
WSU Extension Forestry

Welcome to the Forestry Lunch Breaks!

We'll get started promptly at 12PM

In the meantime, please remember to set your chatbox "To" setting to "Everyone" so your questions get shared to the group

This webinar will be recorded, links to recordings will be sent out early next week along with chatbox transcripts and any additional resources



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Forestry Lunch Breaks: Benefits of Western WA Hardwoods

Oregon Ash (*Fraxinus latifolia*)

Patrick Shults, WSU Extension


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The Basics

Scientific name: *Fraxinus latifolia*
Family: Oleaceae
Height: 60-80 ft
Diameter: 16-30 in
Crown: ~50 ft spread
Age: Up to 250 years
Notable features:

- Critical wetland species
- Niche habitat, can be dominant overstory species
- Washingtons only native ash
- Member of the olive family





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Identification

Leaves: compound, pinnate leaves (4-13" long), 5-9 leaflets, leaflets ovate (2-4" long)
*chocolate chip buds in winter
Leaf/twig arrangement: Opposite
Bark: Smooth, gray-brown when young turning brown and furrowed with diamond pattern with age
Flowers/Fruit: Flowers in mid-spring, develops single-winged samaras
Habitat/range: California to SW WA, wet, poorly drained soils
In WA – typically restricted to southwestern WA, especially in the Chehalis and northern Willamette valleys



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Silvics - Regeneration

- Reach sexual maturity around thirty years
- Dioecious – separate male and female trees
- Small greenish flowers appear in April or May
 - Wind-pollinated
- Ripen into oblong, single-winged samaras in August or September
- Heavy seed crops every 3-5 years
 - Dispersed by wind through fall and winter
- Also reproduces vegetatively (stump sprouts)



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Silvics – Growth and Succession


- Niche species, able to grow in conditions most other species cannot
- Moderately shade intolerant, seedlings can establish in shade for a period
- Slower growth than alder or maple but better than oak
 - Best growth in first 60 years
 - 1-2' height growth per year
- Shallow but wide spreading roots
- Resistant to ice, snow, and windthrow
- Understories susceptible to reed canary grass (noxious weed)



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Damage and Disease Agents



Insects

- Thysanocnemis weevils (seed)
- Fall webworm
- Oregon ash bark beetle

Fungus


- Powdery mildew
- Armillaria
- Leaf spot fungus

Others

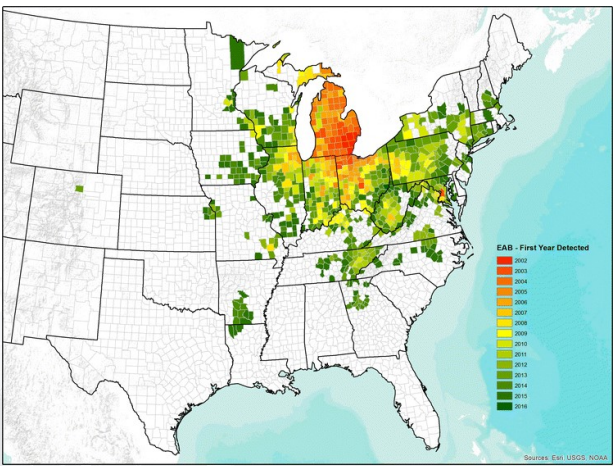
- Mistletoe
- Deer/elk browse

Little or no ecological/economic damage

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Emerald Ash Borer



Background

- From China
- Established in Detroit in mid 1990's (identified in 2002)
- Secondary pest in Asia, devastating pest to *Fraxinus* species in North America
- Now in 35 states and 5 provinces
- Most devastating invasive insect in U.S. history
- Damage significant in urban/peri-urban areas
- Up to 95% mortality (depending on *Fraxinus* species)

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Emerald Ash Borer

Identification

Agrilus planipennis (Buprestidae)

0.3-0.5 inches long

Long, skinny

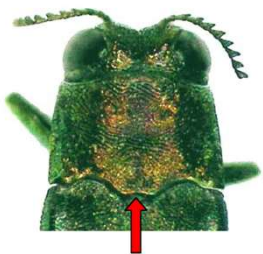

Metallic, emerald green color (sometimes w/ hints of copper)

Coppery undersides

Cylindrical shape


Many lookalikes

Bores below bark, feeds on phloem/cambium



Pronotum in *Agrilus* produced backward as lobe

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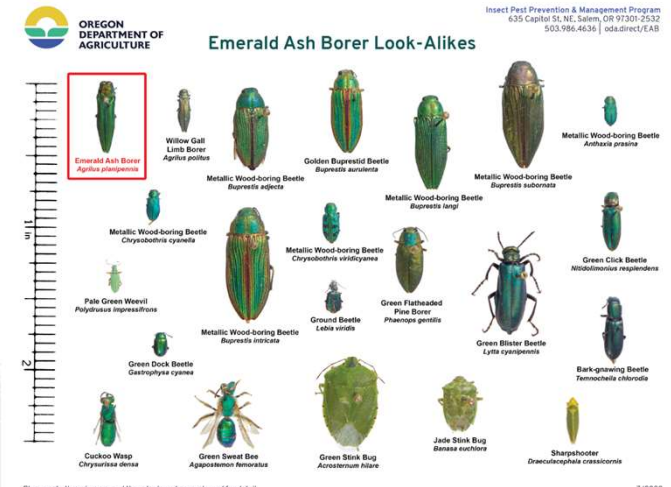
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OREGON DEPARTMENT OF AGRICULTURE

Emerald Ash Borer Look-Alikes

Insect Pest Prevention & Management Program
625 Capitol St., NE, Salem, OR 97301-2532
503.986.4636 | oda.direct/EAB

Please note these images and the ruler have been enlarged for detail.

