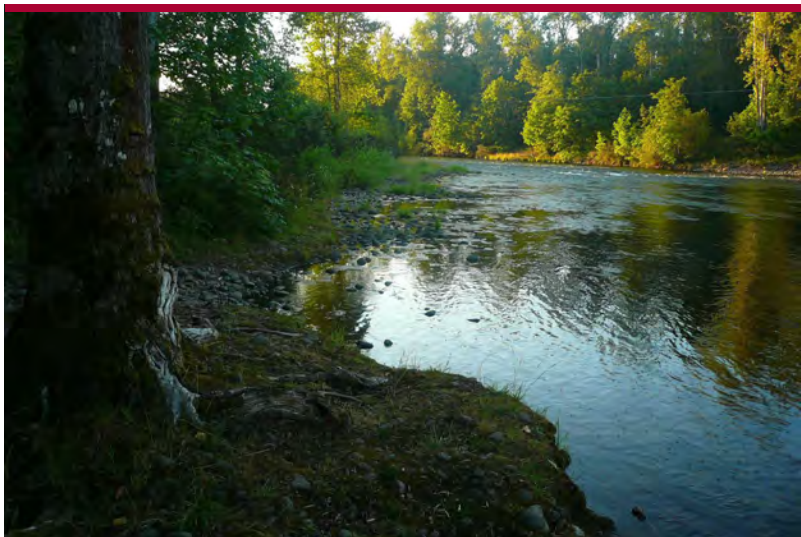


# Weed Watchers EDRR ID Guide

*For the Middle Fork Willamette Watershed*



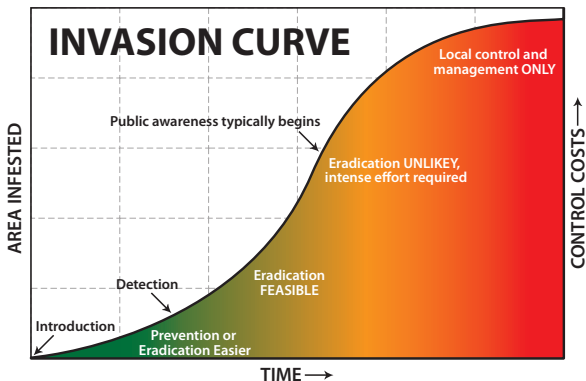
Middle Fork Willamette



WATERSHED  
COUNCIL

## Introduction to Early Detection and Rapid Response

Early Detection and Rapid Response (EDRR) is an approach to invasive species management that focuses on surveying and monitoring areas to find and treat infestations at their earliest stages of invasion. Monitoring can be conducted actively or passively. In active monitoring, an individual visits a site regularly and thoroughly surveys for a particular species or set of species. In passive monitoring, new invasives are found as you do your regular activities such as walking, hiking or riding in a vehicle. Once a targeted species is found, control measures are implemented rapidly to prevent establishment and spread. After prevention, EDRR is the most successful, cost-effective, and least environmentally damaging means of invasive species control.



## **Middle Fork Willamette Watershed Council Invasive Species Management Program**

The goal of the MFWWC Invasive Species Management Program is to minimize the ecological, economic, and human health impacts of invasive species within the Middle Fork Willamette Watershed through prevention, early detection and rapid response (EDRR), community participation, and strategic control. The MFWWC works in a partnership with volunteers, non-profits, businesses, and government agencies to achieve these goals. Volunteers and staff look for and report new, high priority invasive species in the Middle Fork Willamette Watershed. Reports are investigated and infestations are controlled by groups within the partnership.

This EDRR weed identification guide was developed to aid in identifying, detecting, and reporting the weeds that are priorities for early detection and rapid response in the Middle Fork Willamette Watershed. Thank you for your interest in keeping new invaders out of the watershed!

### **Prevent the Spread!**

We need your help in preventing the spread of invasive species. Take care not to spread invasive plant seeds or materials or live animals as you hike, bike, or boat. Brush off your boots, bike, and dog before leaving an infested area. Clean your boat and gear before launching. When you are camping, use local sources for firewood to prevent the spread of invasive insects.

## **Web Resources**

### **Descriptions and photos of listed Noxious Weeds in the State of Oregon:**

<http://www.oregon.gov/ODA/PLANT/WEEDS>

### **Photographs of and control information for invasive species:**

<http://www.invasive.org>

### **Invasive species in the Middle Fork Willamette Watershed:**

<http://mfwwc.org/nativeplants.html>

### **General invasive species information and resources:**

<http://emswcd.org/weeds>

<http://www.opb.org/programs/invasives>

[http://www.kingcounty.gov/environment/animalsandplants/  
noxious-weeds.aspx](http://www.kingcounty.gov/environment/animalsandplants/noxious-weeds.aspx)

<http://www.invasivespeciesoforegon.com>

<http://www.westerninvasivesnetwork.org>

## If you think you have found one of the priority species described in this guide, please report it!

### Step 1: Collect information about your sighting

**1. Take pictures of the plant:** Take several pictures, including close-ups of leaves and flowers. Include an object of known size (such as a coin, your hand, or your lens cap) to show scale.

