Invasive Plants and Noxious Weeds

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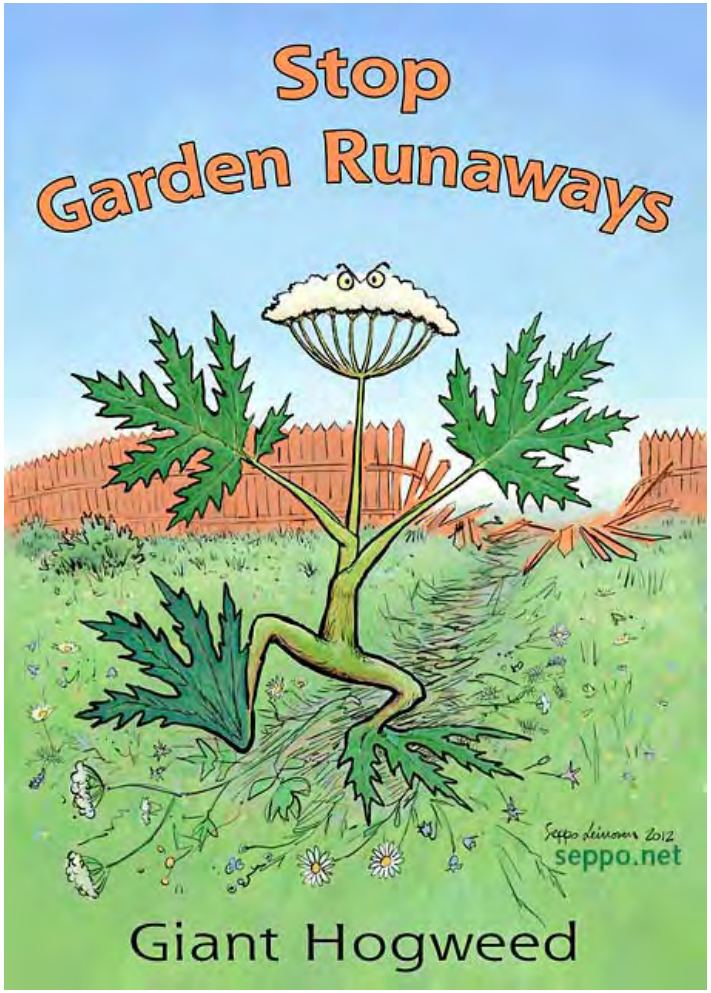
King County Noxious Weed Control Program

kingcounty.gov/weeds

Agenda

- Definitions, impacts and laws
- A closer look at some local invasive plants and noxious weeds



Cartoon. Seppo Leinonen, www.seppo.net

A few examples of garden runaways

English Ivy

Planted on a parking strip

Seeds carried by birds help it spread

Yellow Archangel

Planted in an ornamental bed

Spreading into a rural forest from a yard waste pile

Knotweed

Widely planted as an ornamental landscape plant

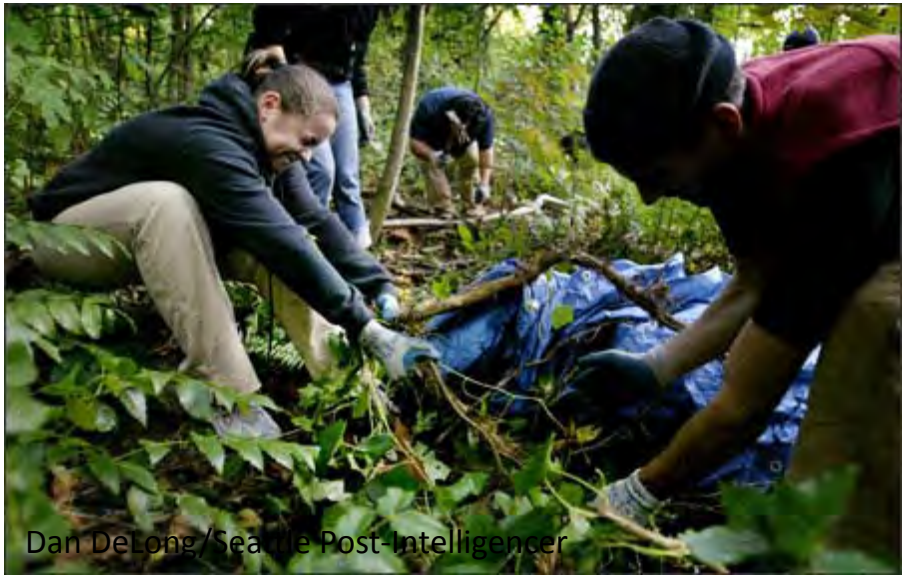
Spreads to rivers where it replaces native riparian vegetation

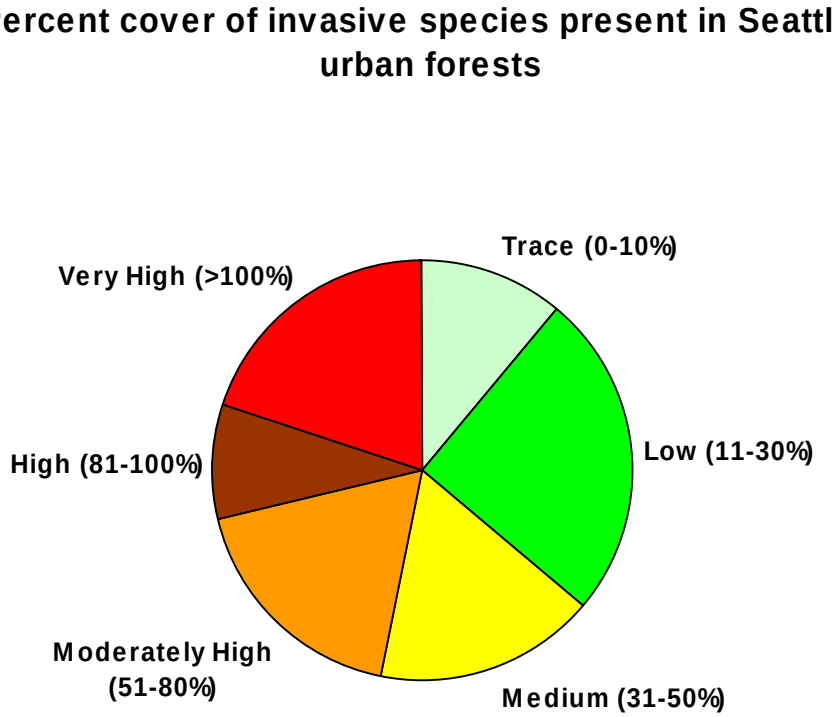
What do these invasive plants have in common?

