Introduction to Woodland Management: FOREST HEALTH

We will cover:

- Differences between tree health and forest health
- Characteristics of a resilient forest
- Four key factors that damage trees
- How to recognize and manage damage


Poll
Is this a healthy forest?
Photo by ODF

Douglas-fir plantation


Poll: Is this a healthy forest?

"Healthy forests have a healthy amount of disease"

Photo by David Gates CCby2.0

Is this a healthy forest?

Photo by ODFW


Healthy forests have a healthy amount of disturbance
Should I be worried about this dead tree?

Healthy tree vs. healthy forest

Poll ?

Which stand will be more successful defending against bark beetle attack?

Trees prioritize how they use limited resources (carbohydrates).

Priorities for tree growth:

1. **Support living tissue**
2. **Then…**

Adding fine root and leaves

Reproduction (flowers and seeds)

Grow up and out (height, branch, root growth)

Diameter growth

Compounds to resist insects and disease

Trees prioritize how they use limited resources (carbohydrates).

Priorities for tree growth:

1. **Support living Tissue**
2. **Add fines root and leaves**
3. **Reproduction (flower and seeds)**
4. **Grow up and out (Height, branches, roots)**
5. **Diameter growth and resistance to insects & disease**
6. **Storage**


4
key disturbance agents that damage trees
BIOTIC FACTORS:
1. Insects
2. Disease
ABIOTIC FACTORS:
3. weather/climate
4. physical damage


Why is Dave chopping into this tree?

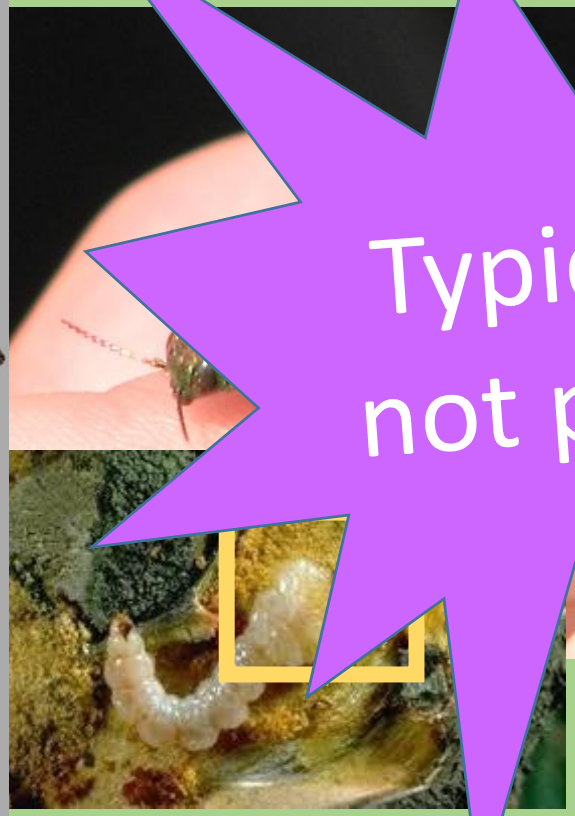
Insects

bark beetles

Insects

Wood borers

Flatheaded borers



onghorn beetles

Typically not pests!

Poll

Which of these trees is being attacked by bark beetles?