**2. Describe the plant:** How big are the leaves? Are there hairs on the leaves or stems? What color are the flowers? How many petals do the flowers have? Write down any other distinguishing features that catch your eye.

**3. Where is the plant located?** If you have a GPS unit, mark the point. The nearest address, intersection, or mile marker is helpful information. If you're on a trail note the nearest landmark and provide instructions on how to find the infestation from there.

**4. How big is the infestation?** Is it just a few plants, or hundreds? How many feet long and wide is the infestation? Are the plants scattered or dense?

### Step 2: Report your sighting

**Go to [www.oregoninvasiveshotline.org](http://www.oregoninvasiveshotline.org)** and click on the 'Report Now' button. Provide all of the information you collected as you fill out the form. Provide photographs if you have them. Please include your contact information so we can follow up with you if we have questions.

*(reporting instructions continue on back of this card)*

***You can also call or email us to report a sighting.*** Please contact Elise Ferrarese, MFWWC Restoration Specialist at (541) 937-9800 or [restorationspecialist@mfwwc.org](mailto:restorationspecialist@mfwwc.org).

## What We Will Do

If a species from this guide is reported to us, we will contact the landowner and request permission to visit the reported site. If the species was found on public land, we will notify the appropriate land management agency. We will then visit the site to verify the species, determine the most effective response, and begin control of the species as soon as possible.

For several species in this guide, control is only available in certain areas or habitats. If such limitations exist for a particular weed, this information can be found on its identification card.

## Spurge Laurel

*Daphne laureola*

1. Chris Aldassy, EMSWCD
2. Whatcom county Noxious Weed Control Board
3. Whatcom county Noxious Weed Control Board
4. © Bruce Newhouse
5. Chris Aldassy, EMSWCD
6. Whatcom county Noxious Weed Control Board

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## Spurge Laurel

*Daphne laureola*



**General:** Evergreen, shade tolerant shrub growing to 4 feet tall. Mature plants have many shoots originating near base. Branches green, turning grey with age. Spread by root or seed.

**Leaves:** Glossy, oblong, dark green, thick with smooth edges. Spirally arranged; crowded at branch tips. 2-7 inches long, ½ -2 inches wide. Leaves lighter underneath. Leathery.

**Flowers:** Small and inconspicuous, yellow-green with orange stamens, unpleasantly fragrant. Bloom from late January to May. Grow in clusters of 5-20 between leaves near the tops of stems.

**Fruit:** Egg shaped fleshy berries start out green and ripen to black in early summer.

**Notes:** **All parts of this plant are toxic.** Do not handle without protection.

**Impacts:** Grows in the understory of our native forests where it can rapidly colonize areas to form dense stands and out-compete native vegetation. Once established, spurge laurel is difficult to manage. Birds spread seeds randomly making detection very difficult and allowing spurge laurel to spread throughout natural areas unchecked. Alters soil chemistry.



## Gorse

*Ulex europaeus*

1. Forest and Kim Starr, U.S.G.S
2. Forest and Kim Starr, U.S.G.S
3. © Bruce Newhouse
4. Forest and Kim Starr, U.S.G.S
5. Norman E. Rees, U.S.D.A Ag. Research Service
6. © Bruce Newhouse

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## Gorse

*Ulex europaeus*



**General:** Spiny, evergreen shrub up to 15 feet tall and 30 feet wide. Grows in dense thickets. Branches ridged and hairy; green when young, turning brown with age.

**Leaves:** When young, leaves alternate and three parted, becoming spine-like, green, ½ to 2 inches long, occurring in whorled clusters.

**Flowers:** Produces a profusion of yellow pea blossom shaped flowers very similar to Scotch broom in early spring to late summer. Shiny flowers are solitary and often clustered at the ends of branches.

**Fruit:** Hairy, oblong pods, ½ to 1 inch long, containing two to six seeds. Smooth, shiny, hard, heart-shaped, tiny seeds green to olive in color, turning brown or black when mature. Ejected when seed pods mature.

**Notes:** Gorse is highly flammable. The spiny leaves are the best way to differentiate gorse from Scotch broom which at all times has non-spiny and typically three-parted leaves.

**Impacts:** Gorse will grow in dense, impenetrable thickets that exclude native plants and animals and render land useless. It can also increase erosion on steep slopes. Gorse becomes extremely difficult to eradicate once it is established due to its long-lived seed.

