Urban Weeds

Control them before they control you!
Workshop Outline

What is a Weed?
Definitions
Impacts on Ecosystems & Economy
Strategies in Weed Control
Prevention
Urban Weed Slides (Backyard, Regional, High Alert)
Your Role in Weed Control
IPM Control Methods
Q & A
Evaluations
What is a WEED?

A plant that is considered a nuisance, or troublesome that grows where it is not wanted and often spreads fast, taking the place of desired plants.

A plant that is considered a hazard or that causes injury to people, animals, or a desired ecosystem or crop.
Some Terminology to Know

**Non-Native:** "Exotic", "alien", and "non-indigenous" to the Willamette Valley

**Aggressive:** fast moving/spreading plant.

**Invasive:** Those that spread into areas where they are not native and cause ecosystem level damage.

**Noxious:** Species (or groups of species) that have been legally designated as pests, for example by a county, state or federal agency.
Growth & Spread Terminology

Vegetative
(root, stems, rhizomes)

Reproductive
(Seeds)
Impacts from Weeds

- Economics
- Affects on Habitat & Native Species
- Ecosystem-level Impacts
Invasive species cost Americans about $143 billion per year.

At least 30 new potential biological invaders enter the US every day.
Strategies in Invasive Plant Control

- **Simple Prevention or Eradication** (Save $$)
- **Local Control & Management Only** (Expensive)

Detection: focus resources here

- Acres Infested
- Control Costs
- Time

Introduction
Impacts on Habitat & Native Species

Invasive species are a major threat to native species and habitats. (Second only to habitat destruction.)
Impacts on Habitat & Native Species
Ecosystem Level Impacts

Disturbance Regimes

Hydrology

Geomorphological Processes

(Erosion, Sedimentation)

Soil Chemistry
Common Backyard Invaders
Hairy Bittercress
*Cardamine hirsuta*

**Look for:**
- Small round clumps in damp, recently disturbed soil
- Wiry green stems with small white flowers

**Spreads:**
- Growth via taproot in small clumps
- Birds, wind & rain

**Removal:**
- Hand pull or use small tool
- Early to mid-February

**Other:**
- *Pull these before the flowers go to seed*
Dandelions

- Control dandelions when young and before they set seed
- Many new tools for home use available
- Although, dandelions are good for lawn!
Mosses

If the moss in your yard is limited to shady areas:

• Enjoy as a low-maintenance groundcover!
• Requires little, if any watering, no fertilizer or mowing
• Stays green and soft all year so long as it does not receive too much traffic.
Mosses (cont.)

Common causes of moss in lawn:

• Lack of fertility
• Soil compaction
• Poor drainage
• Too much shade
• Poor soil aeration
• Low pH

Moss can tolerate more shade than grass, so it moves in as the grass thins out.
Creeping Jenny
*Lysimachia nummularia*

**Look for:**
- Creeping/vining groundcover

**Spreads:**
- Vegetatively

**Removal:**
- Hand pull where practical
- Remove all stems and fragments to prevent re-rooting
- Burn in spring or fall when green and other natives are dormant

**Other:**
Periwinkle
* Vinca major

**Look for:**
- Trailing vine with purple flowers

**Spreads:**
- Spreads along the ground, roots at the stems to form a dense mat

**Removal:**
- Raise the runners with a rake and dig out by hand
- You can also mow close to ground

**Other:**
- Round-up is ineffective due to waxiness of the leaves
Herb Robert
*Geranium robertianum*

Look for:
- Fuzzy red stems from a central rosette
- Similar foliage to Bleeding Heart.
- Notice flower with 5 petals is different than the bleeding “heart”

Spreads:
- Entirely by seeds capable of being ejected up to 20’

Removal:
- Hand pull before it flowers and seeds

Other:
Comparison

**Invasive Herb Robert**

**Native Bleeding Heart**
Shining Geranium
*Geranium lucidum*

Look for:
- Red stems
- Shiny rounded, loped leaves turn red near end of summer
- Tiny pink-purple flower
- Pointed “beak” at top of fruit pod

Spreads:
- Entirely by seeds capable of being ejected up to 20’

