



Oregon State University
Extension Service

TALL TIMBER TOPICS



A newsletter for
those interested in
Forestry, Woodland
Management and
Christmas Trees in
Northwest Oregon

Fall 2019



Notes from your Extension Forester

Fall greetings! After several successive years of hot and smoky summers, I think many of us can appreciate this summer's mild weather and the early arrival of fall rains. Hopefully this has resulted in good survival rates for those who planted seedlings last winter. Despite the plethora of rain we received in September, northwest Oregon ended out the water year (Oct 1—Sept 30) at about 80 to 85% of normal precipitation. We need a few more good wet years to finally end the long term drought we have been experiencing.

With colleagues from the Oregon Department of Forestry, I am keeping track of reported locations of dying and declining mature western redcedar trees. If you have had several large western redcedars suddenly die in the past year, and have others that are either healthy or declining, contact me with your location information so that I can add to our database.

Lastly I want to recognize our newly graduated Master Woodland Managers from Yamhill and Washington Counties. They showed up enthusiastically throughout the four-month training and are now ready to serve their local woodland communities. Our new MWMs are: Marc & Delilah Ahrendt (Gales Creek), Brett Aldrich (Amity), John Dummer (Portland), Leo Krick (Sheridan), Debi Lorence (Hillsboro), Gordon Smith (Sheridan), Larry Stevens (McMinnville), Nicole Wood (McMinnville), and Gary Woodward (Willamina). Congratulations to all!

Amy Grotta

OSU Extension Forestry & Natural Resources Faculty - Columbia, Washington & Yamhill Counties

Office Location: Columbia County Extension Service, 505 N. Columbia River Hwy, St. Helens, OR 97051

Phone: (503) 397-3462 **E-mail:** amy.grotta@oregonstate.edu

Web: <http://extension.oregonstate.edu/>

Blog: <http://blogs.oregonstate.edu/treetopics>

UPCOMING EVENTS

OCTOBER

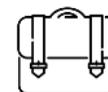
THE FUTURE OF FOREST CREATURES - EXPLORING OUR ROLES AND OPPORTUNITIES

Tuesday, Oct. 22nd, 7:00 pm. Washington County Small Woodlands Association monthly program. Location: Tualatin Valley Fire & Rescue #17, 31370 NW Commercial St., North Plains. Speakers: Lori Hennings, Metro; Sean Matthews, Oregon Biodiversity Information Center; and Peter Hayes, Hyla Woods. All are welcome, no RSVP needed.



ESTATE PLANNING

Wednesday, Oct. 23rd, 6:30 pm social/7:00 program. Yamhill Small Woodlands Association Monthly program. Location: Yamhill County Public Works Auditorium, 2050 NE Lafayette Ave, McMinnville. Speaker: Dr. Tamara Cushing, OSU Extension Specialist in Forest Economics, Management & Policy. All are welcome, no RSVP needed.



TECH TALK

OSU EXTENSION EVENT!

Tuesday, Oct. 29th, 6:00 pm. Location: OSU Columbia County Extension, 505 N. Columbia River Hwy, St. Helens. Speaker: John Krause, Oregon Department of Forestry will demonstrate how to use Avenza, a mapping app that you can use in the field for a variety of forest management purposes. Free, but RSVP required: <https://beav.es/Zs2> or call Sonia, 503-397-3462.



"Avenza maps has proven to be the newest, most powerful tool in my forest farming tool box (right up there with a chainsaw). For approximating property lines (prior to site prep, planting, vegetation control, PCT, or a commercial thin) Avenza saves me untold hours of handheld compass orienteering and thousands of dollars in survey costs. Avenza has helped me locate vegetation covered corner markers, buried property fence lines, and old unnoticed tree blazes..." - satisfied local woodland owner

NOVEMBER

CREATE A POLLINATOR HEDGEROW

OSU EXTENSION EVENT!

Saturday, Nov. 2nd, 10:00 am - 1:00 pm. Location: Matteson Demonstration Forest, Gaston. Learn how to design and plant a hedgerow to attract pollinators on your woodland property. We will be planting a demonstration hedgerow so come prepared to get dirty and help plant and mulch. Free, but RSVP required: <https://beav.es/Ze2> or call Sonia, 503-397-3462.