# Indigo Bush

*Amorpha fruticosa*

1. © 1998 Nick Kurzenko
2. Robert H. Mohlenbrock @ NRCS PLANTS
3. D. E. Herman @ NRCS PLANTS
4. Steve Hurst @ NRCS PLANTS
5. Robert H. Mohlenbrock @ NRCS PLANTS

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## Indigo Bush

*Amorpha fruticosa*



**General:** Perennial shrub. Mature plants 3 to 10 feet tall. Branches are firm and woody while twigs are green and hairy. Spreads by seed.

**Leaves:** Each 4 to 8 inch long leaf is composed of 13 to 25 smaller leaflets. Leaflets are teardrop- to paddle-shaped, 1 to 2 inches long, hairy, resinous, and dotted. Leaf shape is highly variable.

**Flowers:** Showy purplish-blue with orange anthers, forming 3 to 6 inch clusters on the ends of erect branches. Fragrant vanilla scent. Flowers in early summer.

**Fruit:** Seeds are around ¼ inch long, brown, curved and either smooth or hairy.

**Notes:** Extensive root system forms nitrogen-fixing nodules.

**Impacts:** Indigo bush thrives in wet soils along rivers, streams, ponds, and in moist forests but has adapted to infertile, dry, and sandy soils. Riparian corridors in the Pacific Northwest are especially at risk.

## Garlic Mustard

*Alliaria petiolata*

1. Glenn Miller, ODA
2. Chris Evans, River to River CWMA
3. Tom Forney, ODA
4. Leslie J. Mehrhoff, University of Connecticut
5. Jason Dumont, TNC

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## Garlic Mustard

*Alliaria petiolata*

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**General:** Biennial forb. Rosettes form by late spring in first year, blooms April to June second year. Distinct “S” shaped curve at top of root. Typically 1-3 feet tall, up to 5 feet. Self pollinating.

**Leaves:** Basal leaves dark green, kidney shaped, 2-4 inches around, deeply veined. Leaves of young rosettes rounded. Stem leaves alternate, sharply toothed, triangular, smaller toward top of stem. Produce distinct garlic odor when crushed.

**Flowers:** Flower stalks usually single and unbranched. Flowers are ¼ inch wide with 4 white petals. Flowers April to June.

**Fruits:** Seeds form in narrow, green seed pods that originate from the center of the flowers beginning in May and turn brown as the seed matures. Seeds small dark, smooth, football-shaped, ejected from seed pods when mature.

**Notes:** Spreads easily along trails and roads. In the rosette stage there are several common look-alikes: wild violets, fringe cup, creeping Charlie, and piggy-back plant.

**Impacts:** Serious threat to native forest understory. Commonly invades roadsides, streamsides, trails, agricultural land, and residential gardens rapidly displacing native species. Root exudes chemicals that inhibit other plants’ establishment and growth.



# Giant Hogweed

*Heracleum mantegazzianum*

1. Beth Myers-Shenai, ODA
2. Terry English, USDA APHIS PPQ
3. USDA APHIS
4. Glenn Miller, ODA
5. Beth Myers-Shenai, ODA

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## Giant Hogweed

*Heracleum mantegazzianum*



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**General:** Perennial forb. 10-15 feet tall. In rosette form, up to four feet tall with giant leaves spread wide. Stalk and flower head develop after 2-4 years then plant dies back. Stalks 2-4 inches in diameter, hollow with raised purple blotches and erect hairs.

**Leaves:** 3-5 feet wide, with 3 leaflets per leaf. Leaflets deeply incised and lower surface is scaly.

**Flowers:** Flower head made up of numerous, white flowers, umbrella-like, up to 2 ½ feet in diameter. Flowers mid-May through July.

**Fruit:** Seeds are flat, oval, tan with brown lines, about  $\frac{3}{8}$  of an inch long. Each plant can produce up to 50,000 seeds.

**Notes:** **This plant is a public health hazard.** Skin will burn and blister when exposed to plant's sap and sunlight. Native cow parsnip, a hogweed look-alike, typically only grows to 6 feet tall with a flower head of less than 1 foot in diameter and much smaller, much less incised leaves.

**Impacts:** Readily colonizes stream banks, fields, and forest understory where it replaces native vegetation and prevents new trees from growing. Establishment along streams and rivers leads to increased bank erosion.



# Knotweed

*Polygonum spp.*

1. Richard Old, xidservices.com
2. Tom Huette, Forest Service
3. Catherine Herms, Ohio State Weed Lab Archive
4. Nanna Borchardt, Sitka Conservation Society
5. Nanna Borchardt, Sitka Conservation Society

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Photo by:

## Knotweed

*Polygonum spp.*



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**General:** Perennial forb. Grows to 12 feet tall, depending on species, from long, creeping rhizomes. Stout, hollow stems are reddish-brown to green, with slightly swollen nodes. Branches grow in a zig-zag pattern. Stems similar in appearance to bamboo. Propagates mainly from spreading rhizomes. Dies back in winter, but the tall, dead, brown stems often persist.

