

# OREGON TREE HEALTH THREATS



June 2024

**Square miles known to be infested with EAB: 10.4**

*This monthly newsletter gives updates and resources on emerging threats to the health of Oregon's trees in natural and managed landscapes. It is published by the Oregon Department of Forestry with the collaboration of other state, regional, federal, Tribal, and local agencies and organizations. To subscribe, email [jim.gersbach@odf.oregon.gov](mailto:jim.gersbach@odf.oregon.gov)*

## In this issue:

- *New ODF publication offers guidance on what to do with ash wood*
- *ODA girdles Oregon ash trees in ring around Forest Grove to slow EAB spread*
- *June 12 is forecast as date adult EAB will begin to emerge in NW Oregon*
- *Cornelius begins to treat street trees to protect them from EAB*
- *Scientists sequence genome of Oregon ash tree for first time*
- *Traps placed in Wilsonville to learn more about Mediterranean oak borer*
- *APHIS provides traps to help with EAB detection*
- *EAB educational walks scheduled at Silver Falls State Park on June 1<sup>st</sup>*
- *Centro Cultural in Cornelius adopts Latino students' plan for managing ash trees*

## **New publication on what to do with ash wood is now available from ODF**

Emerald ash borer has spread widely across the country inside ash wood that people move long distances. To slow the spread of EAB within Oregon, the Oregon Dept. of Agriculture has placed a quarantine on Washington County prohibiting the movement of untreated or unprocessed hardwood out of the county. To help people comply with quarantine regulations, the Oregon Dept. of Forestry has published a two-page document. It explains why a quarantine is needed and ways ash wood can be treated to kill EAB larvae. Find it at <https://www.oregon.gov/odf/forestbenefits/documents/eab-what-to-do-with-ash-wood.pdf>

## **ODA looks to trap EAB in ring of girdled ash trees around Forest Grove**

In May, people working for the Oregon Dept. of Agriculture girdled (with landowner permission) 51 Oregon ash trees on 9 properties surrounding Forest Grove at a distance of up to two miles. Chemical distress signals the trees give off will help lure female emerald ash borers to come lay their eggs on those trees. In June, ash trees near the trap trees will be treated with emamectin benzoate to keep them safe from spillover attacks. Then this fall, the girdled trees will be cut down and examined to see if larvae are present and in what numbers. According to ODA the trees will serve as a population sink, helping reduce EAB numbers in the already infested area and slowing its outward spread.

Farther out from those trees, ODA is girdling one ash tree about every quarter mile in a ring around the known infested area. About 125 trees have been girdled on 60 properties, with one to three nearby ash trees to be treated to prevent spillover. The goal is to measure the density of EAB and capture EAB that may be headed out from the infested area.

From four to 11 miles from the epicenter of the infestation, 45 ash trees spaced about a mile apart are being girdled on three dozen different properties. These will serve as “sentry trees”, a kind of early-warning system to see if any EAB have moved beyond the known area of infestation. They will also be cut down and inspected this fall. That will give ODA an early indication of how far and in what direction EAB may be spreading.



## **EAB adults in Oregon should start to emerge around June 12**

Modeling is forecasting June 12 as the most likely date for emerald ash borer adults in Washington County to start emerging, with peak emergence in July. A few larvae may not mature until later in the summer, and can emerge as late as September or early October. Adults are small and hard to see. EAB is usually detected by noticing canopy decline in ash trees, telltale D-shaped exit holes, cracks in ash bark, or the flaking of bark by woodpeckers trying to get at the larvae. Read more at [eab-monitoring-guidance.pdf](http://eab-monitoring-guidance.pdf) ([oregon.gov](http://oregon.gov))

As an adult, EAB causes only minor damage to ash foliage. However, females can fly up to a couple miles and spread the population to new areas. Because larvae can emerge even from downed logs and firewood, it is important to properly treat or dispose of ash material prior to adult emergence. Effective methods include burning, chipping to pieces less than 1 inch in any dimension, or heat-treating wood in a kiln for at least an hour at 160 degrees Fahrenheit). Read more at

[https://www.oregon.gov/oda/shared/Documents/Publications/IPPM/PermanentEABQuarantine Flyer](https://www.oregon.gov/oda/shared/Documents/Publications/IPPM/PermanentEABQuarantineFlyer).

## **Cornelius is treating its street trees to protect them from EAB**

To protect them from EAB, urban ash trees in Cornelius are being treated by the private firm SavATree. The City of Cornelius contracted with SavATree to treat ash street trees. EAB was confirmed in Cornelius only last year when a few trees in two local parks were found to be infested. Prompt treatment of ash in surrounding neighborhoods should ensure they remain uninfested, according to ODF’s Urban and Community Assistance Forester Alison Herrell.