REFORESTATION: ISSUES AND TRENDS

Wednesday, Nov. 20th, 6:30 pm social/7:00 program. Yamhill Small Woodlands Association Monthly program. Location: Yamhill County Public Works Auditorium, 2050 NE Lafayette Ave, McMinnville. Speaker: Robbie Lefebvre, Oregon Department of Forestry Reforestation Manager. All are welcome, no RSVP needed.



DECEMBER

CLIMATE ADAPTATION STRATEGIES FOR PACIFIC NORTHWEST FORESTS

Thursday, Dec. 5th, 8:45 am - 5:30 pm. Location: Chemeketa Center for B & I, Salem. Sponsored by Northwest Natural Resources Group. NNRG is hosting this workshop to help foresters and other land managers consider climate adaptation concepts and strategies in their management practices to meet their clients' goals and sustain forests into the future. Cost: \$75. Information and registration at: <https://www.nnrg.org/>.



TREE TRIVIA

I'm a medium-sized deciduous understory tree. My showy white flowers really make me stand out in the woods in springtime. My leaves and twigs are oppositely arranged on my branches. Woodpeckers, band-tailed pigeons and many other birds feast on my red berries in autumn. WHAT AM I? (Answer on page 5)

Thinning and selective management of maturing Douglas-fir forests

By Glenn Ahrens, OSU Forestry @ Natural Resources Extension - Clackamas, Marion @ Hood River Counties

Many family forest owners I meet have older trees and forests – 60 to 80 or more years old – and they would like to retain mature forest conditions. They are interested in periodic thinning, selective harvesting of trees or small patches, and keeping options open for the future. But landowners with larger older timber often hear that they are better off, from an economic and operational standpoint, to clearcut a patch and regenerate it all at once.

Clearcutting is efficient. Douglas-fir regenerates best in a clearing with lots of sun. If trees get too big, local markets for large logs may be limited...etc. But if you want to grow and retain mature forest characteristics, what are the options for managing older Douglas-fir forests with thinning and selective cutting rather than larger clearings?

We seek some answers to this question in our management of several demonstration areas at [Hopkins Demonstration Forest](#). For example, our prominent “Hillside Forest” is about 25 acres of 80-90 year old second-growth forest that we have thinned three times since 1991. In this mature forest, a clearcut harvest to regenerate a new stand would be an effective, economically efficient harvest and regeneration method. It would help meet our ongoing need for revenue. On the other hand, Douglas-fir and western redcedar can be vigorous and productive for centuries and we can continue to generate some revenue with periodic thinning. So, we are re-considering the options and revising the management plan, seeking to clarify our objectives and develop a long-term strategy for the Hillside Forest.

After almost 30 years of management at Hopkins Demonstration Forest, we are taking stock of what we have learned about the challenges and benefits of thinning and selection cutting. Among the challenges are:

- Risk of damaging soil and trees due to repeated entry with machines in the forest.
- Introduction or stimulation of invasive weeds such as blackberry, geranium, etc.
- Competition from understory vegetation after thinning.
- High level of skill needed to fell large tall trees without excessive damage – to them or the trees being retained for the future.
- Need for permanent roads and skid trails throughout the stand in order to access the whole area for periodic thinning or selective removal.
- Risk that once trees are older and larger, you may be compelled (personally or socially) to protect them, thus reducing actual harvest rate from what was planned.
- Buyers for large logs from older trees are fewer and often farther away.
- If large limbs (knots) are allowed to develop, value is significantly degraded on big trees.

On the plus side, some potential benefits of continued thinning and selective cutting include:

- Enjoying mature forest conditions, large trees, diverse species and layers, wildlife habitat, aesthetics, etc.
- Capturing some of the timber value for periodic income while increasing percentage growth rate in thinned stands.
- Avoided or reduced reforestation costs; avoided risks of regeneration failure.
- Maintaining healthy tree crowns and future options (to keep thinning)
- Producing some trees with higher value large sawlogs, poles, or veneer (if we get it right).

At Hopkins Demonstration Forest, we are in the process of addressing these challenges and pursuing the potential benefits. This fall we will be looking at the Hillside forest with some tried-and-true loggers to get their input on operational aspects. Our Forest Management Committee is looking at the current forest conditions and key questions such as:

- Does it “need” thinning? Based on objective guidelines using average size of trees and number of trees per acre.
- What is our current timber quality, log size, and log grade breakdown?
- How do you manage maturing forests to produce higher quality stems and avoid degrade due to “oversize” diameter and large limbs?



Large, branchy Douglas-fir in a widely spaced area of the Hillside forest.