**Leaves:** Large heart shaped leaves on short stalks. 2-6 inches long and 2-4 inches wide, with pointed tips. Hairless.

**Flowers:** Small, cream-colored, in large plume-like clusters at ends of stems. Blooms late summer through early fall.

**Fruit:** Seeds, when present, are  $\frac{1}{8}$  inch wide, brown, shiny, and triangular. Present in fall.

**Notes:** Found mainly along waterways, roads, gardens, and disturbed areas. Tiny root fragments can easily regenerate into new infestations.

**Impacts:** Displaces native plant species, especially in riparian areas where root fragments are dislodged by high waters and taken downstream to form new patches. Establishment along streams and rivers can lead to increased bank erosion. Decreases shading of streams and is very difficult to control once established.

**Control may not be available in all locations.**

# Orange Hawkweed

*Hieracium aurantiacum*

1. Montana Statewide Noxious Weed Awareness and Education Program Archive, MSU
2. Michael Shepard, Forest Service
3. Ken Chamberlain, Ohio State University
4. Michael Shepard, Forest Service
5. Michael Shepard, Forest Service
6. Montana Statewide Noxious Weed Awareness and Education Program Archive, MSU

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## Orange Hawkweed

*Hieracium aurantiacum*



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**General:** Perennial forb. Mature plants 12-36 inches tall when flowering. Produces mats of rosettes. Spreads by stolon, rhizome and seed. Stem exudes milky liquid when cut. Self pollinating.

**Leaves:** Almost exclusively basal. Spatula- or lance-shaped, up to 5 inches long. Leaf edges smooth or minutely toothed. Very hairy.

**Flowers:** Red to orange ray type flowers, ½ to 1 inch wide. Arranged in clusters of 5-30 at top of typically leafless, hairy stem. Black hairs on flower stalks.

**Fruit:** 12-50 tiny seeds per flower. Seed heads similar to dandelion. Individual seeds dark brown or black, cylindrical, elongated, barbed and bristled.

**Notes:** Found primarily in forest meadows and openings, pastures, lawns, and roadsides. The multiple flowers per stalk can be used to tell hawkweeds from the many look-alikes. Several invasive and native yellow hawkweeds are present in the PNW.

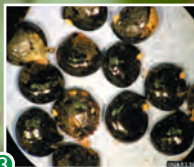
**Impacts:** Invasive hawkweeds dominate sites by out-competing other species and by releasing chemicals into the soil that inhibit other plants' growth. They thrive in moist sunny areas but can tolerate shade. Wilderness meadows in the Pacific Northwest are especially at risk of invasion.

# Pokeweed

*Phytolacca americana*

1. Robert Vidéki, Doronicum Kft
2. Nate Woodard
3. Lynn Sosnoskie, University of Georgia
4. University of Connecticut
5. Catherine Herms, Ohio State Weed Lab Archive
6. Alice B. Russell

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## Pokeweed

*Phytolacca americana*



**General:** Perennial forb, 2-8 feet tall. Smooth, stout, purplish stem that branches extensively. Large, fleshy, white tap root.

**Leaves:** Egg shaped, alternate on stem with smooth edges. Up to 12 inches long and 4 inches wide. Hairless.

**Flowers:** White or green. Form in elongated clusters that hang from branches in early summer.

**Fruit:** Hanging clusters of distinct, deep purple berries with crimson juice. Fruits present mid-summer to late fall.

**Notes:** Every part of pokeweed is poisonous with the root and leaves being the most toxic. The plant's berries have been shown to cause vomiting, spasms, and even death in humans. Re-sprouts from any left behind root fragments. Found mostly in yards, gardens and waste areas in our region.

**Impacts:** **This plant is a public health hazard.** Displaces native vegetation. The large taproot can grow to the size of a bowling ball making it very difficult to eradicate.

# Purple Loosestrife

*Lythrum salicaria*

1. Bonnie Rasmussen, ODA
2. Eric Coombs, ODA
3. Linda Willson, University of Idaho
4. Steven J. Baskauf
5. Steve Dewey, Utah State University
6. John D. Byrd, Mississippi State University

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## Purple Loosestrife

*Lythrum salicaria*



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**General:** Herbaceous perennial growing up to 10 feet tall with up to 50 stems per plant. Upright stems are square to 6 sided. Spreads by seed and rhizome. Well-developed taproot. Can establish in massive thickets in shallow-standing water or in moist areas.

