Fraxinus spp.

Brown Ash
White Ash
Green Ash

Native to Maine

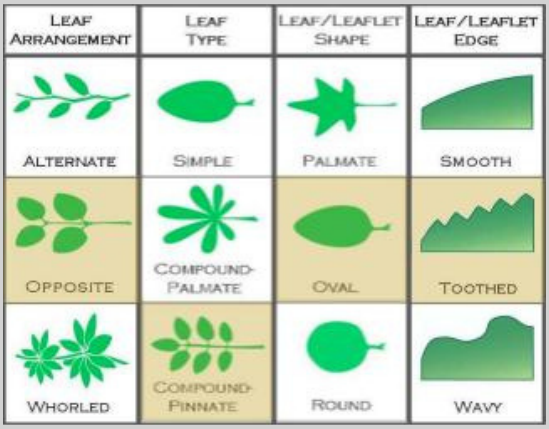
Leaves

Maine Forest Service

Maine Forest Service

Gilles Ayotte, (Bibliothèque de l'Université Laval)

Compound leaves with multiple smaller leaflets. 5-13 total leaflets arranged in opposite pairs with one at the end.
From left to right: White Ash, Green Ash, Brown Ash



Leaf arrangement: opposite
Leaf type: compound pinnate
Leaflet shape: oval
Leaflet edge: toothed

Bark

Maine Forest Service

Keith Kanoti, Maine Forest Service

Keith Kanoti, Maine Forest Service

Young ash trees (far left) have a smooth appearance. Older trees can have a diamond-shape pattern of ridges (center) or a corky appearance (far right) as with Brown ash

Branching

Denver Parks and Recreation

Branches and buds are opposite.

Seeds

Groups of flat, oar-shaped, dry seeds.

MPF, own work

Keith Kanoti, Maine Forest Service

Trees often mistaken for ash:

and their distinguishing characteristics

- Mountain Ash: berries and many leaflets
- Boxelder: leaf shape and 2-sided seed
- Shagbark hickory: bark and seed
- Elm: alternate leaflets
- Black Walnut: seeds and many leaflets
- Prickly Ash: bark

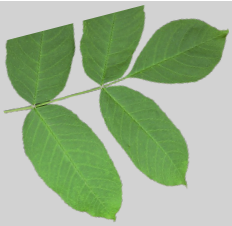
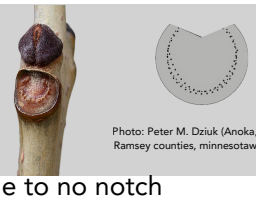
Source: Maine Forest Service

Gulf of Maine Research Institute

Fraxinus spp.

Native to Maine

Distinguishing characteristics of White, Green, and Brown Ash

	White Ash *Fraxinus americana*	Green Ash *Fraxinus pannsylvanica*	Brown Ash *Fraxinus nigra*
Leaves	 korina.info, korina.info	 Gilles Ayotte, (Bibliothèque de l'Université Laval)	 Gilles Ayotte, (Bibliothèque de l'Université Laval)
	• 5-9 leaflets (usually 7) • Leaflets attached by small petiole (stem attachment) • Leaves turn red-purple in fall	• 7-9 leaflets • Leaflets attached by small petiole (stem attachment) • Leaves turn yellow-bronze in fall	• 7-11 leaflets • Leaflets attached directly to stem • Leaves turn yellow-green in fall
Buds	 Agricultural Research Service, USDA	 Agricultural Research Service, USDA	 Agricultural Research Service, USDA
	• Blunt and rounded • Brown • 1/8 inch	• Cone shaped • Brown with red hairs • 1/8 inch	• Sharp end • Dark or black • Smaller than 1/4 inch
Leaf Scar	 Photo: Peter M. Dziuk (Anoka, Hennepin and Ramsey counties, minnesotawildflowers.info)	 Photo: Peter M. Dziuk (Anoka, Hennepin and Ramsey counties, minnesotawildflowers.info)	 Photo: Peter M. Dziuk (Anoka, Hennepin and Ramsey counties, minnesotawildflowers.info)
	• Deep notch • Crescent-shaped bundle scars	• Moderate sized notch • U-shaped bundle scars	• Little to no notch • Bundle scars almost circular
Bark	 Rob Duval (own work)	 Jim Robbins (North Carolina State Extension)	 Keith Kanoti, Maine Forest Service
	• diamond-shaped pattern on bark	• Slightly furrowed bark with woven appearance	• Irregular, flakey bark - "corky" • Gray-brown
Seeds	 Emily Francis, Ash Protection Collaboration Across Wabanakik	 Emily Francis, Ash Protection Collaboration Across Wabanakik	 Emily Francis, Ash Protection Collaboration Across Wabanakik
	• "funnel-shaped"	• narrow, pin-shaped	• "canoe-shaped"