“Experience with treating ash trees with emamectin benzoate injections in the eastern U.S. has shown it provides excellent (95% or more) protection if applied before EAB attacks or at the earliest stages of infestation,” said Herrell.

## Scientists sequence the genome of Oregon ash for the first time

The full genome of a 60-foot-tall female Oregon ash tree in Jackson Bottom Wetland Preserve has been sequenced, making it the first of its species to undergo this process. Wyatt Williams, an Invasive Species Specialist with the Oregon Department of Forestry, collected all the plant material for the genome sequencing.

The material was sent to Jill Hamilton at Pennsylvania State University's Schatz Center for Tree Molecular Genetics. This genetic information will be used to develop resources for future breeding work in *Fraxinus*, focusing on resistance to EAB. To ensure the tree's potential for



future testing and propagation, it has been treated to protect it from EAB and fenced to guard against beaver damage.

In addition, a PhD student in the Department of Entomology and Plant Pathology at the University of Tennessee is working with the Morton Arboretum in Illinois on the whole genome sequencing project. Cuttings from the ash tree were sent to Morton Arboretum, where they will be used to conduct flow cytometry and assess chromosome sets. This process will be carried out for all species of ash trees to compare their chromosome sets and explore evolutionary relationships. Jackson Bottom Wetland Preserve also provided young leaves, floral tissue, vegetative buds, and young shoots from the ash tree for RNA sequencing by the University of Connecticut.

*At left: ODF's Wyatt Williams collecting genetic material of an Oregon ash tree growing in Jackson Bottom Wetland Preserve that was sent to scientists in the east to genetically sequence.*

## Traps are placed in Wilsonville to learn more about Mediterranean oak borer

Allison Monroe, a graduate student from Oregon State University's Forest Ecosystems and Society Department, is setting traps in Wilsonville to help foresters learn more about Mediterranean oak borer (MOB). Monroe made traps from 2-foot-long sections of a healthy Oregon white oak felled in Corvallis due to damage from the January ice storm. Some of the sections were laced with the attracting chemical, ethanol, and some were not. Then the traps

were placed at five sites around Wilsonville. Monroe hopes to document colonization patterns and assess if other insects act as parasites on EAB. Monroe will also be working to test host what other oak or hardwood species MOB might attack. Partners in her work are the City of Wilsonville, Oregon Department of Forestry, and Oregon Department of Agriculture, which emphasizes the collective commitment to addressing the MOB challenge.

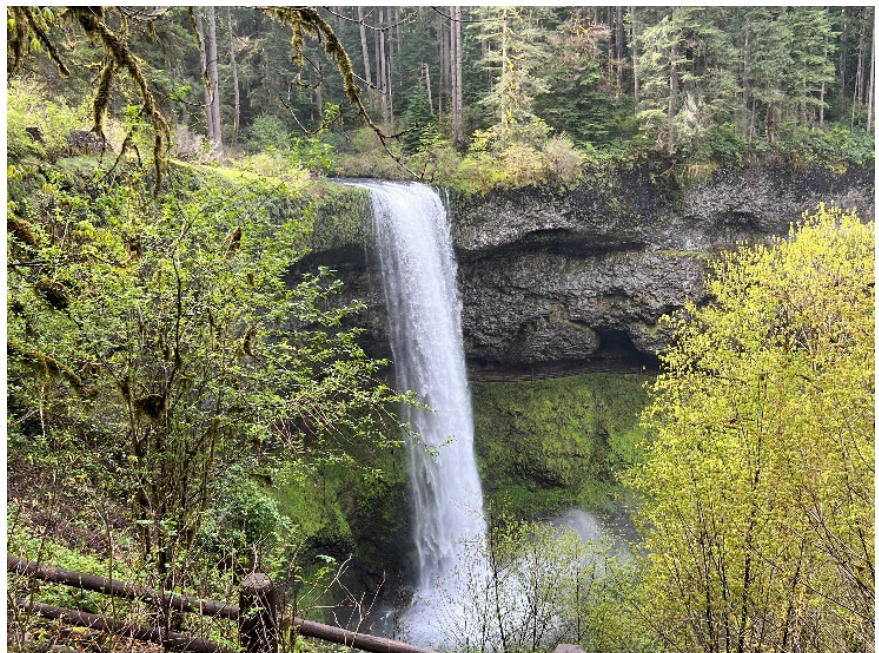
Oregon and California are the first two places in North America where MOB has been found. Local scientists are still trying to learn basic information about the insect and the fungus it introduces that causes a fatal oak wilt. So far in Oregon the borer has only been found in one tree species - Oregon white oak (*Quercus garryana*). Monroe's approach is informed by her background in community ecology and parasitoid wasp research. It promises to advance our understanding of MOB dynamics and inform effective management strategies to protect Oregon's forests.