**Leaves:** Downy, lance-shaped; round- or heart-shaped at the base. Stalkless. Whorled or opposite with smooth margins.

**Flowers:** Numerous, showy, pink to purple with 5-7 petals on a long, upright spike. Blooms July to September.

**Fruit:** Numerous, sand grain size seeds. Seeds present and dispersed in fall.

**Notes:** Typically favors moist sites like wetlands, ponds, stream banks, and marshy areas. However, it is beginning to inhabit drier sites particularly around agricultural pastures and fields. Several large stands established in the Portland area are currently being treated using biological control agents.

**Impacts:** Crowds out native marsh vegetation required by wildlife for food and shelter. Decreased waterfowl and songbird production has been well-documented in heavily infested marshes.



# Japanese Butterbur

*Petasites japonicus*

1. Daniel Lacroix 2005
2. Kropsoq 2006
3. © Jamie Fenneman
4. Ben Legler 2003
5. Ben Legler 2004
6. Kropsoq 2006

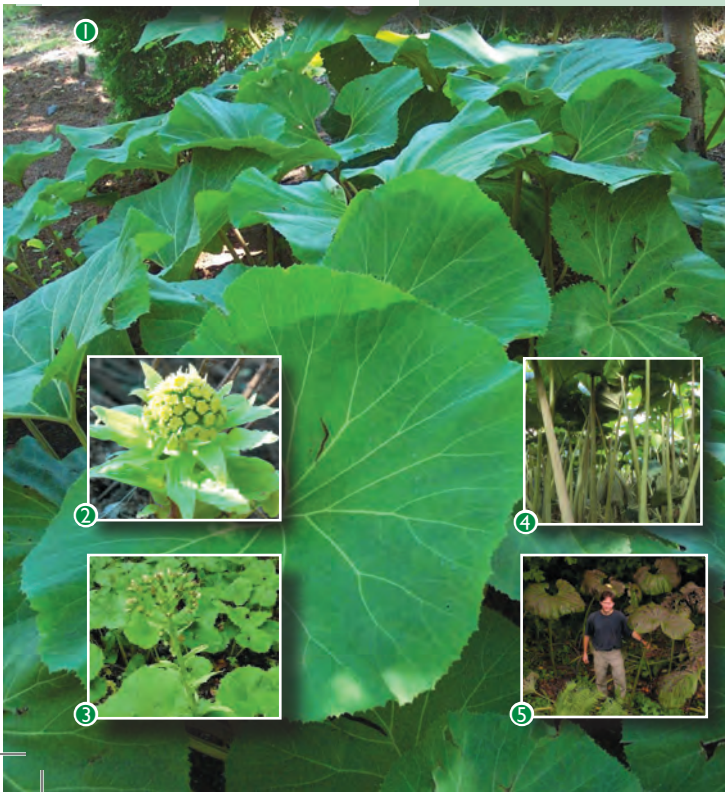
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## Japanese Butterbur

*Petasites japonicus*



**General:** Herbacious perennial. Mature plants can reach up to 5 feet tall. Spreads by extensive rhizome network.

**Leaves:** Large (2 to 4 feet wide), rough-textured, elephant ear-like leaves. Rounded, double-lobed, and often dark green. Grow on long, stout stalks with matted hairs on underside of leaf.

**Flowers:** Yellow to white inflorescences on flowering stems up to 50 inches tall. Bloom in compound bunches resembling an umbrella.

**Fruit:** Must have male and female plants to produce seeds.

**Notes:** Thrives in partial to full shade. Flower heads look similar to PNW native *Petasites* species (sweet & palmate coltsfoots).

**Impacts:** Rapidly colonizes areas, blocking light and out-competing native plant species. Grows well in moist conditions. Invades forests, stream banks, and other moist, low-light environments.

# Rush Skeletonweed

*Chondrilla juncea*

1. Steve Dewey, Utah State University
2. Richard Old, xidservices.com
3. Joseph M. DiTomaso, University of California
4. Steve Dewey, Utah State University
5. Joseph M. DiTomaso, University of California
6. Richard Old, xidservices.com

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## Rush Skeletonweed

*Chondrilla juncea*

6



**General:** Herbaceous perennial growing 1-4 feet tall. Blooms July to September. Coarse, downward-pointing brown hairs on lower 4 to 6 inches of the stem; almost no leaves. Extensive aerial branching. Well-developed taproot. Spreads by seeds and root fragments.

**Leaves:** Sharply-lobed, hairless leaves form a basal rosette (similar to dandelion) that withers as the flower stem develops. Other leaves on the stem are narrow and inconspicuous.

**Flowers:** Yellow flower  $\frac{3}{4}$  inch in diameter with 7 to 15 petals. Flowerheads are produced near the ends of stems, either individually or in groups of 2 to 5, with 9 to 12 flowers each.