- Successful invader
  - Introduced from elsewhere, non-native
  - Escapes into natural areas
  - Persists and spreads
  - Generally lacks predators and natural controls
- Causes harm
  - Bully plant: out-grows, out-spreads and out-competes native plants
  - Disrupts ecosystems

Invasive plants such as English ivy displace native plants and wildlife and can transform entire ecosystems

Impacts to Urban Public Lands





A plant survey found that in half of Seattle's forested parks, the majority of the plant cover consisted of invasive species (before the GSP was established)

Washington State Noxious Weed Law in a Nutshell

Image credit: www.skamaniacounty.org

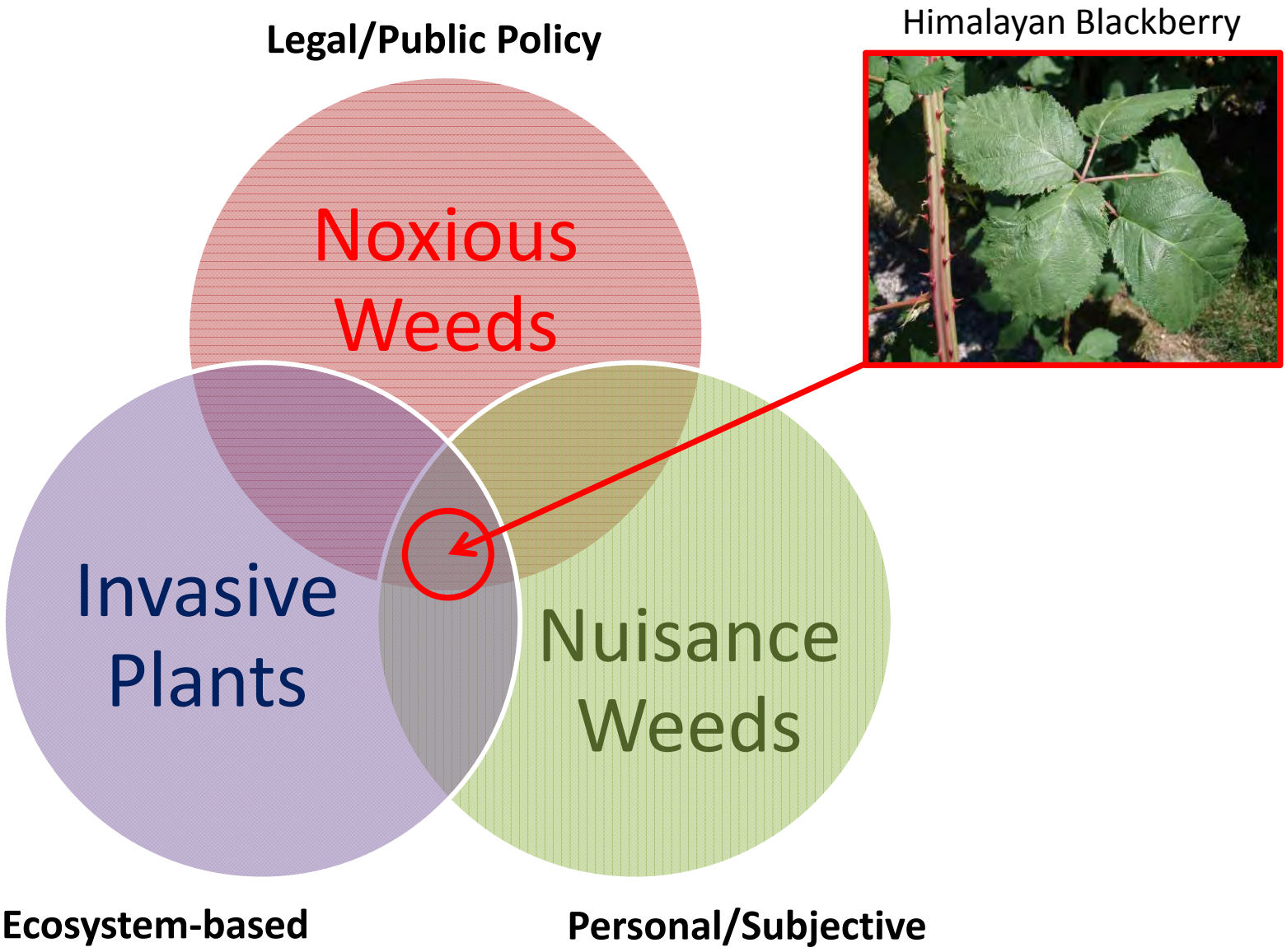
What is a Noxious Weed?

- Non-native plant that impacts agriculture, wildlife, human health, land values or natural resources
- Defined and regulated by state law (RCW 17.10) and the state noxious weed board
- County weed boards implement the law at the local level and educate landowners

Washington State NWCB

Washington State Noxious Weed Control Board website: www.nwcb.wa.gov/

Sorting out the Weeds



Noxious weeds are ranked by how widespread they are

- **Class A Weeds** – new invaders, control required statewide, still a chance to eradicate

Class A: garlic mustard

- **Class B Weeds** – control required only in particular counties or regions, still have a chance to stop them from getting established in some places

Class B: tansy ragwort

- **Class C Weeds** – widespread weeds; counties may select these for required control but focus is mostly on awareness and technical assistance

Class C: English ivy

King County Weed List

- **Regulated Noxious Weeds = control is required**
  - **Class A Weeds:** Control required statewide by state weed board, still a chance to eradicate
  - **Class B and C Regulated Weeds:** Control required in King County by state or county designation; goal is to prevent further spread
- **Non-Regulated Noxious Weeds = control is not required**
  - We educate about these species but control is not required in King County
  - Non-regulated noxious weeds are on state noxious weed list but not designated
  - Weeds of concern are not on state list and are not noxious weeds, but are a problem locally


