

10 RECOMMENDATIONS

December 2020

TO HELP YOU MANAGE ASH IN YOUR WOODS IN THE FACE OF EMERALD ASH BORER AND CLIMATE CHANGE



Photo by Alexandra Kosiba

Ash is an important part of the forests in the Northeast. If you are lucky to have ash trees in your woods, they bring unique assets. Sadly, ash species are facing attack by the Emerald Ash Borer (EAB), an invasive wood-boring insect that feeds on ash trees. EAB has been present in the U.S. since 2002, but in the last few years it has spread to the Northeast, posing a grave threat to the survival of our ash. All three ash species in the Northeast -- white, black, and green ash -- are listed as critically endangered by the International Union for Conservation of Nature (IUCN) because of the threat from EAB. Added to this, we are also facing impacts from climate change. But with thoughtful management we can give ash a fighting chance. Often when there is a threat to the forest, the first reaction is to act quickly, but if we learn from past forest outbreaks (like the spread of chestnut blight in the early 1900s) it pays to be careful about what we do so that we don't lose ash completely. If your woodlot contains ash trees, you will have to weigh the important benefits of ash along with the threats of both EAB and climate change.



Above: Abenaki basketmaker, Jesse Larocque weaving an ash basket
Below: Ash pack basket made by Jesse Larocque

There are a number of important reasons why you should protect ash in your woodlot:

Ash trees are an important aspect of Northeast culture and heritage. Black ash is valued as a spiritual resource and used for basket-making and other traditional lifeways for Indigenous people whose ancestral lands intersect the range of this species. The wood of white ash is preferred for making baseball bats because of its high flexibility, and is prized by woodworkers for use in furniture, cabinets, and flooring. Green ash is widely planted in towns and cities, ironically, often in places where American elm was eliminated due to Dutch elm disease.

Ash trees provide vital support for wildlife. Ash trees provide food and shelter to many species of insects, amphibians, mammals, and birds. Several animal species feed on ash seeds, like squirrels, mice, and turkeys. Large white ash are one of the best trees to form hollow cavities used by a variety of wildlife species, like porcupines and bats. Green and black ash often grow in wetland environments and their leaves are a particularly important high-quality food source for tadpoles, caddisflies, and aquatic organisms, which are then consumed by fish and amphibians.

Ash trees influence local forest ecology and resilience. Because ash leaf-out later in the spring than most other tree species in the Northeast, sunlight is able to reach the forest floor for a longer period. This is important for spring ephemerals -- wildflowers, like trillium and spring beauties, that emerge and flower quickly before the tree canopy closes in and creates dense shade. In the fall, ash shed their nutrient-dense leaves, and in doing so alter the properties of the soil around them. Ash are fast growing and able to colonize disturbed areas and grow more quickly than many other species - a key trait in a changing climate. Along streams, green ash helps to retain soil and provides shade. In wetlands, black ash helps to keep water levels steady and limits flooding. Because ash has unique ecological traits that are not shared by many other tree species, they can help create diversity and add resilience to your forest.

With the values and benefits of ash trees in mind, consider these tips to support ash survival in your woods.

1. RESISTANCE IS THERE, AND THERE IS HOPE IN RESISTANCE

Not all ash trees will be killed by EAB. Of the three species of ash in the Northeast, black and green ash show little resistance to EAB, but some white ash are able to survive. Maintaining healthy white ash across the landscape provides the greatest chance of ash survival. Hope can change your outlook on how to manage ash.

2. THERE IS VALUE IN LEAVING ASH IN THE FOREST

As a landowner, you'll have to decide how to balance your financial and ecological goals as you manage the ash in your woods. Understanding the important ecological benefits of keeping ash in the forest will enable you to strike the right balance in your management approach.

3. MANAGE THE FOREST, NOT THE INSECT

Sound, ecologically based forestry is the best way to manage forests, including those threatened by EAB. Every forest will react differently to EAB, but in general, management that increases species diversity and promotes regeneration will create forests that are more resilient to future stresses, including impacts from EAB.