Removal:
- Hand pull

Other:
Pokeweed
*Phytolacca americana*

Look for:
- Green or red stems with large, simple leaves and purple/black berries

Spreads:
- Seeds dispersed by birds eating berries and depositing offsite

Removal:
- Pull up young shoots making sure to get taproot
- Cut before it flowers & produces seed
- Dig out taproot of larger specimens

Other: plant and berries are toxic
Bishop’s Weed
*Aegopodium podagraria*

**Look for:**
- Light blue-ish-green delicate foliage that is often, but not always, variagated.

**Spreads:**
- Rhizomes – creeping underground stems and roots

**Removal:**
- Dig up entire plant including underground roots. Dispose of soil.
- Be careful to get all fragments as they re-sprout.
- Monitor

**Other:**
- *Keep monitoring for re-growth and maintain*
Lesser Celandine
*Ranunculus ficaria*

Look for:
- Dark green, shiny leaves
- Yellow flowers with 8 petals
- Pale colored bulblet on stem
- March - May

Spreads:
- Rhizomes, bulbs

Removal:
- Remove plant and surrounding soil when blooming in early spring

Other:
Bamboo

Look for:
• Rhizome – underground

Spreads:
• Rhizome – underground

Removal:
• Cut it off
• Cut it down
• Water the area
• Cut it down again

Other:
• *If it spread from another stand, cut the roots that connect it.*
• *Don’t use pesticides if connected to neighbors clump*
Water Gardens and along waterways

- Research first!
  Many commonly used aquatics are invasive
- Always wash new plant introductions (think snails)
- Keep water garden separate from waterways
- Never dump water garden materials (or water) into local waterways
Purple Loosestrife

*Lythrum salicaria*

Look for:
- Square, woody stem with downy hair
- Magenta-colored flower spikes throughout much of the summer

Spreads:
- Underground rhizomes
- Prolific seeding

Removal:
- Dig out entire root crown & remove all fragments

Other:
Yellow Flag Iris
Iris pseudacorus

**Look for:**
- Bright yellow flowers in typical iris form
- 3-sided, shiny green fruit
- Sword-like leaves in a fan-like pattern

**Spreads:**
- Vegetatively – rhizomes
- Seed pods

**Removal:**
- Remove before it goes to seed
- Must be dug out and all fragments removed.

**Other:**
Yellow Flag Iris

*Iris pseudacorus*
Found spreading into our natural areas
Butterfly Bush
*Buddleia davidii*

**Look for:**
- Pink, violet or blue flower spikes
- Velvety, lance-shaped, leaves - green on top, fuzzy white on bottom

**Spreads:**
- Prolific seeding (wind dispersal)

**Removal:**
- Seedlings: Hand pick (be sure to get roots), then plant a native a ground cover
- Cut back repeatedly. (Grows back more vigorously when cut.)

**Other:**
- *Disturbance from digging up encourages seedling growth and should be avoided if possible.*
Tree of Heaven/
Stinking Sumac
*Ailanthus altissima*

**Look for:**
- Suckers coming from base of tree
- Large alternately arranged leaves with leaflets in pairs
- Smells of rancid peanut butter

**Spreads:**
- Spreads vegetatively, sprouting from stump and root portions
- Prolific seeding

**Removal:**
- Hand pull small seedlings before seeds
- Use weed wrench for saplings

**Other:**
*Root system is aggressive enough to cause damage to sewers and foundations.*
Weed Wrench!
Tree of Heaven/Stinking Sumac
Comparison

Tree of Heaven

Black Walnut
English Holly
*Ilex aquifolium*

**Look for:**
- Evergreen shrub/tree with waxy, pointy leaves and red berries
- Grows up to 50’ tall, 15’wide

**Spreads:**
- Seed – Primarily dispersal by birds
- Vegetative - suckers

**Removal:**
- Hand pull small seedlings
- Cut and stump-treat/grind large ones
- Weed Wrench

**Other:**
English Ivy
Hedera Helix

Look for:
• Vigorous woody vine
• Small white flowers in tight clusters

Spreads:
• Vegetatively by stem fragments
• Seed dispersal by birds

Removal:
• Cut from base of trees (or other structure) and dig out roots
• Cut flowers to prevent fruiting