Garlic Mustard


Yellow Flag Iris

Three basic things to remember about the noxious weed law

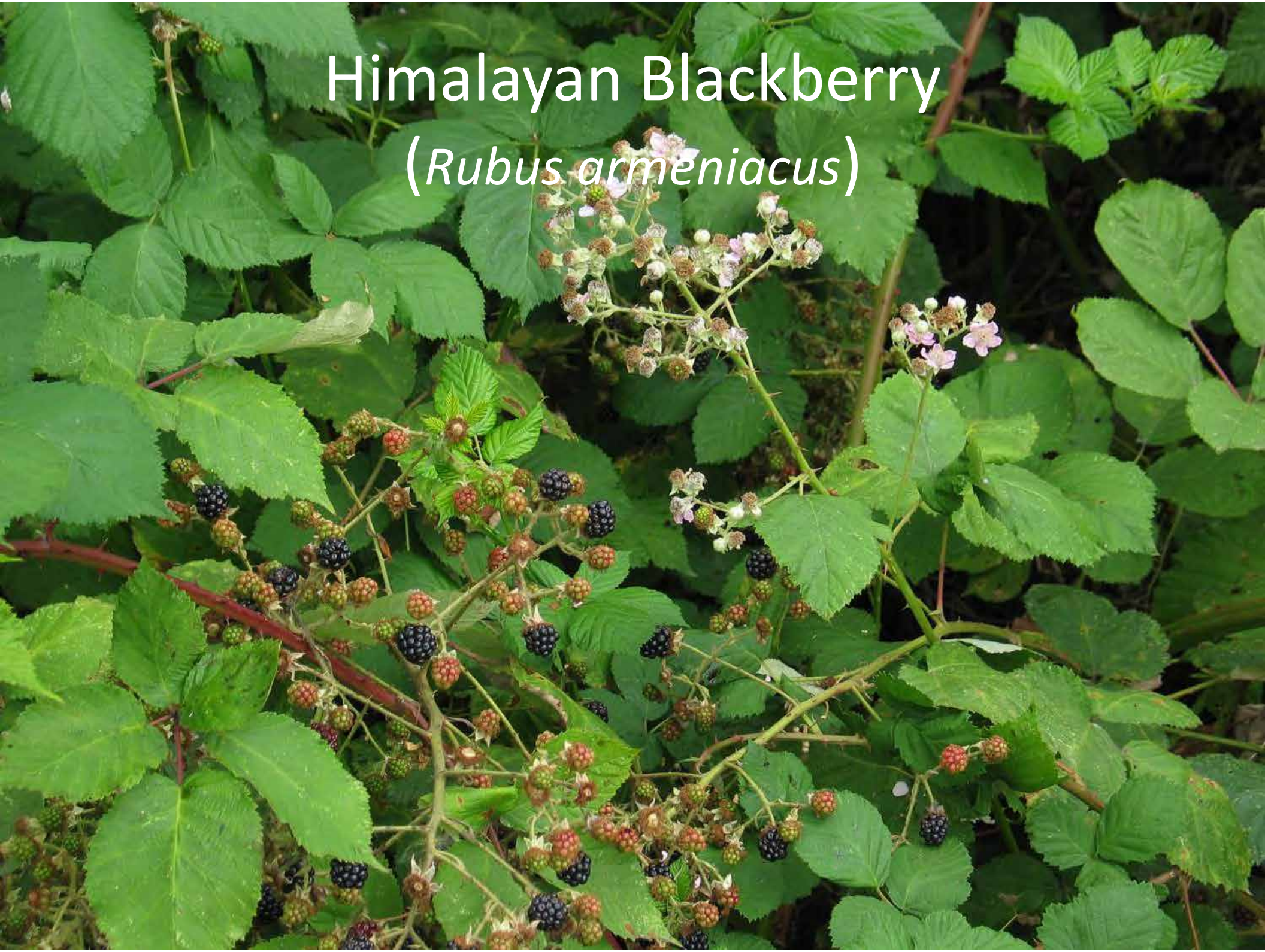
1. Goal is to prevent and reduce harm of noxious weeds to natural and agricultural resources (farms, forests, fisheries, etc.)
2. The regulated species are those that are still limited enough to be able to stop them from spreading (regulated = hope)
3. Property owner is responsible for controlling listed weeds (public, private, commercial, etc.)

A closer look at a few invasive plants and noxious weeds

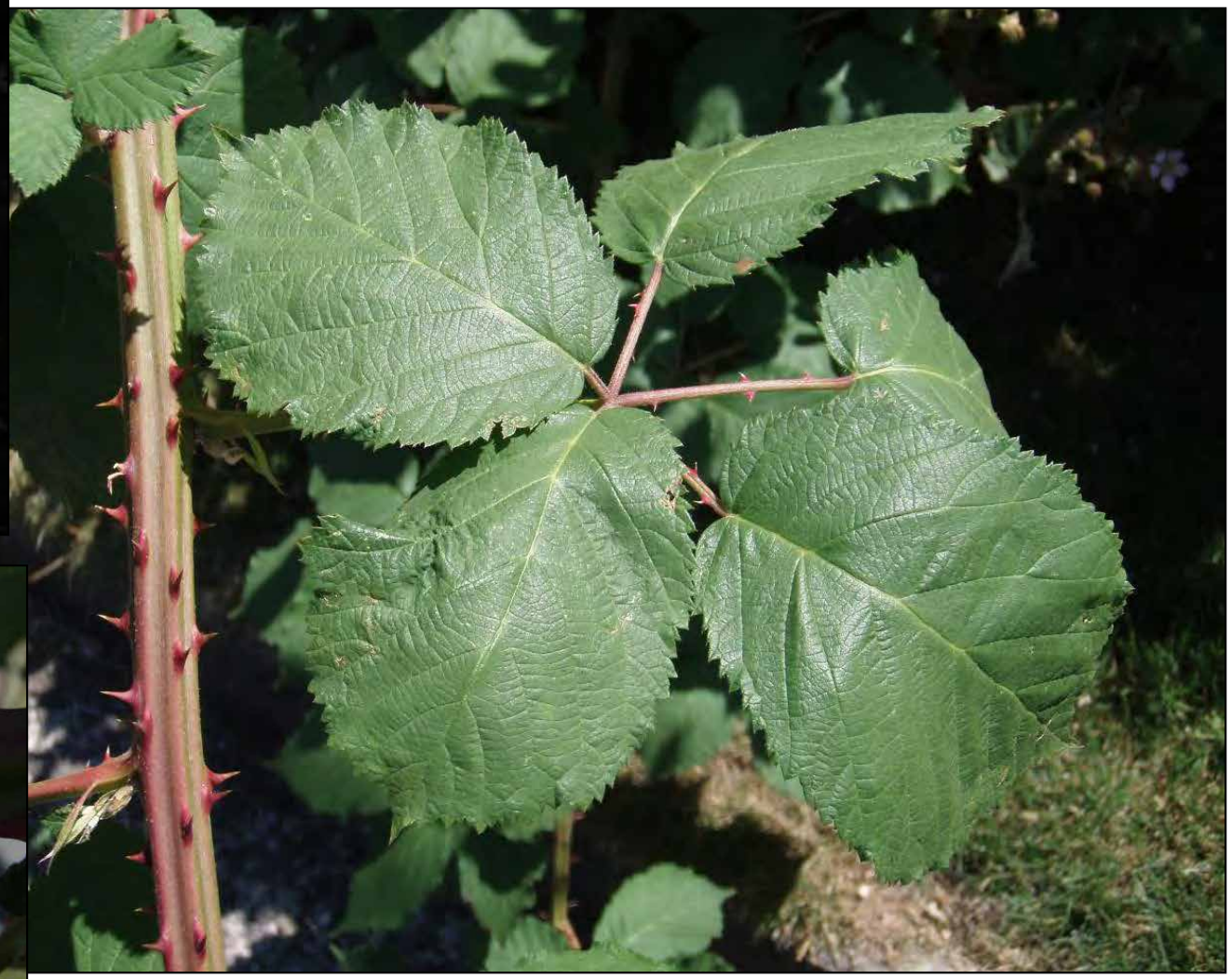
Photo courtesy of Joe Camacho, Latino Outdoors

