

# EXTENSION NOTES



## CAVITY TREES ARE REFUGES FOR WILDLIFE

To many people, trees with one or more holes in the trunk don't seem worth keeping. Yet to many birds and mammals, these "cavity" trees are a vital source of food, shelter, and safety.

By letting cavity trees remain on your property, you can provide important habitat for wildlife.

### WHAT ARE CAVITY TREES?

Cavity trees are trees that have one or more holes in the trunk or main branches. Some cavities are excavated by birds, whereas others are created by decay associated with wounding or branch mortality.

In Ontario, more than 50 species of birds and mammals depend on cavity trees for nesting, rearing young, roosting, feeding, storing food, escaping predators, or hibernating. The bird and mammal species that use tree cavities are divided into two groups. Primary cavity-users are able to excavate their own cavities. In contrast, secondary cavity-users rely on cavities excavated by primary-users and on naturally occurring cavities. Examples of primary cavities users include woodpeckers, chickadees, and the red-breasted nuthatch. The list of secondary cavity users is extensive and includes saw-whet owl, barred owl, and kestrel, as well as several species of waterfowl (e.g., common goldeneye and wood duck). Many songbirds, including eastern bluebird, great-crested flycatcher, and white-breasted nuthatch are secondary cavity users. Various mammals also rely on existing cavities for denning, resting, and escaping predators. They include deer mice, martens, fishers, raccons, porcupines, squirrels, weasels, and even black bears.



## WHAT WILDLIFE LOOK FOR IN A CAVITY TREE

Not all cavities are the same. The size, shape and location of cavities determine how wildlife species use them. Generally speaking, cavities fall into four categories:

- nest or den cavities
- roost cavities
- escape cavities
- feeding cavities

### NEST OR DEN CAVITIES

Although generally referred to as nest or den cavities, this type of tree cavity might be used by numerous species for a variety of purposes including: rearing young, overwintering, roosting, and short-term shelter from adverse weather conditions or predators.

Many of these cavities are excavated by primary cavity users as nesting sites. Their entrances are typically circular, with





Natural cavity



Excavated cavity

clean edges and surfaces. The hole may appear dark because it leads to a hollow chamber. Cavities created by wounding or broken branches are often more irregular in shape.

Typically a primary users, such as woodpeckers, will nest in a cavity only once, preferring to excavate a new nest hole in the same or different tree the following year. Most primary users choose trees with some degree of decay and some bird species are quite selective. The pileated woodpecker will generally excavate a nesting cavity in a large living tree with some degree of heart rot, the downy woodpecker prefers dead branches on living trees, and the northern flicker prefers dead trees.

Once a primary user has abandoned a nest hole, it becomes a valuable site for other birds or mammals. Many secondary cavity users will use either natural or excavated cavities and often select the smallest cavity they can enter. A tight fit can reduce predation.

### ROOST CAVITIES

Roost trees are used as safe resting sites for a variety of birds and mammals. Pileated woodpeckers, for example, create roosting trees by excavating many holes along the trunk of a hollow tree. At night they enter the hollow by one of the holes and cling to the inside and sleep. This gives them many exits to choose from if a predator tries to trap them inside. Some species may roost in large groups, such as the threatened chimney swift. With the decline of accessible chimneys in urban areas, the presence of large hollow trees for nesting and roosting may be critical to this species.



Pileated woodpecker nesting cavity



Flying squirrel in roost cavity

## ESCAPE CAVITIES

Not all natural tree cavities are suitable for nesting, denning, or roosting because of the location or size of the cavity. However, these cavities may provide temporary shelter from the elements or protection from predators. These are called escape cavities.

## FEEDING CAVITIES

Birds excavate feeding cavities to find food, such as carpenter ants or the larvae of wood-boring beetles. Because they are rarely used for nesting, denning, or roosting, feeding cavities are not as valuable to wildlife as other kinds of cavities.

Feeding cavities can look like excavated nest holes, but most are more irregular in shape and have rough edges and surfaces. The holes appear lighter in colour because they don't lead to large hollow chambers.

## RETAIN CAVITY TREES ON YOUR PROPERTY

In southern Ontario, the early logging practices of the 1800s and 1900s removed only the healthiest of trees, leaving an abundance of cavity trees for wildlife. However, as harvesting operations began to follow silvicultural principles that focused on improving timber quality, the number of cavity trees began to decline.

Today, loggers, woodlot owners, farmers, and urban dwellers are being encouraged to retain cavity trees when possible. The following guidelines will help you choose the cavity trees that are most valuable to wildlife.

- Leave at least ten living cavity trees on each hectare of land.
- Leave large diameter cavity trees where available (greater or equal to 25 centimetres, preferably greater or equal to 40 centimetres).
- Trees with nest, den, or roost cavities are the most valuable—trees with only escape cavities and feeding cavities are less valuable.
- Choose trees that have cavities in the upper trunk. They are more valuable than cavities in the lower trunk.

- Leave cavities of all sizes, but give priority to big cavities. They tend to be less common and provide habitat for more species than small cavities.
- Retain potential cavity trees (trees that appear to have rotten centres) when there is a shortage of trees with existing cavities.
- Leave a variety of tree species as some trees form cavities less readily but will stand for a long time and others will form cavities more readily but stand for less time.
- Leave cavity trees that have a low risk of blowing down.
- Remove trees that pose a risk to human safety or property, such as leaning or dead trees.



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