Other:
• Wear gloves – sap can cause dermatitis
English Ivy

*Hedera Helix*
Traveler’s Joy
*Clematis vitalba*

**Look for:**
- Deciduous woody vine, 5 leaflets, white puffy seed tails
- Blankets other vegetation

**Spreads:**
- Vegetatively
- Seed dispersal by animals & rain

**Removal:**
- Cut vine at base, dig out root if able
- Vines break easily at joints – make several small tugs to remove from bushes

**Other:**
- *Retrieve as many seeds as possible & dispose in fire or trash*
Traveler’s Joy/Old Man’s Beard

*Clematis vitalba*
Himalayan Blackberry
*Rubus discolor*

**Look for:**
- Thick, red arching canes
- Large, round, toothed leaves with 5 leaflets

**Spreads:**
- By stem fragments & rhizomes
- Seed dispersal by birds

**Removal:**
- Cut canes to 1ft, find “crown” & dig up
- Plant overstory plants to shade out
- Check monthly and continually cut back

**Other:**
Native (non-invasive)

Trailing blackberry – Rubus ursinus

How to tell it from the invasive blackberry

Glaucus (bluish-gray) “film” on canes.

Trailing (non arching – unless it’s climbing something)

Generally 3-leaflets
High Alert: New and Notorious Regional Invaders
Spurge Laurel
*Daphne laureola*

**Look for:**
- Dark green leaves are shiny on top, lighter on underside. Spirally arranged leaves cluster at shoot tips.
- Yellow/green, bell shaped flowers emit a honey-like fragrance.
- Berries unripe are green, turn black when ripe.

**Spreads:**
- Seeds dispersed by birds & rodents.
- Vegetatively through root sprouts.

**Removal:**
- Hand pull (with gloves) for small patch.
- Larger shrubs must be dug out.
- Weed Wrench.

**Other:**
- **CAUTION:** Toxic!
Spurge Laurel
*Daphne laureola*
Yellow Archangel
*Lamiastrum galeobdolon*

**Look for:**
- Variegated leaves are opposite, oval and hairy with coarsely toothed edges
- Small, yellow hooded flowers grow in clusters at stem

**Spreads:**
- Spreads vegetatively by stem fragments. Also spreads by seed.

**Removal:**
- Dig up entire plant.
- Sheet mulch if infestation is large
- Monitor

**Other:**
- Stems & roots tend to break off when pulled
Scotch Broom
*Cytisus scoparius*

**Look for:**
- Woody shrub with showy yellow flowers, grows to 10’ tall
- Rigid bark, small leaves
- Seeds in pods that burst & scatter

**Spreads:**
- Seeds projected from pod and remain viable

**Removal:**
- Pull small plants (and roots!) by hand
- Larger plants – use weed wrench
- Over 2” in diameter & not green at base, cut as low as possible

**Other:** Leguminous
Garlic Mustard
Alliaria petiolata

Look for:
• Year 1: small rosette of round, kidney-shaped leaves w/ scalloped edges
• Year 2: elongated flower stalk appears

Spreads:
• Spread by people, animals, equipment

Removal:
• Hand-pull, dispose of in bag, in trash

Other:
• allelopathic
<table>
<thead>
<tr>
<th>Year 1</th>
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| March – March  
• 1” – 6” tall | March – April  
• Bolts |
| Mid-April  
• Flowers  
• Full ht: 4’ tall | Mid-May  
• Seed Pods |
| Mid-June  
• Dry Stalks |
Giant Hogweed
*Heracleum mantegazzianum*

**Look for:**
- Very tall plant (15-20’)
- Large umbrella shaped flowers (*May – July*)
- Hollow stalks with red-purple blotches
- Large (2-3’ wide!) deeply incised leaves