Top Offenders in Seattle (Non-Regulated)

Himalayan Blackberry (*Rubus armeniacus*)



Himalayan Blackberry (*Rubus armeniacus*)



Evergreen Blackberry (*Rubus laciniatus*)

Good Guy Look-Alike:
Native Trailing Blackberry (*Rubus ursinus*)

Himalayan Blackberry Impacts

- Crowds out other plants
- Reduces habitat diversity
- Creates obstacles to wildlife movement
- Shades out tree seedlings

English Ivy (*Hedera helix*)

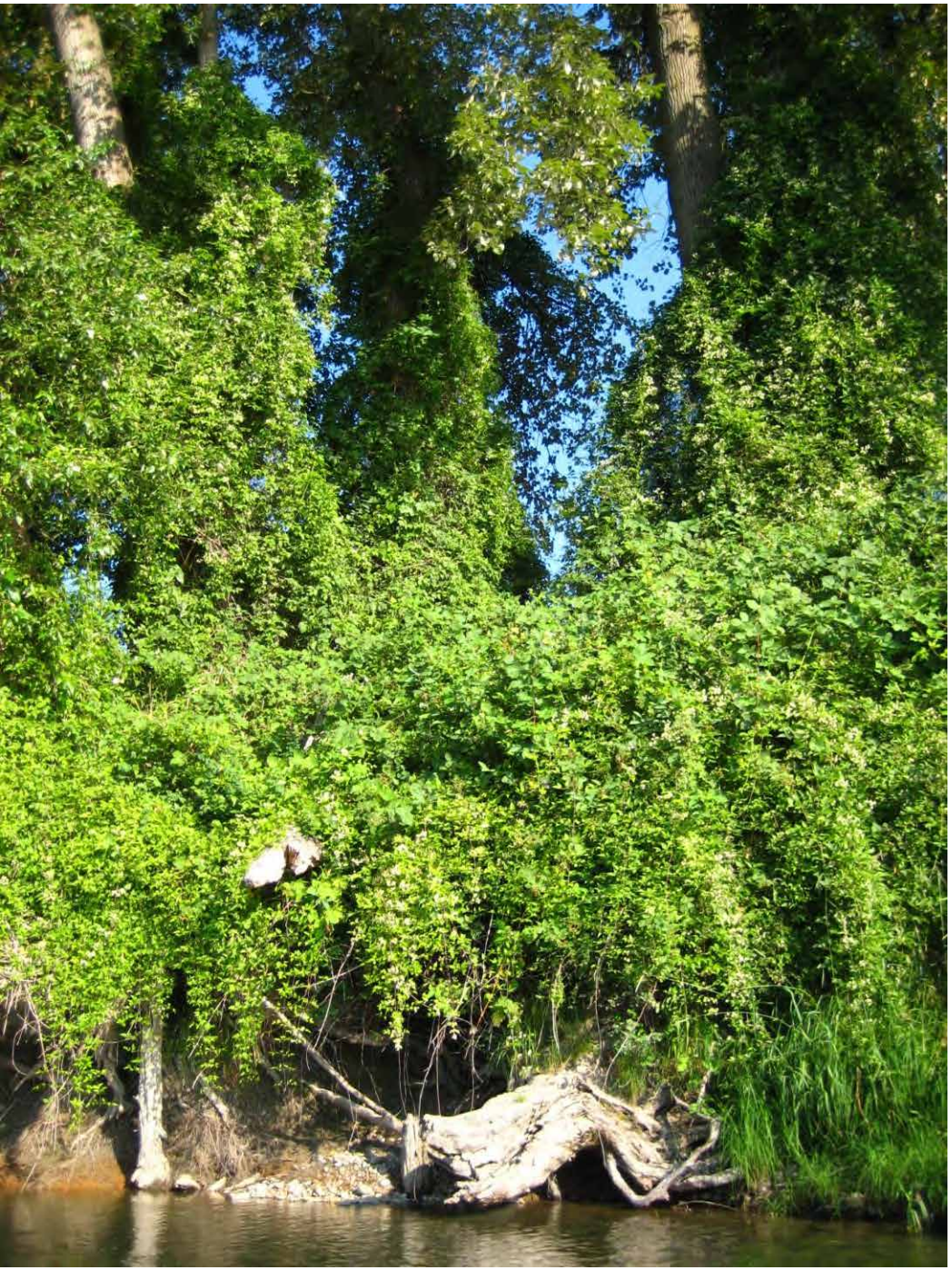
English Ivy Impacts

- Adds weight to the tree; creates “sail” effect and makes trees more likely to blow down
- Shades out tree’s leaves
- Increases rot on tree bark
- Smothers understory plants and tree seedlings
- Provides habitat for rats

Old Man's Beard

Old man's beard (or Clematis) is a deciduous vine with leaves divided into 5 leaflets, fluffy seed clusters, and stringy bark

Old Man's Beard on the Snoqualmie River



English Holly (*Ilex aquifolium*)

