

Pileated Woodpecker Forage:

Conserving food sources

For planners and operations personnel

Conserving current and future cavity trees is not enough to ensure pileated woodpeckers continue to thrive in managed forests. Pileated woodpeckers also **need trees, logs, and stumps** that support the insects on which they feed. Especially important are the wood substrates that house **carpenter ant colonies**, the pileated woodpeckers' main winter food source.

An **awareness of pileated woodpeckers needs**, and advance planning can **make a significant difference** in maintaining the availability of pileated woodpecker habitat.

What is my role?

As a harvest planner, logging supervisor or machine operator, you can **play a key role** in pileated woodpecker conservation by **identifying and maintaining** important pileated woodpecker resources in the forest. By applying the following recommendations, you can help to conserve pileated woodpecker habitat with **minimal impact** on timber values.

Pileated woodpeckers eat mainly wood-dwelling insects though they also eat a variety of berries and fruit when available. Insects, especially ants, are obtained by excavating into wood and also by picking and gleaning insects off the surfaces of trees, logs and stumps. This fact sheet focuses on wood forage sites. This fact sheet will help you identify forage substrates and trees that may be used to excavate food in the future, as well as show you how to protect them

What do current foraging substrates look like?

In the winter, pileated woodpeckers forage primarily on stubs, snags and living trees. This sounds like just about every wood substrate in the forest! However, there are additional clues to indicate a current foraging site. Distinctive foraging signs of the pileated woodpecker include:

- ◆ Rectangular holes, with the long axis oriented along the tree trunk and excavated five centimeters or more into the sapwood at the base of the tree. These excavations result in scattered wood chips about the size of a Loonie.
- ◆ Trees with fine sawdust dumped outside at the tree base indicate that carpenter ants inhabit the tree. Carpenter ant colonies can be found in all tree species.



Fine sawdust around the base of this tree indicates carpenter ant activity.

- ◆ Pileated woodpeckers rarely forage on healthy trees because the insects they seek prefer unhealthy or dead trees. Almost all of the trees with foraging sign are either dead or live trees with some kind of damage or decay. These are often cull trees that wouldn't make good lumber or pulp. In summer pileated woodpeckers also forage extensively on logs and stumps.



This is an example of a rectangular hole excavated by a pileated woodpecker when foraging. Wood chips from the excavation can be seen on the ground.



The orange chipped bark marks the early stages of a pileated woodpecker excavation.

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.

What is suitable future forage?

Large trees and snags, and younger living trees that can be left to grow larger make suitable future foraging trees. Retaining live trees at different developmental stages that will die at different times over several decades will ensure a continuing supply of forage substrates.

How do I protect current and future forage sites?

Retain existing stumps, snags and living trees with visible rectangular holes as they are used repeatedly by pileated woodpeckers. Concentrate on living trees or relatively sound dead wood trees for retention as wobbly or soft trees have higher safety concerns and lower short and long term value for pileated woodpeckers.

- ◆ When safety is a concern, or to recover merchantable wood volume from trees with signs of foraging, “high stub” snags or living trees at or above three meters.
- ◆ Retain or high stub trees with base damage such as fire scars and stem cracks, or other defects such as conks and crooks.



Retain or high stub trees with fire scars.

- ◆ Retained trees should range from the individual foraging substrate to small clumps of trees surrounding it. Variety is important. Protect understory trees as these may develop into foraging substrates after several decades but still years before regenerated trees will develop suitable foraging characteristics.



Trees such as this with visible signs of forage should be protected or high stubbed.



This old stump is used as a food source by pileated woodpeckers.

How many trees should I protect and where?

- ◆ At the landscape scale, a minimum of five per cent retention of broadly distributed residual stands; at the cut block level, an average of at least two trees per hectare. For these trees, retain individuals and clumps in a variety of sizes and locations, well distributed within the block. This provides opportunities for more carpenter ant colonies.

- ◆ Widely distributed individual trees and clumps also help pileated woodpeckers to escape from hawks. When chased by a hawk, pileated woodpeckers fly to a tree and dodge around the trunk. They rarely forage more than about 50 meters from standing trees, probably to reduce predation risk. Trees in blocks increase their security and encourage them to forage in the entire block instead of just around the edges.



Individual trees and clumps of different sizes are retained in this clear cut.

The above recommendations are conservative guidelines. By following the recommendations and incorporating them into your daily practices, there will be an increased probability that pileated woodpeckers will continue to occupy managed forests.

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