**Spreads:**
- Seeds

**Removal:**
- Call Oregon Dept. of Ag – **1-800-INVADER**

**Other:**
- **TOXIC!**
Giant Hogweed (*Heracleum mantegazzianum*)
Giant Hogweed Look-a-Likes

Cow Parsnip
Heracleum lanatum

Angelica
Angelica atropurpurea

Poison Hemlock
Conium maculatum
Japanese Knotweed
*Polygonum cuspidatum*

**Look for:**
- Large leaves, hollow reddish stems

**Spreads:**
- Vegetatively – root fragments get transported via humans, machinery

**Removal:**
- Cut back canes repeatedly
- Dig out EXTENSIVE root system only if you can remove ALL root fragments
- Package up and remove from site

**Other:**
- *Contact your county weed agency for help in controlling this extremely invasive weed*
Japanese Knotweed
*Polygonum cuspidatum*
Common Knotweed Species

- *P. sachalinense*
- *P. cuspidatum*
- *P. polystachum*

“Giant” Japanese “Himalayan”

Listed as Oregon class “B” noxious weeds
Kudzu
Pueraria lobata

Look for:
• Three Leaflets. Purple/pink pea-like flowers, pea-like seadpods

Spreads:
• Spread by runners and rhizomes and by vines that root at the nodes to form new plants & rarely by seed.

Removal: Call 1-800-INVADER
• Mow every month for two growing season.
• Removal of EXTENSIVE root crown – any plant parts must be placed in plastic bag and sent to landfill or can be fed to cattle

Other:
• Leguminous
Kudzu

• Spread by runners and rhizomes and by vines that root at the nodes to form new plants & rarely by seed. Leguminous

• Mow every month for two growing season.

• Removal of EXTENSIVE root crown – any plant parts must be placed in plastic bag and sent to landfill or can be fed to cattle.

“The plant that ate the South”
Your Role in Weed Control

1. Avoid purchasing potential weeds

2. Control/remove the weeds on your property

3. Minimize the spread of weeds

4. Volunteer to help clear out invasives from your favorite natural area

5. Attend a Naturescaping class or other similar class to learn more about how you can use native plants to transform your landscape into a healthy contributor to this ecosystem!
1. Avoid Purchasing Potential Weeds

- Take a weeds list with you when going to purchase plants
- Check contents when buying wildflower mixes. Many contain aggressive or invasive non-native species
1. Avoid Purchasing Potential Weeds

If there is a particular non-native plant you are interested in, be wary if it:

• Produces large amounts of seeds
• Provides berries for wildlife
• Spreads quickly by runners, underground roots or plant fragments
• Is unusually pest- and weather-resistant
2. Control Weeds on Your Property

The first step is identification:

- Inventory the plants on your property
- Take frequent walks around your yard making note of new growth and appearance of seedlings
- Make note of any plants spreading quickly or spontaneously coming up where you’ve not planted them
3. Minimize the Spread of Weeds

Weeds are spread by:

- Humans & Other Animals
- Machinery & Equipment
- Nature (wind, water, etc.)
3. Minimize the Spread of Weeds

Minimize your impact by:

• Leaving wildflowers in the wild

• Clean the seeds from your boots, bike tires, car tires and from your dog’s fur before and after going into a natural area – leaving seeds where they may have originated

• Empty the bilge water from your boat and check the external portion of your boat to avoid spreading aquatic pests from one waterway to another.
Control Methods

**Mechanical**
- Mowing, hand pulling, cutting, burning

**Cultural**
- Shading, plant appropriate competitive vegetation

**Biological**
- Parasites, predators, and pathogens; *typically a slow process*

**Chemical**
- Spraying, painting, usually most effective in fall; FOLLOW THE LABEL
Learn More

• Portland Plant List – at the end of the document is the best weeds list to take to the nursery with you:
  https://www.portlandoregon.gov/bes/article/473164

• Invasive Plant fact sheets:
  http://www.invasive.org/species/weeds.cfm

• If you spot Kudzu or other HOT Species contact ODA:
  Invasive Species Council 1- 866-INVADER (1-866-468-2337)
  invasives-info@oda.state.or.us
Attend other EMSWCD Workshops!

Learn more about using native plants to create natural landscapes that are water and wildlife-friendly

Native Plants
Naturescaping
Rain Gardens

www.emswcd.org