Oregon Grape is a Look-Alike For Young Holly

Oregon Grape – leaves in pairs, berries blue

English Holly – leaves not in pairs, berries red

English Laurel (also called Cherry Laurel)

Laurel is a tall, evergreen shrub with shiny, smooth leaves, upright flower clusters and black berries (that are poisonous)

Class B Noxious Weed*

Invasive Knotweed
(*Polygonum bohemicum* et al)

(*Control required only on selected waterways)

Knotweed has hollow, upright, bamboo like stems, often reddish

Knotweed spreads as fragments get moved by floods, by mowing, or in soil

Knotweed out-grows native riparian trees and shrubs need for good habitat and water quality

Despite the large rhizome mass, knotweed provides poor erosion control

Class B Noxious Weed

Yellow Archangel
Lamiastrum galeobdolon (a.k.a. *Lamium*)

Small yellow mint-type flowers in leaf axils

Silvery markings on leaves of this popular garden plant make it easy to spot invading into shady forests


Yellow archangel can completely take over the understory of even very shady forests.

Class B Noxious Weed

Poison-Hemlock (*Conium maculatum*)

Poison-Hemlock Identification

"Umbrella" blooms

Stems stout, non-hairy, hollow, reddish-purplish blotches

Leaves resemble parsley

1st year plants low-growing

2nd year plants 6 to 10 feet

Poison-Hemlock Infestation

Bindweed (Morning Glory)

(*Convolvulus arvensis* and *Calystegia sepium*)

Field Bindweed Hedge Bindweed

Top Offenders in Seattle (Regulated)

Class A Noxious Weed

Garlic Mustard (*Alliaria petiolata*)

Garlic mustard is a European species that inhibits tree growth through negative impacts on beneficial fungi and has no natural enemies in North America.

A single garlic mustard seed can populate a large area in a very short time!!

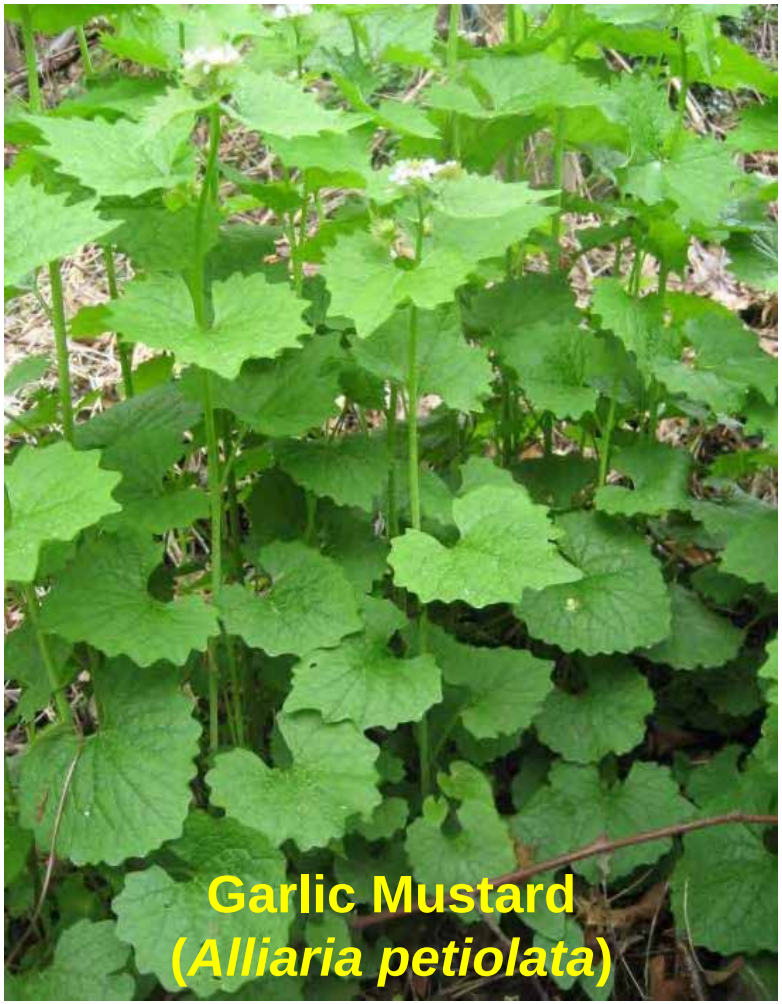
Garlic Mustard Identification

- Small white flowers with 4 petals
- Lower leaves rounded
- Upper leaves longer, more like triangles
- Garlic smell when crushed

- Thin seed pods
- Curved roots

Garlic Mustard in March

Garlic Mustard has lots of look-a-likes



Leaves are thin and smooth

Leaves on most of the look-a-likes are fuzzy

Garlic mustard is highly adaptable

Rural forest in Skagit County

Urban hillside in Seattle

Class A Noxious Weed

Giant Hogweed
(*Heracleum mantegazzianum*)

15 feet tall with a stout, purple-blotched stem, large white umbrella-shaped flower clusters, and giant, sharply toothed leaves

Caution: Giant Hogweed Can Cause Burns

- Juice of giant hogweed contains skin toxins
- Causes skin to be hyper-sensitive to sunlight
- Burns occur when skin is exposed to sunlight, even a day or two after contact with hogweed
- Causes blisters followed by purplish-dark blotches that persist and can continue to be sun-sensitive for several years
- Washing or flushing with water before sap dries can help reduce blisters
- People vary in their sensitivity