- Top
- Bottom

Insects

Defoliators

Insects

Sucking insects

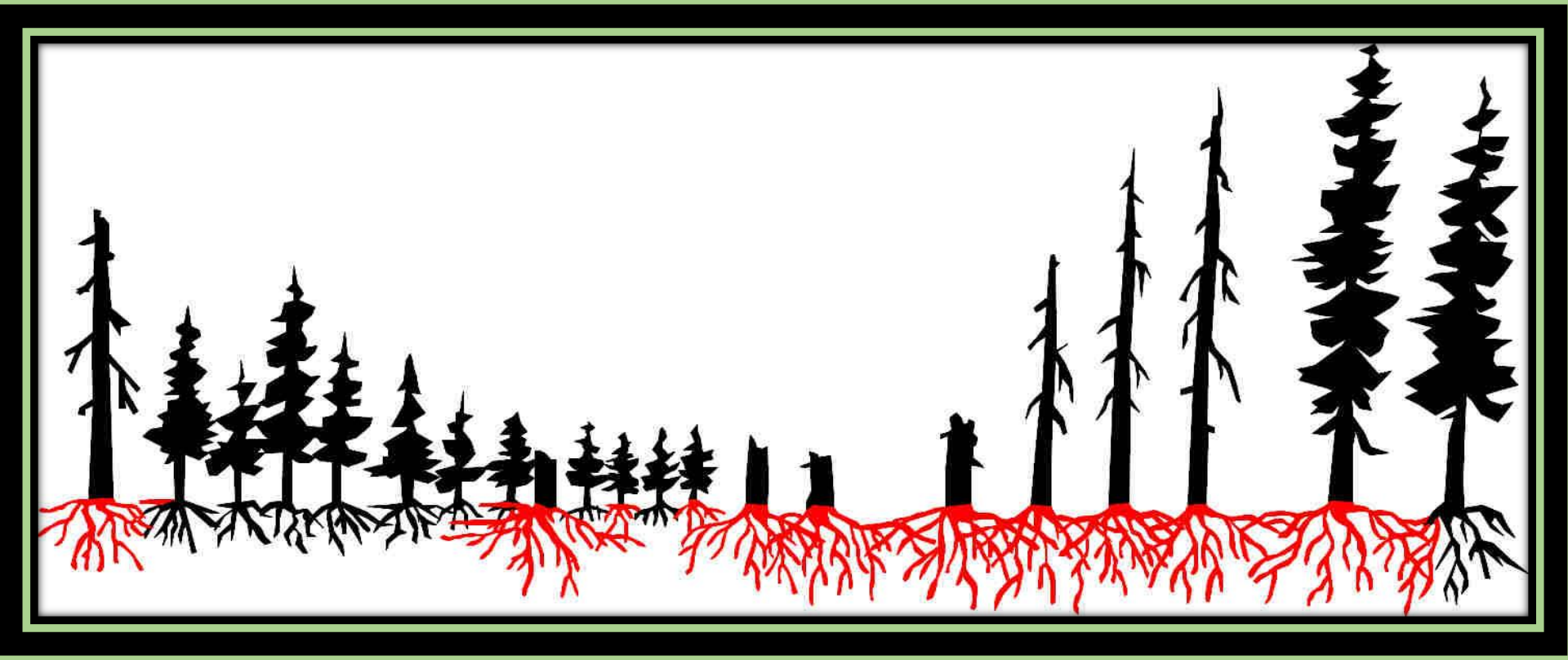
Heavy defoliation on the central and north coast!

Spruce aphid on Sitka spruce

Colin Murphey/The Astorian

Disease

Root Rots



Disease

Laminated root rot

Disease

Heart and Butt Rots (wood decay)

Disease

Foliage

Swiss needle cast	maple anthracnose

Invasive vs native

Abiotic

Weather & Climate

Abiotic

Physical Damage

Abiotic

Abiotic

Which stand will be more successful defending against bark beetle attack? Root rot?

BOG Discussion

- You will be put into groups of about 4 or 5.
- Have 5? min to talk about forest health issues that you are aware of on your property or neighborhood. If you know cause or not.

- Choose one of those issues. If you know what it is, spend another 5 min talking about how you know. If not, spend the time talking about how you might figure it out. If calling your Extension agent is part of your solution, what information would you need to collect & share with her?
- ID one member of your group as spokesperson.


7 STEPS
TO HELP YOU DIAGNOSE AN ISSUE
1 Where is the damage?
2 What is the species?
3 What is the location and pattern of occurrence?
4 Is there an obvious cause?
5 Anything noticeable like a mushroom or canker? Can it be from an insect?
6 Maybe it's a root problem?
7 Are there similar problems in your area?

Plus/Delta Evaluation

- Please use your Chat
- Tell us 1-3 things you liked, though worked about todays class.
- Tell us 1-3 things that you thought did not work so well, and could be improved

wrap up

- Will get an email with study recommendations from Brad & Lauren. Links to reading and or videos. Recap expectations.

- Please contact us if you have questions.

- Thank and close.