

Pileated Woodpecker Management

Improved management conserves habitat

Pileated woodpeckers play important ecological roles in the Foothills forests of Alberta, Canada. They are a major predator of wood dwelling forest ants. They are indicator species for other species that rely on dead and decaying wood in the forest—meaning, that the presence of pileated woodpeckers suggests these other species are likely to be present. Finally, pileated woodpeckers create large cavities that are used by many cavity dwelling species like the boreal owl, American marten and even ducks such as the Barrow's goldeneye. Without these cavities excavated by pileated woodpeckers year after year, other cavity users would compete for the few natural cavities available and their existence and survival could be imperiled.



The Foothills forests of Alberta Canada.

Challenges: past and present

Pileated woodpeckers across North America were threatened in past centuries by widespread land clearing for agricultural development and human settlement as well as by uncontrolled hunting. Populations continue to recover from these impacts. Much of the land cleared for agriculture in eastern North America has returned to its native forest state and pileated woodpeckers are a protected species. Today pileated woodpeckers face new challenges in the form of timber management as harvest practices of recent decades have reduced the supply of large, dead trees that pileated woodpeckers need. Enlightened forest managers are now taking a proactive approach to ensure the successful conservation of pileated woodpeckers.



Two aspen trees grow undisturbed after wild fire burned the surrounding forest. They may eventually develop decay characteristics preferred by pileated woodpeckers.

Consequences of habitat loss

Pileated woodpeckers depend on large trees that are dead or decaying for nesting and roosting. They forage on logs, stumps, snags and live declining trees. These trees are associated mainly with mature forests but they are also found in younger forests as islands of trees left standing following a natural disturbance such as fire or disease, or following manmade disturbances such as logging. When fewer suitable trees remain available, the birds are forced to seek out vital resources in ever enlarging territories. As territory size increases, the overall population density in a region declines and there are fewer pileated woodpeckers. Fewer birds result in a reduced number of cavities excavated in an area, and many large cavity dwelling species may be left without shelter.

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.

Current equilibrium, uncertain future

A recent study of pileated woodpecker habitat ecology in the Foothills forests of Alberta discovered a surplus of pileated woodpecker cavities. More than enough cavities are presently available for pileated woodpeckers and other cavity using species. However, potential losses from fire, logging and other disturbances could reverse this situation. Pileated woodpecker cavity production is slow, averaging just over one cavity per year per pair of pileated woodpeckers. Therefore, any cavity losses take years to replace. Natural losses are inevitable but manmade losses can be limited or avoided.



A pileated woodpecker cavity in an aspen tree.

Taking positive steps



This aspen was left behind after timber harvesting and has become home to a pileated woodpecker cavity.

A number of positive steps can be taken to conserve pileated woodpecker habitat. The first step should protect current cavity and forage resources.

Pileated woodpecker cavities are sturdy and can last for decades in the forest. Forest managers should attempt to identify and protect existing cavity trees. Wood substrates such as living declining trees, stumps and snags are important for foraging and should also be identified and retained on the forest landscape.

Did you know....

Pileated woodpeckers don't migrate. They are year round residents of certain forested habitat in Canada.

However, conserving the trees and wood substrates needed for current nesting, roosting and foraging needs is not enough. The second step should manage for a continuing supply of trees and substrates for future cavity production and foraging. This will help generations of pileated woodpeckers persist and prosper. Forest managers should identify and safeguard trees that will eventually decay and become prospective cavity trees or foraging substrates.



Young aspen left to grow for the future foraging and cavity needs of pileated woodpeckers.