Sap from hogweed causes painful burns

Giant Hogweed Identification

Giant Hogweed – truly giant

Good Guy Look Alike: Native Cow Parsnip

Use Caution When Handling Giant Hogweed

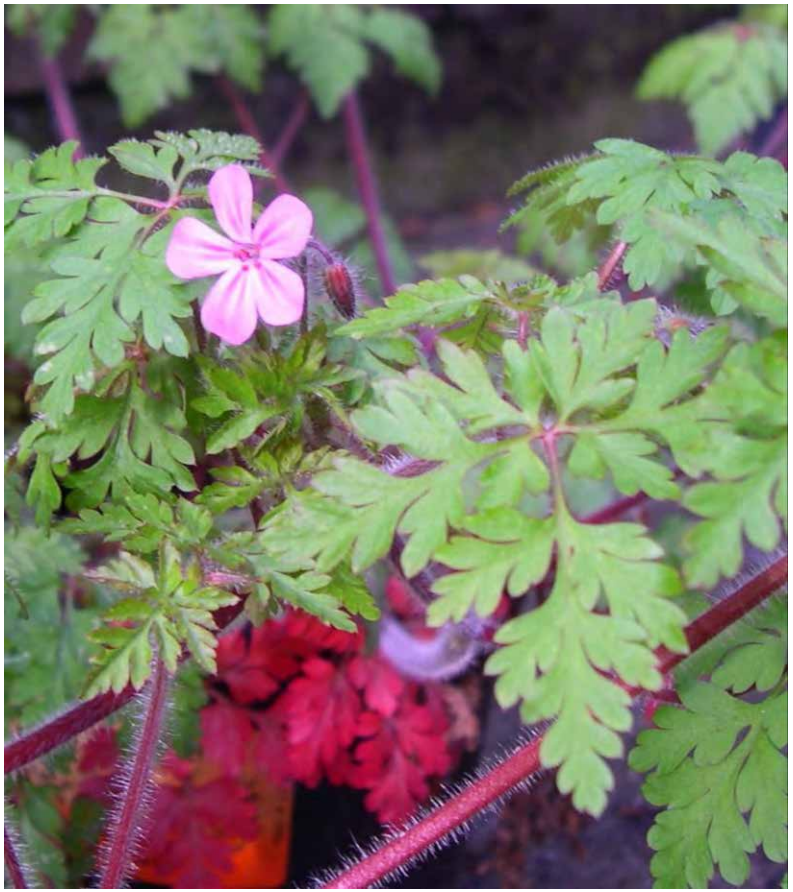
Don’t get hogweed juice on your skin. Always wear gloves, long sleeves, long pants and boots.

Bonus Weeds – Non-Regulated (if there's time)


Herb Robert (a.k.a. Stinky Bob)
(*Geranium robertianum*)

Don’t Pull a Native by Mistake

Noxious Weed: Herb Robert
(*Geranium robertianum*)



Hairs on stems, five petals, stringy roots, strong odor

Native Plant: Bleeding Heart
(*Dicentra formosa*)

No hairs on stems, heart-shaped flowers, fleshy roots, no odor

Pampas and Jubata Grass

Pampas grass: In 2013, a large escaped population was discovered in Olympia with almost 500 plants.

Jubata grass is also invasive in California and Oregon and has been documented in Washington. Looks very similar but less ornamental.

Pampas Grass Escapee

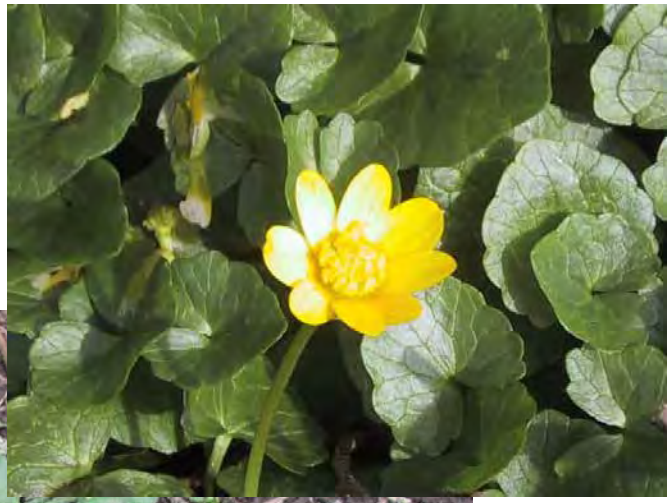
Volunteer pampas grass plants growing along old railroad tracks near Spokane Street

Italian Arum (*Arum italicum*)

- Native to Asia, Europe and northern Africa
- Perennial, herbaceous woodland plant that grows from tubers
- Leaves emerge in the fall to late winter and die back in the summer
- Leaf blades are arrowhead-shaped, variegated
- Flowers: spathe and spadix, emerge in late April to June and give off unpleasant odor
- Fruit is a orange-red berry

http://biology.burke.washington.edu/herbarium/imagecollection/imagelarge.php?ImageNumber=10719&TaxonID=167&SourcePage=taxon&

Lesser Celandine
(*Ficaria verna* or *Ranunculus ficaria*)



- Low-growing, dark green, succulent, shiny, heart-shaped leaves appear in late winter
- Flowers are bright yellow with 8 to 12 petals, borne singly on delicate stalks that rise above the leaves
- Flowering occurs March through May
- By June, foliage is gone and only tubers remain

How Lesser Celandine Spreads

- Tiny cream colored bulblets are produced in stem axils later in the flowering period
- Abundant fingerlike tubers are produced by the roots and are easily visible when plants are pulled up

Spurge Laurel (*Daphne laureola*)

Scotch Broom (*Cytisus scoparius*)

Butterfly Bush (*Buddleja davidii*)

Can grow 5 to 8 feet in a single season

Leaves gray green above and white and fuzzy on the underside, finely toothed on margins

Yellow Flag Iris

(*Iris pseudacorus*)

- Large yellow iris –blooms April to June
- Leaves in a fan
- Prominent midrib on leaf
- Found on lakes, streams, wetlands
- Outcompetes native plants and animals for habitat
- Forms impenetrable mats, accumulates sediment

Seed pod

Bittersweet Nightshade (*Solanum dulcamara*)

Bonus Weeds – Regulated (if there's time)

Class B Noxious Weed

Policeman's Helmet (*Impatiens glandulifera*)

Annual with fleshy, reddish stems, 3-10 ft tall, flowers resemble English policeman's helmet, vary in color from white to dark pink-purple

Class B Noxious Weed

Policeman's Helmet (*Impatiens glandulifera*)

