Drummers in the Woods

by Bob Armstrong and Marge Hermans
from Southeast Alaska's Natural World

Woodpeckers! Six species of them are found in Southeast Alaska. They brighten gray days with the sound of their drumming and startle us with flashes of white, black, and red plumage.

· **Downy, hairy,** and **three-toed woodpeckers** live year-round in Southeast.

· **Northern flickers** and **red-breasted sapsuckers** generally leave the state in winter and return to nest in the spring.

· **Black-backed woodpeckers** occasionally occur in Southeast but are not known to nest here.

All woodpeckers depend on dead and rotting trees for nesting, and they contribute in important ways to the health of our forest and many of its other residents.

Northern Excavations, Inc.

Deep in a patch of woods somewhere in Southeast Alaska, a woodpecker clings tightly to the trunk of a big, aging hemlock tree. *Tap-tap-tap!* Again and again his strong, chisel-shaped beak sends wood chips flying 15 feet down to the forest floor as he painstakingly begins carving out what will become a hole for roosting or a nest cavity for his mate and their young.

The sound of his labors may echo through the forest for two or three weeks. By then, the persistent excavator will have completed a round, narrow entrance hole just large enough for him or his mate to slip through and a flask-shaped chamber inside the tree, maybe five, eight, or 10 inches wide and eight to 15 inches high.

A downy woodpecker, a rare year-round resident in Southeast Alaska. The red on the back of its head indicates it is a male.

Red-breasted sapsuckers are the most commonly seen woodpeckers in Southeast Alaska. The sugary sap that flows from the holes they excavate attracts hummingbirds, warblers, and kinglets as well as feeding the sapsuckers.

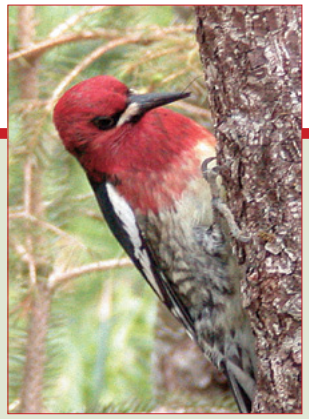
If the female woodpecker lays eggs inside the chamber, her young will be sheltered from the weather and well protected from predators during the few weeks they will need to mature before leaving the nest.

Great Adaptations

Chiseling into tree trunks is bone-wracking work, but our woodpecker has special physical characteristics that serve him well for both excavating cavities and ferreting out wood-boring insects and larvae to eat. His bill is heavy and strong, and its tip is flattened like a chisel. He has a thick skull and powerful neck muscles. Inside his skull he has a narrow space between the tough outer membrane of his brain and the brain itself. He is built to absorb the shock of pounding on wood day after day to make his living.

Other qualities contribute to his success as an excavator. He has short, strong legs and powerful thigh muscles. Strong feet with long toes and sharp claws help him grip the trunk of the tree. Stiff, pointed tail feathers help brace his body as his beak hammers away.

These same characteristics help downy, hairy, and three-toed woodpeckers feed by chiseling into tree trunks and the junctions and undersides of branches. They can pry into cracks and crevices or peel off bark to reach insects. One study during an epidemic infestation of Engelmann spruce beetles in Colorado found these three species of woodpeckers stripped the bark from heavily infested trees and fed on the overwintering brood of beetles. Beetle reduction by woodpeckers, the study reported, ranged



"The better to eat, my dear..."

Woodpeckers' tongues are specially adapted to their feeding habits. The tongues of downy, hairy, and three-toed woodpeckers have sharp, horny tips for spearing insects, while the tongues of flickers have small barbs useful for snatching insects from the ground. All four species have sticky saliva that helps make insects adhere to their tongues, and special organs called "Herbst's corpuscles" on the tips of their tongues, so they can feel prey they cannot see.

Sapsuckers have shorter tongues with brush-like tips for licking sap from the holes they drill in trees.

from 45 percent on lightly infested trees to 98 percent on heavily infested trees.