**Fruit:** Seeds  $\frac{1}{8}$  inch long with slender beaked tops, bearing numerous fine bristles that aid in dispersal by wind.

**Notes:** The leaf, stem, and roots exude milky sap when cut or broken. Found along roadsides and disturbed areas in sandy to gravelly soils and shallow bedrock soils.

**Impacts:** Mature plants can produce 1,500 flower heads with up to 20,000 seeds. Aggressively invades range or croplands. Displaces native plant species and reduces forage for livestock and wildlife.

**Control may not be available in all locations.**

## Yellow & Purple Starthistle

*Centaurea solstitialis* & *C. calcitrapa*

1. Tom Forney, ODA
2. © Barry Rice, sarracenia.com
3. Photographer not known
4. © Barry Rice, sarracenia.com
5. Steve Dewey, Utah State University
6. Tom Forney, ODA

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## Yellow & Purple Starthistle

*Centaurea solstitialis* & *C. calcitrapa*



**General:** Annual or biennial, spreads by seed. Grows 1 to 4 ft tall. Rigid stems are extensively branched. Foliage may be dull green to gray and covered in woolly hairs.

**Leaves:** Rosette and lower stem leaves are deeply lobed. Upper stem leaves are narrow and undivided. Purple starthistle rosettes have spines in center.

**Flowers:** Yellow or purple flowerheads respectively. Sharp spines to more than 1 inch long surround base.

**Fruit:** Seeds less than  $\frac{1}{8}$  inch long. Yellow starthistle seeds are creamy tan to dark brown and may have plumes. Purple starthistle seeds are tan and have no plumes.

**Notes:** Both plants are extremely competitive and have the ability to adapt to a variety of climatic conditions. Yellow starthistle is toxic to livestock.

**Impacts:** Thrives in grasslands, rangelands, pastures, roadsides and disturbed areas. Reduces land value, native plant diversity, wildlife forage, and recreational opportunities.



## Yellow Archangel

*Lamium galeobdolon*

1. Richard Old, xidservices.com
2. Richard Old, xidservices.com
3. Jeff McMillian @ NRCS PLANTS
4. WA Noxious Weed Control Board
5. Jeff McMillian @ NRCS PLANTS

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## Yellow Archangel

*Lamium galeobdolon*



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**General:** Herbaceous, evergreen perennial. Grows as a dense, trailing mat. Can grow upright to 12 inches tall. Spreads by seed, stem fragments, and rooting at nodes.

**Leaves:** Typically variegated with distinctive silvery-grey markings. Opposite, oval, hairy, coarsely toothed edges. Oils in leaves have distinct odor. Square stems.

**Flowers:** Small, yellow, and hooded, growing in clusters around stem. Flowers between April and June.

**Fruit:** Brown, numerous, inconspicuous.

**Notes:** Can grow in a wide range of soil, water, and shade conditions, preferring partial to full shade.

**Impacts:** Rapidly forms a dense mat, like English ivy, outcompeting and smothering native plants. Grows as a ground cover, but can climb as a vine. Often growing in residential settings, it can quickly invade forested areas and streambanks.

**Control may only be available in priority natural areas.**



## Yellow-flowered Hawkweeds

*Hieracium* spp.

1. Richard Old, xidservices.com
2. Richard Old, xidservices.com
3. Beth Myers-Shenai, ODA
4. Tim Butler, ODA
5. Richard Old, xidservices.com

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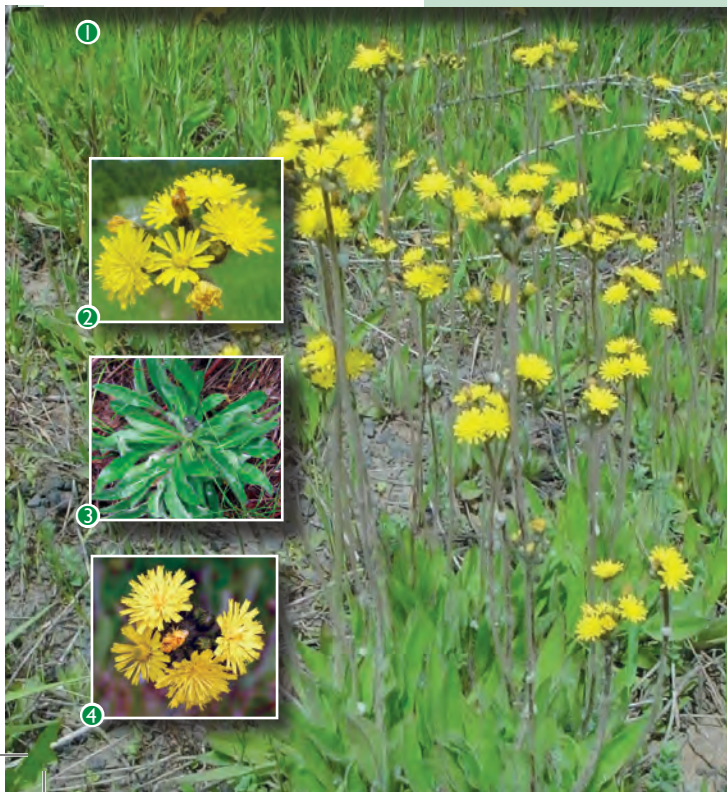
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## Yellow-flowered Hawkweeds