(continued on page 5)



Forests on the Rebound

By Brad Withrow-Robinson, OSU Forestry & Natural Resources Extension

Adapted from TreeTopics blog, <http://blogs.oregonstate.edu/treetopics>

Above: Rebounding forest after a harvest in the Cascade foothills. Photo: Brad Withrow-Robinson

People enjoy and cherish Oregon's forests for a number of reasons. High among them are the beauty and the variety of plants and animals that live there.

While most of us picture older forests when we read that, we would be wrong to think of that as the complete picture. Nonetheless a large part of our emotional, scientific and social energy is directed towards those older forests.

I recently attended a workshop and tour that focused on another stage of forest development. A stage that many people would not recognize as, or even call a forest. It is the often-unsightly mix of living and dead that is left after a major disturbance like a wildfire, or a clearcut harvest. Where trees once stood, stumps, snags, brush and weeds prevail.

Ecologists call this stage "early seral" forests. I think of them as "Forests on the Rebound".

But some might ask "if a forest has been destroyed by fire or harvest how can it be said to be rebounding?"

Despite the scarred appearance and loss of the forest tree canopy, it is important to recognize that these forests have been disturbed, not destroyed. Yes, most of the trees are gone but the sites still contain many critical parts, legacies of the previous forest stage. Shrubs such as snowberry, salal and vine maple, trees like bigleaf maple, and many flowering herbs and grasses will all quickly resprout and flourish in the open sunshine. Other trees and shrubs which propagate by seed also often quickly establish, even if it takes several years to be recognizable. Trees which have to re-seed include red alder, Douglas-fir, hemlock and western redcedar. So, many (though

not nearly all) of the plants that were there before are generally still there a short while after the disturbance. This often sets the stage for a similar forest to rebound and eventually reoccupy that site.

These rebounding forests are often super-diverse. Not only do they contain the plant legacies from the earlier forest, they quickly collect many other new, sun-loving species of plants that were not part of the previous forest. These new additions emerge from the seed bank or drift in on the wind to take advantage of the sunny new environment on the forest floor. This is the recipe for great plant diversity.

These new, radically different forest conditions are exactly what many animals need, too. A whole host of animals are keyed in to, and dependent on this stage of rebounding forests. Deer and elk, migratory songbirds and bats, pollinating bees and butterflies all flourish among the rowdy, diverse vegetation of the rebounding forest. Important species that help illustrate the importance of this forest stage.

There is new research trying to understand the role forest plantations play in providing habitat to animals who depend on these early seral habitats for their success. Some of these animals that use open, disturbed forest sites, notably certain songbirds, have been declining in recent years.

There is concern that recent changes (over the past several decades) in the amount and character of recently-disturbed forest habitats may be a factor in the decline. These include:

(continued on page 5)

Forests on the rebound (continued)

- A dramatic decrease in harvest on federal lands has reduced the amount of young, rebounding forest habitats there.
- Harvest continues on private lands, but and economic and policy incentives, along with modern reforestation practices encourage rapid “green up” after harvest.

This has generally shortened the amount of time in the rebound stage between harvest and crown closure.

- Common reforestation practices reduce the amount of broad-leaved shrubs and other vegetation – things we know are important habitat pieces. So, although there is lots of young forest plantations on private lands, they may not be providing good habitat.
- Fewer dead trees (snags) are left in these open areas (after fire or harvest) than were in the past.

Although wildfire remains a source of disturbance in western Oregon, it is not on the scale that it was in past.

A recent workshop in Corvallis highlighted a near-decade of coordinated research and other efforts to understand the impacts of some of those landscape changes, and particularly the effects of forest management practices on rebounding (early seral) forests, and the wildlife that depends on them.

Teams of scientists at OSU, private landowners including Hancock Forest Management and Weyerhaeuser, agencies including the US Geological Service, and many others conducted and presented their work. They designed a large randomized study, replicated in eight locations across the northern Coast Range that compared different intensities of vegetation control (using herbicides) during reforestation. Then they tracked how the vegetation and wildlife responded over the next six or seven years.

The broad take-home message was that early seral biodiversity is compatible with intensive forest management practices. Young forest plantations can (and likely do) provide habitat for many types of animals that depend on rebounding forests. Some species are provided for better than others.

Thinning and selective management of mature Douglas-fir forests (continued)

- How much of the ground is occupied by brush and hardwoods – how much is too much? What will it take to prevent excessive brush and invasive weeds after harvesting?
- What are the trade-offs in costs and revenues for thinning vs. patch clearings?