Red-breasted sapsuckers, the woodpeckers we see most often in Southeast, use their special woodpecker capabilities in a different way. They chisel rows of small rectangular holes into the bark of trees such as red alders and cottonwoods, then feed on sap and the soft cambium layer just beneath the bark. Over time, as sap oozes out of the holes, the woodpeckers return to feed. But some of their neighbors may share the banquet. The sugary sap may attract hummingbirds, other woodpeckers, kinglets, and even red squirrels and flying squirrels.

Northern flickers are the largest woodpeckers in Southeast, but they spend most of their time foraging on the ground. They can pluck insects from tree trunks and branches, but they eat berries as well. Like other woodpeckers, they use their strong bills to excavate nest holes.

Northern flickers are most often seen in open forests. They feed often on the ground and sometimes along roadsides.

The Hole Story

Alaska Department of Fish and Game biologist Jeff Hughes studied the types of trees in which woodpeckers excavate their nests in the Tongass National Forest. In an article published in the August 1988 issue of *Natural History* magazine, Hughes wrote:

> *Excavating birds almost always choose large, well-decayed western hemlocks that still retain most of their bark. (The bark keeps the interior wood moist, hastening heartrot, which softens the interior.) More than three-fourths of cavities are found in the upper third of hemlocks with missing or broken tops.*

"Good" woodpecker trees often have more than one cavity in them.

Woodpeckers may use the same cavities for nesting or roosting several years in a row, but often they do not. Instead their holes provide some of the best nesting sites for an amazing variety of other birds that are unable to excavate cavities themselves. Among the birds that use woodpecker cavities in Southeast are Barrow's goldeneyes, buffleheads, American kestrels, western screech owls, northern pygmy owls, northern saw-whet owls, violet-green swallows, and tree swallows.

Chestnut-backed chickadees and red-breasted nuthatches use woodpecker holes, too, but they are also able to excavate nests themselves. Red squirrels and flying squirrels also may use woodpecker holes for denning, and in winter small birds that do not migrate south often shelter in them for the night.

Hughes's study led him to conclude that large, old trees are crucial to many birds in Southeast and that forest management should take this into account. He wrote:

> *Stands less than 100 years old rarely contain trees with heartwood decay. Without the well-decayed snags, at least twelve cavity-dependent bird species would not be able to find suitable nest sites in Tongass*

in summer, and nearly half of the forest's permanent avian residents would not find an adequate winter habitat. The result would be a much diminished forest.

Two woodpeckers—red-breasted sapsuckers and hairy woodpeckers—are among the animals considered "indicator species" in Southeast's coastal rain forest. This places them among brown bears, Sitka black-tailed deer, gray wolves, martens, and bald eagles as species whose population levels can be used to monitor the overall health of the forest and the way it is managed.

Private landowners can recognize the importance of woodpeckers, too, by leaving snags or trees with heartrot standing, or by knocking down only the top parts of dead trees and leaving lower sections to attract the excavations and rhythmic tappings of some of Southeast's most intriguing birds.●

Not in My Backyard!

Most of us hear woodpeckers before we see them. Perhaps we hear their loud, rhythmic drumming as they strike their bills against a hollow branch on a tree to proclaim their territory or to attract or bond with a mate. On occasion we might even be rudely awakened at dawn as an overzealous woodpecker uses our drainpipe, stovepipe, or metal trash can as a sounding board.

For woodpeckers, drumming serves the same purpose song does for many other birds. It proclaims a bird's territorial boundaries to others of its species.

My friend Dick Wood and I once instigated a demonstration of woodpecker territoriality. We

Bob's Recollections

carved a model of a black-backed woodpecker with legs made of nails and attached it to the trunk of a tree at eye level. Then we played a recording of a black-backed woodpecker drumming underneath it.

Within a few minutes a black-backed woodpecker flew to the model and attacked it, pecking fiercely at its head. As I took photos, the "real" woodpecker eventually knocked the "intruder" to the ground, then flew off and fed quietly nearby.

Apparently, bygones are bygones so long as one's territory remains intact.