest building, and if you see either of the pair with construction materials, it may lead you right to the nest. Later, when she is incubating, her mate will bring her food; and finally, once the eggs have hatched, both partners will make frequent trips to the nest to deliver meals to their young. Just watch where they're going — easy, right? Well, sometimes!

For obvious reasons, birds hate having their nest found, and often run an obstacle course through bushes and under logs to get there. I've seen crows with nesting material change destination in mid-air, presumably because I was observing them.

Patience is the key, according to naturalist Douglas Leighton, who once found over 1,000 nests in a summer. At the time, he set a record for British Columbia — a fact that he now downplays. Noting that he finds (only!) a few hundred nests each summer these days, he adds that his efforts are probably more scientifically valuable and less damaging to the birds.

For one thing, he can monitor the progress of the nests more carefully; for another, he can have a better time. He says, "I really enjoy the experience of looking for nests, because your awareness is cranked right up.... at one point in my life I used to hunt, and it's kind of the same thing. You have to be so focussed on what's happening around you, it forces you stop and just watch the world go by. I've seen a lot of [other] things... while looking for birds' nests."

A bird researcher with the Canadian Wildlife Service stresses that "attitude is very important in nest searching.... if you go out thinking you're not going to find a nest, then you're not going to. If you start out thinking you'll find nests, you probably still won't find any, but at least there's hope."

The best way to avoid frustration during the search is to treat the exercise like a Tai Chi session — relax and simply enjoy being where you are. After awhile you'll feel like you know the birds you've been watching. Often, it is only then that you will find their nest.

So how do you get started? Nest-searching, like environmental awareness, starts with whatever's in your "back

The early nests of song sparrows are often found on the ground — in this case, under a fallen log in the forest.



ROBERT MCCAIV



Northern flickers carve out new nests each year, and both sexes help to excavate the cavity.

yard." Whether you begin with the birds that you hear singing in a local woodland, or one that you see fly by your kitchen window with a mouthful of grass, choose an area you can easily go back to, so you can get to know the birds that live there. Some birds that occur almost everywhere, and have relatively easy-to-find nests, include robins, woodpeckers, swallows and vireos.

Everyone's seen a robin's nest, but surprisingly, the breeding behaviour of the American robin is poorly understood. They seem to have no distinct courtship, apparently choosing a mate as nonchalantly as we would choose a loaf of bread at the supermarket. Clearly they do mate, however, building their nests early in spring, often two to 10 metres up in conifers, though anywhere but on top of your head is possible.

At least one robin built its nest between the antlers of a mounted deer head, while others have been known to nest in bird feeders, hanging tires, on the steps of ladders and in old cars and trucks. The nests are made of grass and dried leaves, reinforced inside with a mud cup, then lined with soft grasses. One sign that nest-building is happening

is a line of mud across the front of the female, who sits in the nest and forms the mud cup by pushing with her breast.

The northern flicker — the most common as well as the second-largest of the woodpeckers — is the pre-eminent home-builder of the natural world. Flicker nests are large cavities (up to 75 centimetres!) excavated in both living and dead trees. The birds carve out new nests every year, though they may go back to the same tree to do so, making some trees into a sort of apartment block. All this public housing doesn't go to waste — dozens of species, including owls, ducks, flycatchers and swallows, reuse woodpecker nest cavities.

Flicker nests are fairly easy to find. They are noisy birds, often drumming and calling in the general vicinity of their abode. When you have homed in on the general area, simply sit still and listen for the sounds of excavation, or look for fresh woodchips on the ground.

Once the eggs have hatched you may hear the nestlings which, like many children, are very noisy. With patience and good observation, you may even be able to count the young inside the cavity nest. The nestlings, like those of many songbirds, defecate into a small white "fecal sac" which is either eaten or carried away by the parents. This is done to keep the nest clean; and if you see it happening, you can get a good idea of how many nestlings are inside.



ROBERT MCCAWE

A nearby water source is crucial for the barn swallow, who depends on it to provide mud for nest-building.

Barn swallows build "adobe style" mud nests, and have earned their name by constructing homes on the vertical walls of old buildings (including barns), under bridges, and very rarely on rock faces (their traditional habitat). Anywhere with a vertical face that is protected from the rain will do. If there are barn swallows in your area, the nests shouldn't be too hard to find.

Watch for the swallows coming and going with mud. They may travel close to a kilometre away to get just the right mud, which in itself is something interesting to observe. Their collecting grounds can be recognized by peck-marks in the ground and, from a distance, by seeing the birds land on the ground which they rarely do otherwise.