4. AVOID HARVESTING JUST THE LARGEST ASH TREES

Decades of research and experience have shown that harvesting only the biggest trees ('diameter-limit cutting') leads to degraded forests over time. Retaining healthy, vigorous trees across a variety of sizes will maintain a complex and genetically diverse forest into the future. Plus, large trees have important and unique functions in a forest, like storing large amounts of carbon and providing nesting sites for animals.

5. KEEP FUTURE OPTIONS, INCLUDING FUTURE ASH

Researchers have yet to find a harvest treatment that is effective at reducing the impacts of EAB on overstory trees, so it is critical to retain a range of age classes and promote ash regeneration. Although ash seedlings are tolerant of shade, as ash age they require larger openings in the canopy in order to grow (openings need to be at least a quarter of an acre). To help ash regenerate, keep large, healthy ash trees as a source of pollen and seed and make sure there are openings in the canopy for future ash to grow into.

6. SPEAKING OF POLLEN AND SEED, KNOW THAT THERE ARE SEPARATE MALE AND FEMALE ASH TREES

If you want to make sure that you are retaining seed trees, you will need to identify which ash trees are female. Sexing ash trees can be challenging because there are usually fewer female ash trees than male ash trees in a forest and ash does not flower every year (in fact, it may be more than 5 years between flowering). The easiest way to find a female ash tree is to locate a tree that is dropping seeds in the late summer. If you need help identifying the sex of your ash, contact a forestry professional.

7. EXPLORE INTEGRATED PEST MANAGEMENT (IPM) TECHNIQUES TO COMBINE COMMON-SENSE METHODS AND PRACTICES RIGHT FOR YOUR LAND

Our understanding of managing ash and EAB is improving rapidly. Before you plan a harvest, speak with a professional forester about what EAB management techniques are being used in your area. Insecticides that target EAB are available, but they involve frequent reapplications (every 2-3 years) and some are not suitable for use near water bodies. This management technique may be best suited for specimen ash, ash growing near homes, roads, or other infrastructure, or to protect seed trees.

8. ADDRESS THE IMPACTS OF CLIMATE CHANGE IN YOUR WOODS THROUGH GOOD FOREST MANAGEMENT

In addition to EAB, climate change is creating great uncertainty about the future of our forests, but there are things you can do to help your woods be better equipped to face oncoming change. A forester can identify the likely impacts that your woods may experience in the next few decades and incorporate these threats into the management plan. Both white and green ash are projected to do well in a changing climate, but they need to survive EAB first. Forest management can create more variation in the size and species of the trees in your woods, which can help the forest recover after a disturbance - whether from EAB or climate change.

Photo by Alexandra Kosiba



9. KNOW WHERE YOUR ASH TREES ARE LOCATED

Whether along your favorite trail, in your yard, hanging over your barn, along a stream, or scattered in your woods, knowing where your ash trees are located will help you decide the best way to manage them and their EAB-associated risk. Consider varying your management based on how you use your land. You may choose to remove potential hazard trees in highly used areas or to use insecticide on a prized ash near a homestead. If you plan to do a timber harvest, understanding which parts of your forest have ash and how much there is will allow you to make sound management decisions that meet your economic and ecological goals.

10. SEEK HELP FROM FORESTRY PROFESSIONALS

Your state's forest agency or forest extension office can help you find local information and connect with a professional forester for advice on managing the ash on your property. They can help you understand the risk of EAB arriving in your woods based on other known infestations and can help you assess if EAB has already arrived. Be mindful that there are other reasons why ash trees may decline and die that are not related to EAB. For more information, reach out to the following:

Maine	Maine Forest Service EAB Information - www.maine.gov/eab Maine Forest Service District Foresters - https://www.maine.gov/dacf/mfs/policy_management/district_foresters.html
New Hampshire	NH Bugs - https://nhbugs.org/ UNH Cooperative Extension County Foresters - https://extension.unh.edu/countyforesters
Vermont	VT Invasives - https://vtinvasives.org/land/emerald-ash-borer-vermont VT Forests, Parks and Recreation County Foresters - https://fpr.vermont.gov/forest/list-vermont-county-foresters

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