*Hieracium spp.*



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**General:** Perennial forbs. Mature plants 8-36 inches tall when flowering. Produces mats of rosettes. Spreads by stolon, rhizome, and/or seed. Stem exudes milky liquid when cut. Self pollinates.

**Leaves:** Lance-shaped to broadly elliptical basal leaves, present at flowering. Stem leaves rare on most species.

**Flowers:** Yellow, dandelion-like, clustered at top of hairy, erect stem. Up to 30 flowers per stem. Flowers June to July at lower elevations.

**Fruit:** Many tiny seeds per flower. Seeds arranged in starburst shaped clusters and winged. Individual seeds ribbed and dark.

**Notes:** Invasive and native hawkweeds are very similar. Invasive hawkweeds tend to form continuous patches of ground cover whereas native hawkweeds do not. For positive ID, consult a technical flora resource or contact a professional botanist.

**Impacts:** Invasive hawkweeds produce mats of rosettes that dominate ground cover. They exude chemicals into soil, inhibiting other plants' growth. They thrive in moist sunny areas, but can tolerate some shade. Invade grasslands, pastures, lawns, and roadsides: wilderness meadows in the Pacific Northwest are especially at risk.

**Control may not be available in all locations.**

## Yellow Flag Iris

*Iris pseudacorus*

1. Nancy Loewenstein, Auburn University
2. Leslie J. Mehrhoff, University of Connecticut
3. Steve Hurst, USDA NRCS PLANTS Database
4. Joseph M. DiTomaso, University of California-Davis
5. John M. Randall, The Nature Conservancy
6. Joseph M. DiTomaso, University of California-Davis

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## Yellow Flag Iris

*Iris pseudacorus*



**General:** Perennial forb. Showy yellow flowers appear in spring. Aggressive invader in wet habitats.

**Leaves:** Basal, deciduous. 2-4 feet in height, flattened and sword-like.

**Flowers:** Large, showy, pale to deep yellow. Multiple flowers on erect stalks 3-4 feet in height. Blooms April-June.

**Fruit:** Large seed pod bears many flattened round disk-like shiny brown seeds. Seeds are about 1/2 inch in diameter and float.

**Notes:** Grows in moist areas including streams, ponds, wetlands, and ditches. Large clumps of plants are formed from lateral growth of rhizomes. Reproduction can occur asexually through rhizome fragmentation or by seed production. Popular plant among gardeners and aquatic plant enthusiasts.

**Impacts:** Crowds out native wetland vegetation required by fish and wildlife. Flows in waterways including irrigation canals and flood control ditches can be severely restricted.

## Sulfur Cinquefoil

*Potentilla recta*

1. Richard Old, XID Services, Inc.
2. Theodore Webster, USDA Agricultural Research Service
3. Steve Dewey, Utah State University
4. Montana Statewide Noxious Weed Awareness and Education Program, Montana State University
5. USDA Agricultural Research Service

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## Sulfur Cinquefoil

*Potentilla recta*



**General:** Perennial forb with taproot that can grow up to 19 inches tall and live for 20 years. Found in rocky soils, grass fields, pastures, and roadsides.

**Leaves:** Divided into 5-7 hairy, toothed leaflets arranged palmately. Central leaflet is longer than the other leaflets.

**Flowers:** Light yellow flowers with 5 heart-shaped petals appear from May to July.

**Fruit:** Seeds are small (1mm) clam-shaped, dark brown with pale brown net-like pattern.

**Notes:** Sulfur cinquefoil stems are covered with stiff hairs and branch only at flowers. Can be confused with the native slender cinquefoil (*Potentilla gracilis*) which has short hairs that lie flat on the stems and leaves, brighter yellow flowers, and a smooth seed coat. It can reproduce vegetatively through new shoots that emerge from the edges of the root crown and sexually through prolific seed production.

**Impacts:** Out-competes native plant species. Plant is not consumed by livestock and most wildlife and outcompetes forage grasses so it reduces pasture productivity.