Few nests are more beautiful or carefully constructed than those of the red-eyed vireo. These small elegant cups hang suspended by their rim from the forked branch of a deciduous tree, often two to three metres from the ground, but sometimes much higher. The female does all of the building, weaving together strips of bark and grasses, waterproofing and binding the nest with spider webs or caterpillar silk, and adorning it with fragments of birchbark and lichen, which probably serve to camouflage it.

The vireos themselves are unobtrusive birds that blend into the background. The male often sits high in the canopy incessantly singing his familiar song — "I am here, where are you" — while the female is building the nest or incubating the eggs in the forest understorey. If you watch the male long enough, he may go down to visit his mate; like many bird pairs, these two will interact with each other from afar, through songs and calls.

Nest-searching is its own reward. You learn so much by watching birds patiently and observing their behaviour that, even if you didn't find a single nest, it would be a worthwhile activity. Sooner or later, however, the chances are that you will find one. What then?

The quest for nests can be a blessing or a curse for the birds who occupy them, depending on how you go about it. Leighton says the biggest problem with nest-searching is that

"some people get carried away... and just go crashing through the habitat. That can be very destructive, because [nest robbers such as] crows, ravens and magpies are watching what you're doing. I know from experience that you can lead predators to nests... there's a high level of ethics required." As a general rule, if your actions seem to be changing the behaviour of the adult birds, then you need to rethink them.

For starters, don't approach an active nest — you risk attracting the attention of nest robbers. This invisible line that you shouldn't cross will depend largely on your own judgement, but there are at least two cases when you should draw the line far from the bird's home.

One involves ground-nesting birds, which have virtually no scent of their own to attract wandering predators. Just trampling some plants or leaving your smell near a ground nest can alert a predator to its presence. Stay at least several metres from these nests at all times, preferably more.

The second special case is nests with older nestlings in them. If you approach very closely, the young birds may leap out and scatter. This emergency evacuation, which is akin to someone shouting "fire" in a crowded cinema, has developed as a response to predators.

You also should limit the amount of time that you spend observing a nest. Even when you watch from a distance, through binoculars, the bird is probably aware of your presence and may be "on edge." Be alert for changes in its behaviour, and leave the area if the bird is calling, not

returning to the nest or otherwise behaving strangely. When in doubt, err on the side of caution.

Finally, if you enjoy searching for nests, why not put the information you gather to good use? Scientists rely on nest records collected by volunteers across the country to monitor Canada's bird populations — and develop appropriate management and conservation actions when problems occur (see sidebar, p.17). When you take part in a regional nest records scheme, not only will you get expert advice on nest-searching and monitoring, your participation will give you a good excuse for being a voyeur in spring.



JAMES M. RICHARDS

UNLIKE MANY SONGBIRDS,
WHO FALL SILENT WHEN THE
SUN IS HIGH, THE RED-EYED
VIREO SINGS ALL DAY LONG.

Counting birds' nests for conservation

CANADA'S FIRST nest records scheme began in British Columbia in 1955. Regional co-ordinator Wayne Campbell says over 500,000 nest records have been amassed for the province since then — a volunteer effort he estimates is worth well over \$10 million. That volume of long-term data is necessary in order for scientists to identify factors that may be affecting bird populations.

We know, for example, that many Canadian songbird populations are declining each year, but where does the blame lie? In the case of tree swallows, Campbell notes that a preliminary analysis of nest records suggests that climate change has fooled them into nesting too early.

"I'm getting reports that there are a lot of dead nestlings in nest boxes; and what we've determined over the long term is that tree swallows are now nesting about 10 or 12 days earlier than they were 15 years ago. The unfortunate thing is that the insects aren't appearing at the same time, so the swallows are hatching, there's no food for them, and they're dying," he explains.

It is long-term records like these — rather than observations of a wide variety of nesting species — that are crucial in helping



Cowbird egg among robin eggs in American robin's nest.

DON JOHNSTON

researchers determine the factors that may be affecting bird populations. Indeed, the nests of many birds — particularly those that nest high in trees or in alpine areas — are rarely found. George Peck, co-founder of the Royal Ontario Museum's nest records scheme, points out that approximately half of the 2 million nest records collected (and salvaged from historical sources) in Ontario since 1957 come from about 10 species.

That fact makes it easy for volunteers to participate in nest record schemes — no matter where they live. Whether you monitor the behaviour of peregrine falcons nesting on city buildings, keep full season records of the American robin in your back yard, or travel down remote northern rivers to record the abundance of belted kingfishers, you

can make a contribution to bird conservation efforts.

If you would like to take part in a nest records scheme, visit the Bird Studies Canada Web site at www.bsc-eoc.org/national/nestrecords.html to find out how to get in touch with the co-ordinator in your region.

Michael Henry



Hunt Lake Trail, Whiteshell Provincial Park



Narzisse Snake, Delta

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