Can grow to 10 feet tall in one season

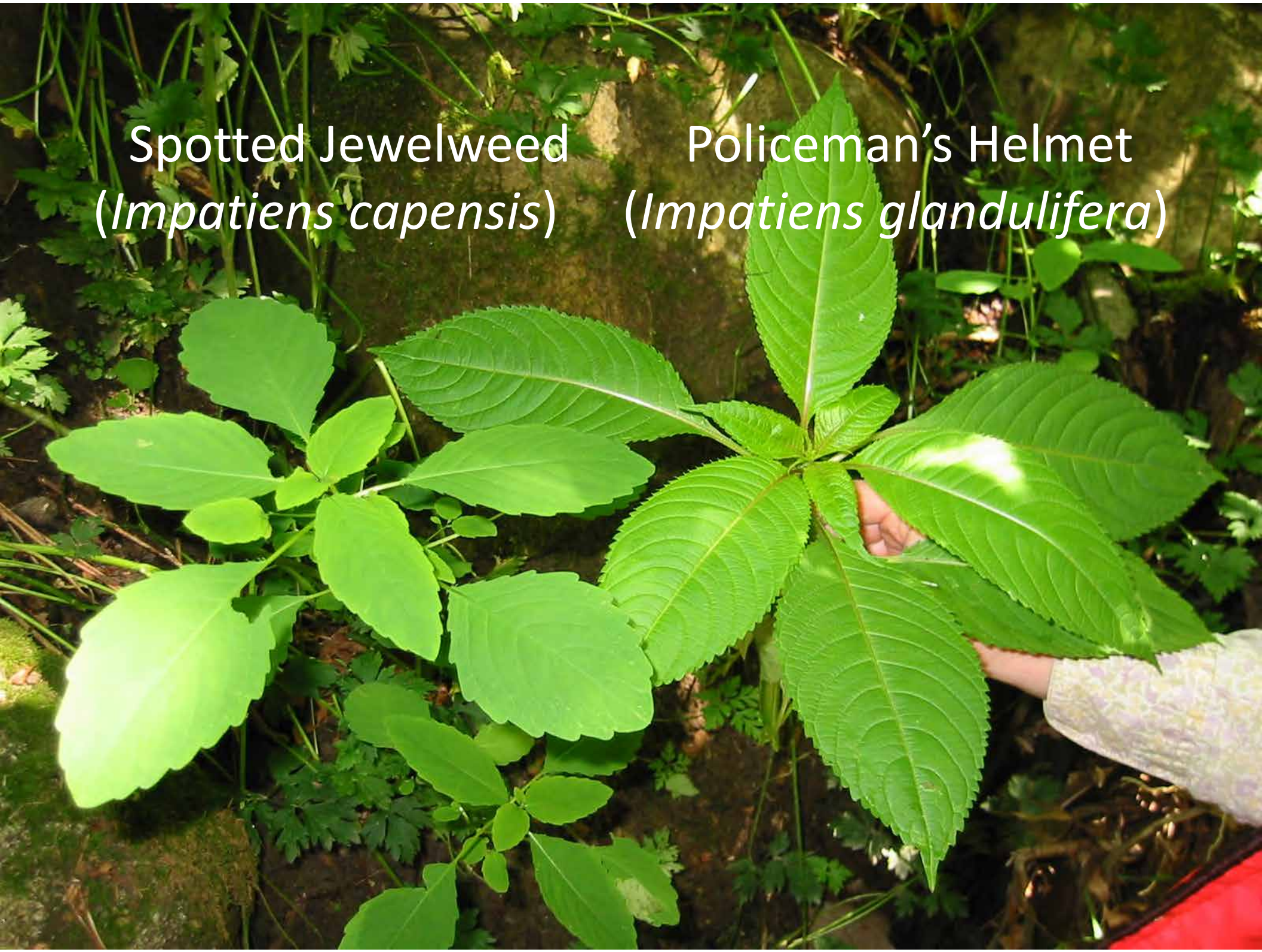
Grows so fast and densely that it crowds out other plants

Often Confused with Policeman's Helmet: Spotted Jewelweed (*Impatiens capensis*)

- Native to the Eastern U.S. but invasive in the Pacific Northwest
- Not on the noxious weed list
- Can become quite dense and cover large areas quickly
- Orange-yellow flowers and smaller plant overall

http://powellgardens.blogspot.com/2010/09/floral-treasures-after-lush-season.html

Weed of Concern – Control Not Required


Spotted Jewelweed
(*Impatiens capensis*)
Policeman's Helmet
(*Impatiens glandulifera*)

Shiny Geranium (*Geranium lucidum*)

Class B Noxious Weed

Shiny Geranium (*Geranium lucidum*)

Herb-Robert (*Geranium robertianum*)

Shiny Geranium (*Geranium lucidum*)

Class B Noxious Weed

Class B Noxious Weed

Tansy Ragwort (*Senecio jacobaea*)

First year rosettes are low-growing with round-lobed leaves, visible spring to fall (even winter)

Flowering stems are 1-6 ft tall with clusters of yellow, daisy-like flowers

- Bolts May-July
- Flowers June-Sep (later if mowed)
- Seeds in August

Class B Noxious Weed

Tansy Ragwort (*Senecio jacobaea*)

- Spreads into fields, forest openings and roadsides
- Seeds are viable for 10 -16 years
- Causes irreversible liver damage and is toxic to horses, cattle and some goats
- Taints honey and milk, making it unpalatable and unsellable
- Often spread by mowing, animals, or in hay

Class B Noxious Weed

Purple Loosestrife (*Lythrum salicaria*)

Key characteristics:

- perennial rhizomatous emergent with showy magenta flower spikes
- stems are square and branched
- leaves opposite, long and narrow
- up to 2.5 million tiny seeds/plant
- flowers July and August

Purple Loosestrife and Native Look-A-Likes

Purple Loosestrife (weed) Douglas Spirea (native) Fireweed (native)