Source: Maine Forest Service, Ash Protection Collaboration Across Wabanakik, New York Botanical Garden Field Guide to the Ash Trees of the Northeastern United States

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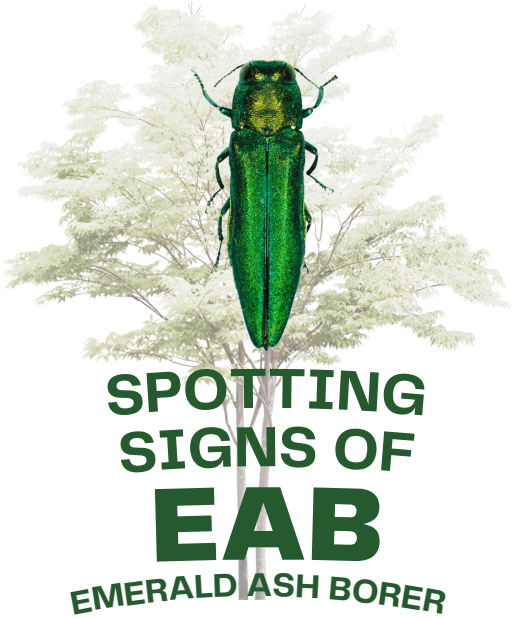
Crown Dieback

or canopy thinning

EAB larvae feed under the bark cutting off the tree's ability to move water and nutrients, which causes the leaves to die.



SPOTTING SIGNS OF EAB

EMERALD ASH BORER

Epicormic Shoots

When trees are in distress they send out new growth towards the bottom of the tree.

D-Shaped exit holes

When EAB adults exit the tree they leave behind D-shaped holes.

Emerald Ash Borer

Agrilus planipennis

First identified in Maine in 2018, the EAB attacks all true Ash trees (*Fraxinus spp*). If you spot an EAB or signs of EAB damage in an Ash tree in your area, please contact the Maine Forest Service.

https://tinyurl.com/EABinMaine

Snake-Shaped Galleries

EAB leave snake shaped channels just under the bark as the larvae feed.

Woodpecker Activity

or "blonding"

As woodpeckers search for insects and larvae in the bark, they create a "blonding" effect by tapping off bits of bark.

Bark Splitting

When EAB feed under the bark, trees try to cover the wounds. This causes the bark to split vertically

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Source: Maine Dept. of Agriculture, Conservation & Forestry, University of Wisconsin-Madison Ext. Photo Credits (clockwise from top right): Edward Czerwinski (Ontario Ministry of Natural Resources), Kelly Oten (NC State Ext), PA Department of Conservation and Natural Resources - Forestry, Joshlaymon (Own work, Wiki-Commons), Kenneth R. Law (USDA Bugwood.org), Rebecca Hargrave (Cornell Cooperative Extension), Daniel Herms (Ohio State University, www. bugwood.org), PA Department of Conservation and Natural Resources, Howard Russell, Michigan State University, Bugwood.org

Fraxinus spp.

Male vs. Female Ash Trees

Native to Maine

Female Ash Tree

Bebeau, 2013

Budding of female tree

iNaturalist

Stringy ends where seeds are attached

Tyler Everett (own work)

Dried ends where seeds would have been attached

MPF, own work

Brown Ash Seed from Female Tree

Male Ash Tree

Bebeau, 2013

Darlington, 2018

Tuft-like flowers on the branches of ash trees

Source: Ash Protection Collaboration Across Wabanakik, iNaturalist, Maine Forest Service

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