

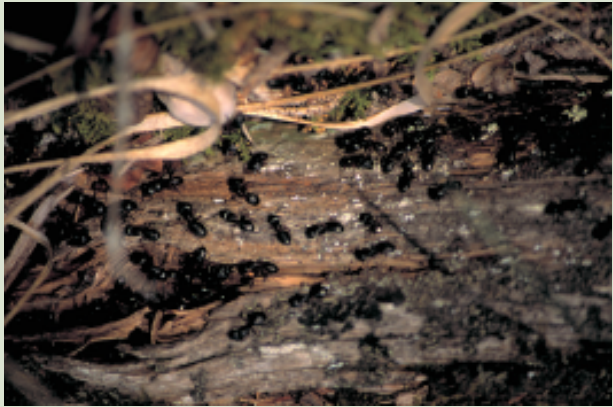
Pileated Woodpecker Forage

Pileated woodpeckers never forget

“Elephants never forget”—or so the saying goes. Here in the Foothills forests of Alberta, Canada, the same could be said for the pileated woodpecker. These birds have a talent for knowing where to look for food in the summer and remembering where food can be found in winter. For the pileated woodpecker, foraging is a daily chore and remembering where food is located has life or death implications.

Diet

Pileated woodpeckers spend much of their active time searching for food. In Alberta’s Foothills forests, pileated woodpeckers eat a varied diet to satisfy their energy needs. In the summer, ants and other insects are obtained by gleaning on or near the surface of logs, stumps, and standing dead wood and live trees. Pileated woodpeckers also make extensive excavations into partially decayed wood. Using their sharp beaks they scale bark off dead and decaying trees to reach bark beetle larvae. Though their diet consists mostly of insects, pileated woodpeckers do eat available fruits and berries such as pin cherry, saskatoon, and mountain ash, sometimes even hanging upside down on a branch to reach the best bunches.



Carpenter ants visible on decaying wood on the forest floor.

Winter survival



Sound wood is chipped away in the search for carpenter ants.

The key to survival for pileated woodpeckers is finding enough food to carry them through a harsh Canadian winter. Their foraging methods change with the onset of winter thereby increasing their chances. In the wintertime, carpenter ants are obtained from extensive excavations into relatively sound wood at the bases of trees containing hibernating carpenter ant colonies. These colonies are the most available winter food source. A carpenter ant colony residing in the base of a snag or physically damaged living tree can have up to 15,000 ants. Excavating ants from the colony is like taking frozen dinner from the freezer.

The Foothills Model Forest pileated woodpecker study was initiated in 1993 to determine whether pileated woodpeckers might be adversely affected by timber management practices. The study followed 32 radio-tagged adult pileated woodpeckers over three years and data was collected on pileated woodpecker foraging ecology and cavity tree preferences. Pileated woodpeckers are not likely to become a species at risk in the forest community. However, the study recommended several important management steps to improve the quality of current and future pileated woodpecker habitat.

But how does a pileated woodpecker know which trees store their dinner, and which trees do not? Success in finding food means life or death when the temperature dips below -30°C and daylight is limited to eight hours. In these conditions, pileated woodpeckers can't afford to spend too much time searching for those few trees that hide the ant colonies, they need to go straight to the freezer.

Search images

In the summer and fall, pileated woodpeckers hunt for food sources that become their winter freezers. Flying from tree base to tree base, pileated woodpeckers search for food—but it isn't at random. This is a carefully orchestrated activity and the birds rely heavily on *search images*—a process of concentrating their efforts where they have been successful at finding food before; a bit like going back to a grocery store that carried your favourite product.

Saint's freezer food

A particular pileated woodpecker named Saint, part of a recent study of pileated woodpecker habitat ecology in the Foothills forests of Alberta, illustrates how this method works. On a brilliant fall afternoon, Saint was busy getting down to business, stocking his memory with the locations of freezer food to be consumed during the coming winter months. Saint flew to the bases of dead trees or visibly damaged or decayed live trees. Often, these trees had old, oblong or rectangular holes of previous pileated woodpecker excavations. Once there, he peered and poked, and sometimes he rapidly flicked his tongue on the bark, making a soft rattle. Woodpeckers have a poor sense of smell, and must find food mainly by sight and hearing. The tongue rattling probably helps them locate hollows inside the tree, and may stimulate insect movement that the bird can then see or hear.



An oblong hole excavated by Saint.



Carpenter ants active near the surface of the excavation are eaten by the woodpecker.

When Saint found a carpenter ant colony, he stayed a few minutes using his long sticky tongue to slurp up ants, which were still active near the surface. He often made a quick excavation with his sharp beak into the tree to access tunnels made by the ants. Over the space of a few hours he visited eight trees with ant colonies. Five of these trees had old excavations, perhaps made by Saint or his mate in the past.

Did you know....

The possible life span of a pileated woodpecker is 12 years though the average is likely less.

Saint remembers

When winter arrived not long after, Saint knew where he could find his frozen food, as did other pileated woodpeckers that were part of the study. They did almost no searching, relying instead on their memories so they could fly directly to trees with ant colonies. As winter progressed, the birds continued to use the same trees over and over, repeatedly accessing the freezers of food by excavating deeper and deeper into the wood.

Defending territory

Pileated woodpeckers can be added to the long list of birds and other wildlife such as black bears and elephants that have remarkable abilities to relocate food resources. Perhaps this behavior might even offer some insight as to why pileated woodpeckers defend their territories from other pileated woodpeckers even in the winter. Knowing where the freezers are located and that only other pileated woodpeckers have the skills required to open the freezer, it makes sense to defend the food that provides life giving winter sustenance.

Remember to survive

When it comes to food, pileated woodpeckers never forget because their lives depend on it. They don't have much body fat nor warm feathers, so knowing where to get food when they need it most is crucial to their survival of the long cold winters in the Foothills of Alberta.



Relying on his memory, Saint quickly finds trees containing carpenter ant colonies.

Did you know....

The main predator of pileated woodpeckers is the northern goshawk.



A northern goshawk on the nest with its chicks.