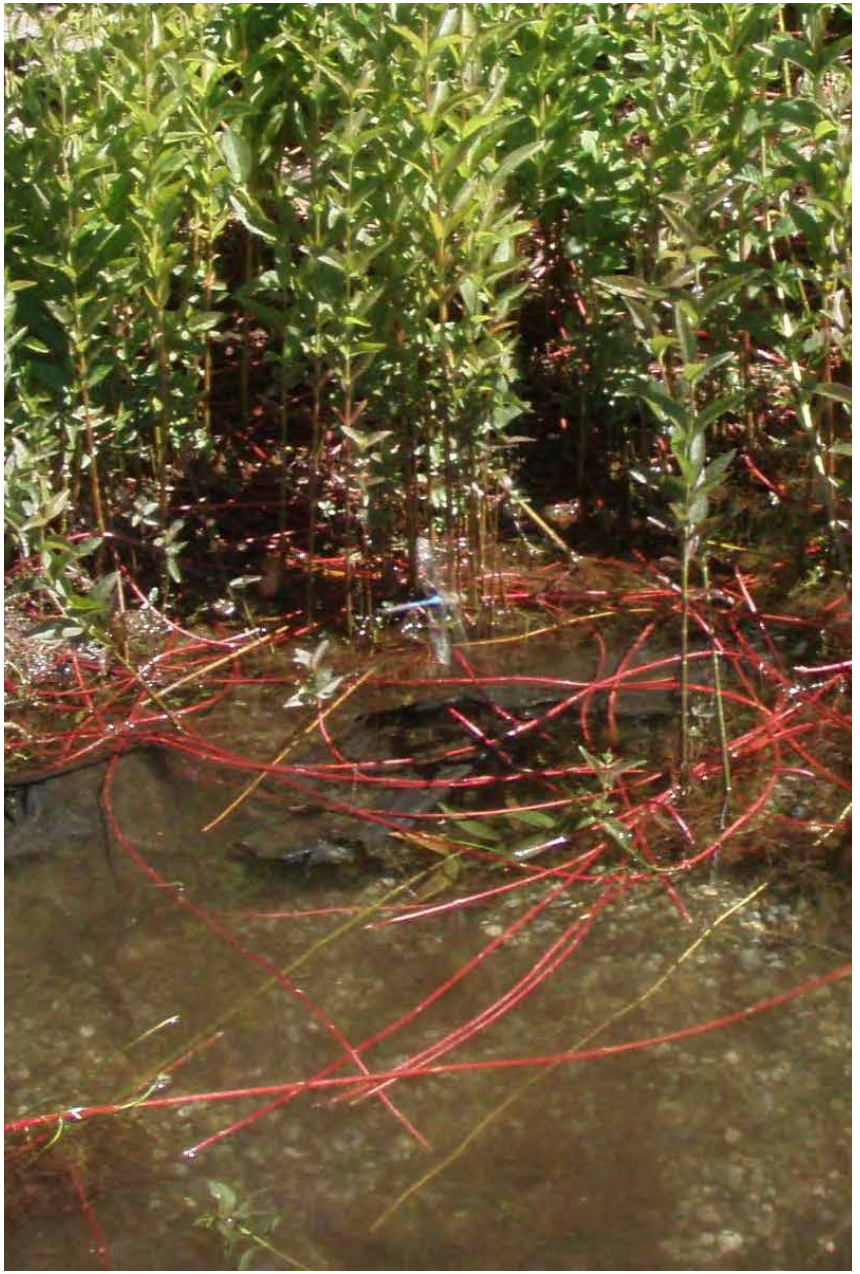
Class B Noxious Weed

Garden Loosestrife (*Lysimachia vulgaris*)

Yellow, primrose-like flowers clustered near the top of plant

- Flowers in July and August
- Grows in areas with variable water levels like the Sammamish River

Garden Loosestrife (*Lysimachia vulgaris*)



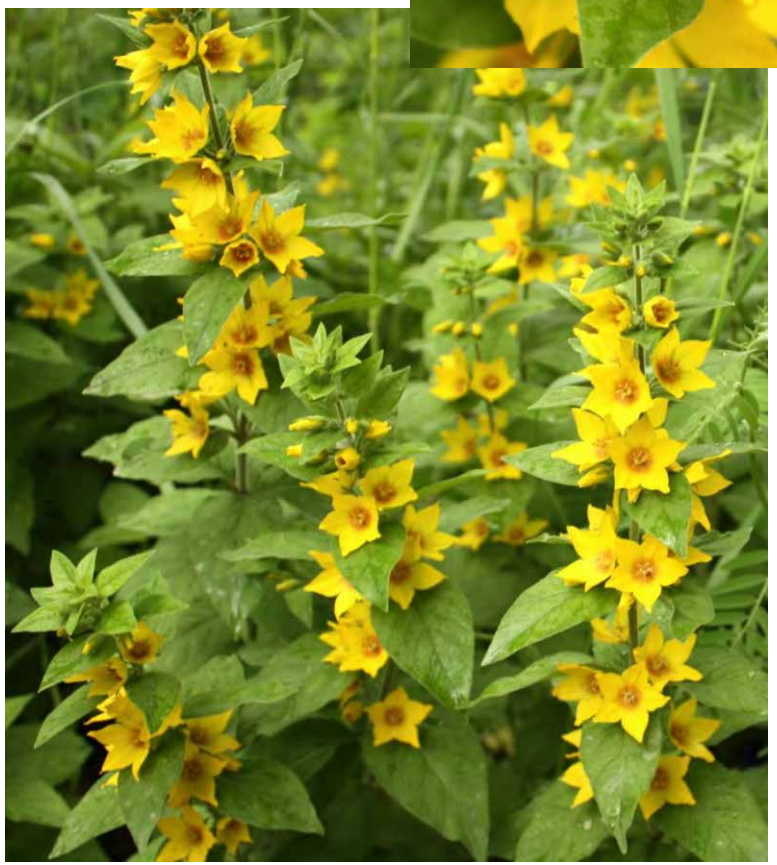
2-10 foot tall perennial of wetlands and shorelines, produces extensive red rhizomes that will reach up to 10 feet out into adjacent open water

The *Lysimachia* cousins: No-good Garden Loosestrife and its Ornamental Look-A-Like

<u>Noxious Weed</u>:
Garden Loosestrife

Lysimachia vulgaris

<u>Garden Plant</u>:
Yellow Loosestrife



Lysimachia punctata

Info on Noxious Weeds in King County:

www.kingcounty.gov/weeds

Weed Photo Page:

Search by Weed Name

Annual bugloss	Abutilon theophrasti
Bighead knapweed	Acroptilon repens
Bittersweet nightshade	Alliaria petiolata
Black knapweed	Anchusa arvensis

Click thumbnail picture to get more information and photos

bighead knapweed

King County Noxious Weed Control Program

Contact us:

206-477-9333

(206-477-WEED)

noxious.weeds@kingcounty.gov

kingcounty.gov/weeds

- **Weed Board**: Scott Moore, John Browne, Eldon Murray, Becky Chaney, Grace Stiller
- **Manager**: Steve Burke
- **Admin**: Denise Liguori
- **Education**: Sasha Shaw
- **County Lands**: Roy Brunskill
- **State Lands**: Trish MacLaren
- **Aquatic Weeds**: Ben Peterson
- **Riparian Team**: Justin Brooks, Sayward Glise, Erin Haley, Randy Ladowski
- **Regional Weed Specialists**: Matt Below, Mattia Boscolo, Mary Fee, Karen Peterson, Eric Walker, Maria Winkler, Patrick Sowers