## APHIS provides traps to help with early detection of EAB

The USDA Animal Plant Health Inspection Service (APHIS) has supplied 368 EAB traps with lures to 20 collaborating organizations in western Oregon in 2024. ODF currently has more than 70 purple sticky traps available upon request. The trapping survey aims to investigate the leading edge of the known infestation and to detect currently unknown satellite populations in Oregon. Information related to the spread of EAB will be used to facilitate additional releases of biological control agents. To request trapping supplies or to inquire about participating in the survey, please email [wyatt.williams@odf.oregon.gov](mailto:wyatt.williams@odf.oregon.gov) A map of current EAB traps that have been deployed in the state can be found here: [EAB Traps WebMap \(arcgis.com\)](#)

## ODF to give guided EAB educational walks at Silver Falls State Park on June 1

The Oregon Dept. of Parks and Recreation (OPRD) is collaborating with ODF to offer free educational walks to an ash grove in Silver Falls State Park on Saturday, June 1. Admission is free to all state parks then in celebration of State Parks Day. ODF Urban and Community Assistance Forester Lilah Gonen will be giving walks from 11 a.m. to 2 p.m. The walks will include how



to identify native Oregon ash, the important role the species plays in Oregon’s wetland ecology, and how the trees and the habitat they create are at risk from emerald ash borer.

## **Latino high school students recommend treatments to save ash trees on Centro Cultural campus in Cornelius**

The non-profit Centro Cultural’s Cornelius office sits in a neighborhood with low tree canopy just a few miles from where emerald ash borer was first found in Oregon. A total of seven ash trees grow on Centro’s campus. All are at risk of being killed by EAB. Aware of the risk, Mariana Valenzuela, Director of Community Partnerships and Advocacy at Centro Cultural, recognized a role for the Climate Justice Leadership Program (CJLP) to help.

CJLP already involved local high school students in a variety of different environmental fields to learn about parks and nature of the Tualatin Watershed.

In May 2023, CJLP focused their efforts on coming up with a plan for the ash trees at the Centro Cultural office. In partnership with Tualatin Soil and Water Conservation District, Backyard Habitat Certification Program, and Oregon Department of Forestry, the group designed a comprehensive work-learn program to provide the community with a program centered on students.



“We work with them directly to ensure what we’re teaching them is actionable to what they want to do in life. We’re always asking them what do you want to learn about? What do you want to see? What do you want to do?” said Victor Vasquez-Ibarra of the Backyard Habitat Certification Program.

In February 2024, with support from the Oregon Department of Forestry and a US Forest Service State Urban Forest Resilience (SUFR) grant, the students presented their ash tree management plan to Centro Cultural leaders. They recommended how to care for each ash tree on campus. They outlined treatments, when the work should happen, and the cost. Now Centro Cultural is seeking funds to implement the plan, engage the current cohort, and connect with new students.

Janet Silva-Villanueva, Project Coordinator at Centro Cultural, is looking to keep up the momentum. She said, “I’m excited to see what opportunities we can bring to our



community in the future.” You can read the full story of what the students learned at [Students protect urban tree canopy in Cornelius, OR. - Tualatin Soil and Water Conservation District \(tualatinswcd.org\)](https://tualatinswcd.org)

## Publications

*Alternatives to Ash in Western Oregon: With a Critical Tree Under Threat, These Options Can Help Fill Habitat Niche.* G. Kral, and D.C. Shaw. 2023. OSU Extension EM 9396. <https://catalog.extension.oregonstate.edu/em9396>

*Oregon Ash: Insects, Pathogens and Tree Health* by Oregon State University Extension (also available in Spanish at this same website) <https://extension.oregonstate.edu/pub/em-9380>

*Wood Decay Fungi Associated with Galleries of the Emerald Ash Borer* by the University of Minnesota and Uruguay’s *Instituto Nacional de Investigación Agropecuaria* [Forests | Free Full-Text | Wood Decay Fungi Associated with Galleries of the Emerald Ash Borer \(mdpi.com\)](https://www.mdpi.com)

## Useful links for more information

Mediterranean oak borer fact sheet  
<https://www.oregon.gov/odf/Documents/forestbenefits/fact-sheet-mediterranean-oak-borer.pdf>

EAB monitoring guidance  
<https://www.oregon.gov/odf/forestbenefits/Documents/eab-monitoring-guidance.pdf>

Oregon Dept. of Agriculture  
<https://www.oda.direct/EAB>

Oregon Dept. of Forestry  
<https://www.oregon.gov/odf/forestbenefits/pages/foresthealth.aspx>

OSU Extension  
<https://extension.oregonstate.edu/collection/emerald-ash-borer-resources>

Emerald Ash Borer Information Network, a collaborative effort by the USDA Forest Service and Michigan State University  
[www.emeraldashborer.info](http://www.emeraldashborer.info)

USFS Forest Health Protection  
<https://www.fs.usda.gov/foresthealth/index.shtml>