Stay tuned for some answers in future articles on this topic. If you are interested in learning and sharing your knowledge about managing mature forests, please join us in our effort at Hopkins Demonstration Forest. Let me know if you are interested in helping with inventory, assessment, tree marking, and other tasks as we continue to study and manage the Hillside forest. glenn.ahrens@oregonstate.edu



A rebounding forest following a clearcut on industrial ground in the Coast Range. Note woody debris, abundant hardwoods.

If you are a bird looking for open, brushy cover for roosting and nesting, feed on seeds and bugs you catch on the wing, then many of the conditions created by current forest practices will likely meet your needs. You will also have many new neighborhoods to choose from. If you are a bird who gleans bugs from leaves, like an orange crowned warbler, then it may take a bit longer for the disturbed site to become suitable habitat. But if you are a bat or a bird such as a bluebird or purple martin who also needs snags for nesting and roosting, your needs will be harder to meet, likely with fewer suitable neighborhoods to choose from.

There was of course a lot of discussion at the workshop on how to improve the usefulness of early seral habitat for the species that depend on it. Ideas included increasing the amount of snags for cavity nesters, tolerating more shrubs in young plantations, and maybe planting at wider or more variable spacings.

For more information about the early seral workshop, and view some of the presentations, visit their website <https://www.forestbiodiversity.org/earlyseral>.

Answer to Tree Trivia (page 2)

I am the Pacific dogwood tree, *Cornus nuttallii*!

FORESTS AND NATIVE BEES: THE SEASON ONE RECAP

By Amy Grotta, OSU Forestry @ Natural Resources Extension

Adapted from TreeTopics blog, <http://blogs.oregonstate.edu/treetopics>

Back in spring I introduced readers to a new initiative that OSU Extension has begun to learn more about how native bees use managed forests. Our first season of data collection is now in the books. I'd like to explain a bit more about how we designed this project and some early takeaways.

At the Matteson Demonstration Forest, I set up three collection sites. The first site is around the parking area just inside the Matteson gate. It's the most disturbed of all the sites. We'll be planting a pollinator hedgerow at this site soon. The other two sites are located in 5-acre units that were clearcut in summer 2018. Because these sites are quite open (in the [early seral stage](#)), we expect them to have abundant floral resources that would attract bees. In addition to what plants came into these areas naturally, in one of the sites I scattered native wildflower seed in a strip plot. We would like to see whether this additional influx of floral resources is beneficial to bee populations.

I visited the sites monthly with volunteers from the [Oregon Bee Atlas](#). We collected bees using a combination of methods, and information about each one is recorded in a database. When we used nets to catch bees, we also recorded the plant species we caught them on. But we also used traps filled with soapy water to supplement our netted collections.

So what did we find? Well, we found lots of bees of many different types! While we won't know how many bee species we collected until they are all reviewed by experts at OSU, it is clear that this forest is home to many native bees. In the spring, we caught an abundance of mining bees in the *Andrena* genus. These bees nest in bare ground, and in April the soil in the clearcut sites were full of small holes, presumably mining bee nests. We also found red cuckoo bees in the *Nomada* genus. These bees don't make their own nests, but lay their eggs in *Andrena* nests! As the season progressed we found lots of bumblebees, longhorn bees, and beautiful, metallic green small carpenter bees. Carpenter bees nest inside dead wood or old broken off stems, so finding them in a forest seems logical.

At all three sites, non-native weedy plant species were abundant and consequently, we found nearly twice as many bees visiting non-native plants (~150) compared to natives (~80). Here's a full list of the plants we caught bees on: *(continued on page 7)*



Collecting bees in a recent clearcut in May 2019.



Small bowls filled with soapy water were set along a transect to supplement our netted collections.