## Yellow Floating Heart

*Nymphoides peltata*

1. David Cappaert, Michigan State University
2. Rob Andress, Dept of Conservation & Natural Resources
3. Rob Andress, Dept of Conservation & Natural Resources
4. David Cappaert, Michigan State University

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## Yellow Floating Heart

*Nymphoides peltata*



**General:** Perennial aquatic water lily-like plant. Grows in dense patches in ponds and backwaters.

**Leaves:** Floating leaves are heart-shaped to circular, the size of a silver dollar with waxy margins and purplish undersides.

**Flowers:** Bright yellow flowers with 5 petals (3-5 cm in diameter) are supported several inches above the water on strong stalks.

**Fruit:** The fruit capsule is 2.5 cm long and contains numerous seeds. The seeds are oval and flat (about 3.5 mm long) and hairy along their outer edges.

**Notes:** Plants are rooted to the bottom of the waterbody at depths of 2-15 feet. Reproduces both vegetatively from stem fragments that can root, and sexually by seed. Yellow floating heart can be distinguished from the native yellow water lily (*Nuphar variegatum*) based on leaf size. The native yellow water lily has very large leaves and button-like flowers.

**Impacts:** Creates dense patches that restrict light and exclude native species. Creates stagnant areas with low oxygen levels underneath floating mats. Can disrupt entire foodweb of ponds it invades. Interferes with recreation; impacts fishing, boating and swimming.



# Kudzu

*Pueraria lobata*

1. Kerry Britton, USDA Forest Service
2. Chuck Barger, University of Georgia
3. Steve Hurst @ NRCS PLANTS
4. James Miller, Forest Service
5. Jil M. Swearingen, U.S.D.I National Park Service

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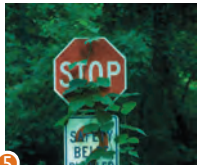


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USDA 0002

## Kudzu

*Pueraria lobata*



**General:** Fast-growing, deciduous, perennial vine. Grows up to a foot per day, completely covering vegetation and structures. Vines 1-4 inches thick. When young, stems are covered with stiff bronze hairs, becoming woody when mature. Roots are fleshy with taproot up to 12 feet deep.

**Leaves:** First true leaves covered with short bronze-colored hairs and arranged oppositely. Subsequent leaves with three leaflets on short petiole and arranged alternately on the stem. Individual leaflets 3-4 inches long and deeply lobed with hairy edges.

**Flowers:** Reddish to purple, erect, pea-like flowers 4-8 inches long with a grapefruit-like smell. Blooms mid-summer through very early fall.

**Fruit:** A flattened brown pod, approximately 1 ½ to 2 inches long, contains many kidney bean-shaped seeds.

**Notes:** Annual control costs in the U.S. are over \$50 million dollars and rising.

**Impacts:** Kudzu is so aggressive that it covers and smothers all other plants in its path, resulting in massive monocultures eliminating native species and natural diversity.

## Old Mans Beard

*Clematis vitalba*

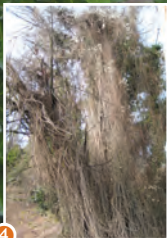
1. Chris Aldassy, EMSWCD
2. Jan Samanek, State Phytosanitary Administration
3. Jan Samanek, State Phytosanitary Administration
4. Chris Aldassy, EMSWCD
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## Old Mans Beard

*Clematis vitalba*



**General:** Perennial woody vine climbing and smothering objects like trees, shrubs, or fences. Aggressively grows vertically 100 feet or more. Self-pollinating.

**Leaves:** Deciduous, opposite, usually with five leaflets. Leaflets elongated, heart-shaped. Leaf edges typically smooth on flowering stems. Upper leaflets sometimes 3-lobed.

**Flowers:** Blooms throughout summer, green to white, perfect flowers (stamens and pistils on all flowers) about 1 inch in diameter, arranged in clusters.

**Fruit:** Numerous, small seeds arranged in clusters bearing long white feathery tails. Prolific seed clusters hang from vine like white puffy spheres, and persist after leaves have fallen from trees through late fall and into winter.

**Notes:** A native look-alike, *Clematis ligusticifolia*, exists predominantly east of the Cascades, has imperfect flowers, (some flowers have stamen only), and does not have the aggressive growth habit of *C. vitalba*.

**Impacts:** Blankets existing vegetation, starving trees and shrubs of sunlight, eventually killing them. Will try to grow vertically, but may also create dense mats of vegetation on the ground preventing the regeneration of future plants.

## Acknowledgements

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## Together we can prevent the next invasion!

The effort to control invasive species will only be successful with support from the public. This weed identification guide was developed to help individuals identify and report the weeds that have been given priority for early detection and rapid response in the Middle Fork Willamette Watershed.

*To become a Weed Watcher or to get more booklets contact the MFWWC at (541) 937-9800.*

