

# Pileated Woodpecker Cavities:

## *Conservation methods*

For planners and operations personnel

Pileated woodpeckers play an essential ecological role by providing large cavities for a variety of wildlife that depends on cavities for shelter, food storage and reproduction. As such, the presence of pileated woodpeckers in the forest community may be a **good indicator of the health** of this cavity using wildlife community. Existing pileated woodpecker cavities should be protected because of their relative rarity, low rate of replacement and importance to other cavity dwelling species.

Pileated woodpeckers are especially fond of mixed woods and stands of deciduous trees found throughout the forest. Harvest practices can reduce the availability of key structural components of pileated woodpecker habitat such as large, decaying trees preferred for cavity nesting as well as wood substrates important for foraging. An **awareness of pileated woodpeckers' needs** and a small amount of 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.

### What does a pileated woodpecker look like?



Pileated woodpeckers are large black birds about the size of a crow, with red crests atop their heads, and black and white striped faces. They excavate large cavities in certain types of trees. This fact sheet will help you identify cavity trees, trees that may be used to excavate cavities in the future, as well as show you how to protect them.

### How do I identify a cavity tree?

You need not closely examine every tree in the forest as pileated woodpeckers have specific preferences. Keep your eyes open for trees with the following characteristics. Cavity trees:

- ◆ Are most often live or dead trembling aspen, but also balsam poplar or even dead coniferous trees if there are no deciduous trees present.
- ◆ Are large trees, greater than 30 centimeters diameter at breast height.



- ◆ Are used by a variety of other species. Don't be fooled if you find a boreal owl, red squirrel, American marten or a common goldeneye peering out at you.



- ◆ Have few branches on the main trunk and are often in or beside a small open area.
- ◆ Have one or more grapefruit-sized holes 3-15 meters high on the trunk of the tree.

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.



- ◆ Have signs of internal decay such as **conks**, large dead branches, branch stubs, trunk cracks and swellings.



- ◆ May have a pile of wood chips on the ground at the base of the tree.

## How do I protect cavity trees?

The protection strategy is simple!

- ◆ Avoid cutting down trees you have identified as cavity trees. Due to slow cavity production, it is important to retain every cavity tree.
- ◆ Use varying approaches to protect the cavity trees such as protecting a single tree to protecting the stand of trees surrounding it. Varying the number of trees left standing increases the probability that pileated woodpeckers and other species will continue to use them. If in doubt, ask a supervisor.



Two individual aspen trees were retained together during harvesting.



These aspen were retained clustered together.

## Cavities for the future

Pileated woodpeckers excavate a new cavity annually; therefore suitable trees must be available. Ensure that adequate numbers of trees with future cavity potential are also protected.

## What does a potential cavity tree look like?

- ◆ Pileated woodpeckers prefer to excavate in trees where decay has softened the wood. Conks, dead branches, branch stubs, trunk cracks and swellings are all strong indicators that decay is present while dead top, forked top, scars and galls sometimes indicate decay.
- ◆ Dead trees more than seven meters tall with broken trunks also have high potential value for pileated woodpeckers.
- ◆ Live trees without signs of decay are also potential cavity sites but



in the more distant future than those showing decay now.



Dead branches are strong indicators that decay is present in the tree.

## How do I protect trees suitable for cavities in the future?

Trees in three different stages need to be protected:

1. Any tree containing a cavity.
2. Live trees currently infected with heart rot fungus (visible conks) or with other external damage that supports current or future decay should be protected, as they are likely to stand longer than dead trees.
3. Some live trees without any visible decay should be retained for more distant future use, as they will likely develop into suitable cavity trees for pileated woodpeckers.

Some younger stands, particularly pockets of trembling aspen that can be expected to develop into large trees in the future should be retained. Focus on deciduous or mixed stands in areas where deciduous species occur and particularly where deciduous species are relatively uncommon.



These conks indicate this tree is infected by heart rot fungus.



## How many trees should be protected and where?

- ◆ A minimum of five stands each at least five hectares in size for each 2,000 ha area.
- ◆ Remember to vary the approach from small groups of trees to clumps or patches.
- ◆ It is unnecessary to retain potential cavity trees in all harvest areas, especially if the preharvest stand does not contain deciduous species.
- ◆ If younger stands and trees have been reserved as potential future cavity trees, they must be protected long enough to allow them to develop into trees large enough to meet pileated woodpecker needs.



These aspen trees, left as residuals, must be retained as they grow and decline. They will not become suitable trees for pileated woodpecker cavities for many years.



Clumps of aspen trees are left behind as residuals.

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

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