Native plants	Non-native plants
Candy flower (<i>Claytonia sibirica</i>)	Bull thistle (<i>Cirsium vulgare</i>)
Ocean spray (<i>Holodiscus discolor</i>)	Shiny geranium (<i>Geranium lucidum</i>)
Trailing blackberry (<i>Rubus ursinus</i>)	Cat's ear (<i>Hypochaeris radicata</i>)
Oregon iris (<i>Iris tenax</i>)	Oxeye daisy (<i>Leucanthemum vulgare</i>)
Licorice root (<i>Ligusticum apifolium</i>)	Meadow knapweed (<i>Centaurea pratensis</i>)
Camas (<i>Camassia sp.</i>)	Common vetch (<i>Vicia sativa</i>)
Creeping snowberry (<i>Symphoricarpos mollis</i>)	Nipplewort (<i>Lapsana communis</i>)
Yarrow (<i>Achillea millefolium</i>)	Hairy vetch (<i>Vicia villosa</i>)
Miner's lettuce (<i>Claytonia perfoliata</i>)	Canada thistle (<i>Cirsium arvense</i>)
Self-heal (<i>Prunella vulgaris</i>)	Armenian blackberry (<i>Rubus armeniacus</i>)
Farewell-to-spring (<i>Clarkia amoena</i>)	St. Johns Wort (<i>Hypericum perforatum</i>)
Common madia (<i>Madia elegans</i>)	

Forests and native bees (continued)

We also caught all kinds of bees in the bowl traps, but in particular there were dozens – perhaps hundreds – of small bees. These can be more difficult to observe and catch with nets, so although we don't know what plants these small bees were associated with, by using the traps we do know they are inhabiting the site.

The native seed mix that I sowed at one of the sites germinated well, and some of the species even flowered this first year. It takes time for the population to establish so I expect that next year the flowers will be more abundant. We didn't find many bees visiting these plants – likely because the bees focused their energy on other plants outside the seeded plot which were much more abundant. The exception was on my final collection trip in mid-September. By then, the only flowers to be found in the entire site were in the seeded plot, and I found bees visiting the lone yarrow, farewell-to-spring, and madia flowers still left.

We'll be monitoring the sites at Matteson again next year, and I'm looking forward to seeing whether any of these dynamics change. Will we find more bees visiting the native flowers that I seeded in as they become more established? Will there be as many weedy plants for bees to forage on in the clearcuts, now that they have been treated with herbicide in preparation for replanting this winter?

If you are a woodland owner who would like to learn how to provide habitat for native bees on your own property, you're in luck. Next year, OSU Extension will be offering workshops in various locations on this subject.

If you'd like to get involved with our pollinator sampling at Matteson, and/or on your own property, you can become an [Oregon Bee Atlas volunteer](#). Look for new training opportunities to be announced soon.

Finally, we'll be planting our demonstration pollinator hedgerow at Matteson at a work-and-learn event on [Saturday, November 2nd](#). All are invited! See page 2 for details.

Thanks to all of the Oregon Bee Atlas volunteers who enthusiastically helped me survey at Matteson, and to the Oregon Department of Forestry for providing the funds to set up this project (and a similar one in Lane County).



New Oregon State Wildland Fire Extension Program

In late June 2019, the Oregon Legislature approved the establishment of a new Oregon State Wildland Fire Extension Program, to be led by [Forestry & Natural Resources Extension](#) and the [College of Forestry](#) at Oregon State University.

The ultimate goal is to **build wildfire resistance and resilience** into our rural landscapes and wildland-urban interface areas. This initiative was inspired by the innovative work of Extension Agent Daniel Leavell with the [Klamath and Lake County Forest Health Partnership](#) as a model for expanded effort statewide. A [publication outlining their collaborative process](#), including curriculum for carrying out similar landscape-scale planning, was published in October 2018.

This new Wildland Fire program will add capacity for up to six new OSU Extension Wildfire Specialists to work with agency and industry partners, communities, landowners, and land managers. The work to be done is too big for any one organization, but by leading partnerships and working together we plan to make a real impact on the ground, spreading land management and fuel reduction projects over the Oregon landscape.

We need this extra effort as the risk of destructive wildfires is increasing in Oregon and across the West due to growth in the wildland-urban interface, increasing frequency of severe fire weather, and increasing forest fuel loads. We cannot be complacent in thinking that the problem is “won't happen in our neighborhood” or that it is beyond our control.

The Wildland Fire Extension program will launch in the coming months with the first round of hiring for these new positions, which will be strategically located where risk is greatest and efforts are likely to have the most impact.

Oregon State University Extension Service
Columbia County
505 N. Columbia River Hwy
St. Helens, OR 97051

NONPROFIT ORG.
US POSTAGE
PAID
PORTLAND, OR
PERMIT NO. 1

Return Service Requested

A background image of autumn leaves in shades of yellow, orange, and red.

IN THIS ISSUE

Upcoming Events	page 2
Tree Trivia	page 2
Managing Mature Forests	page 3
Rebounding Forests	page 4
Native Bee Season Recap	page 6
Wildland Fire Extension	page 7