7/2022

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Emerald Ash Borer

Symptoms


- Canopy dieback
 - Top-down damage
- Epicormic shoots
- Bark splitting
- Increased woodpecker activity

Signs

- Serpentine larval galleries and/or larval presence
- D-shaped exit holes



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Potential Impacts in WA


Urban Spaces

- Losses to urban canopy (heat bubble, stormwater)
- Increase in hazard trees (potential injuries/damage, cost of removal, reduced property value)
- Disproportionate effects on low-income communities
- Costs of ash treatment (long-term)


Forested Settings (Oregon ash)

- Increased temperatures in riparian areas
- Loss of soil stabilization
- Changes in hydrology (transpiration loss)
- Establishment of noxious weeds

Emerald Ash Borer




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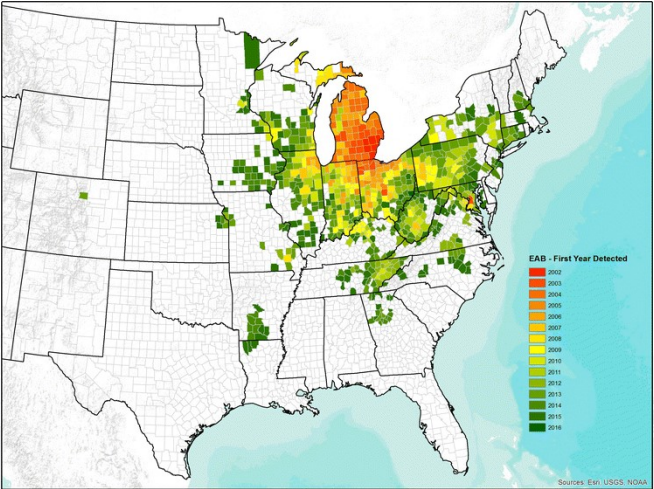
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What can landowners do?

- Don't move firewood!
- Stay up to date
- If you own ash, watch for the signs/symptoms
- If you think you see EAB, take pictures or capture a sample to get professional help identifying



Emerald Ash Borer



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Ecological Role and Importance

- Long-term dominant (climax) species on poorly drained areas, slow moving streams, floodplains, heavy clay soils
 - Sites that cannot sustain other trees, including cottonwood
- On slightly drier sights it can be a component of mixed stands
- Associated species: cottonwood, red alder, bigleaf maple Oregon white oak, willow, snowberry, wild rose
- Relatively shade intolerant
- Important riparian species




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Ecological Role and Importance

- Importance to wildlife:
 - Often provide critical habitat in bottomlands and valleys where agriculture dominates land use
 - Deer/elk browse foliage
 - Beaver feed on bark and use stems for dams/lodges
 - Foliage consumed by butterfly larvae
 - Seeds eaten by birds and small mammals




Photo: Tim Giraudier

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Indigenous Uses:

- Ash species are sacred to some tribes in the eastern U.S, less known about western use of Oregon ash
- Wood used to make small tools, pipes, digging sticks, instruments, and canoe paddles
- Roots used to make baskets
- Infusion of twigs used for fevers
- Mashed roots used to treat wounds
- Fuelwood



Native American Ethnobotany Database (<http://naeb.brit.org/>)

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Uses/Products


Characteristics

- Moderately hard, heavy wood
- Intermediate strength/bending, high impact resistance
- Machines easy (planing, turning)
- Non-durable, not suited for outdoor use

Wood products

- Furniture
- Cabinets
- Flooring
- Crates/pallets/boxes
- Pulp
- Baseball bats*
- Makes great firewood (but don't move it!)

Rarely harvested for commercial value in Washington, often subject to riparian zone restrictions




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- Not commonly planted for commercial timber (no known plantations), mostly natural regeneration or species used for restoration activities
- **Not currently recommended for planting because of EAB**
- Site selection – most competitive on excessively wet sites but can grow well on upland sites with high water tables
- Site preparation – seems to compete well in grasses but removal of competing vegetation will support early growth
 - Chemical options may be limited
- Seedlings not commonly sold, but germination is relatively high using collected seed

Management - Planting




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Management – Young and Mature Stands

- Thinning in young stands can support vigorous growth and clean timber
 - Can respond to thinning even in older ages (40-50 years)
- SLAM Management for EAB (slow ash mortality)
- Diversification of stands through underplanting and small openings may improve resilience to EAB
 - More to come on this ...



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Other WA Hardwoods



Pacific madrone
Arbutus menziesii



Black cottonwood
Populus trichocarpa




Western paper birch
Betula papyrifera commutata



Bitter cherry
Prunus emarginata

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Thanks for tuning in!


Check out these upcoming events!
[Forestry Lunch Breaks: Birds of WA](#)
[Online Forest Stewardship Coached Planning](#)

Go to **forestry.wsu.edu** to learn more and sign-up

Please take a few moments to let me know what you thought of this program (link in chat)

... And topics you'd like to see covered in future lunch break series!

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Questions?

Patrick Shults, patrick.shults@wsu.edu

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