



COLUMBIA INVASIVE WEED CONTROL PARTNERSHIP

Columbia Soil and Water Conservation District

2514 Sykes Road
St. Helens, OR 97051
Phone: 503-397-4555x104
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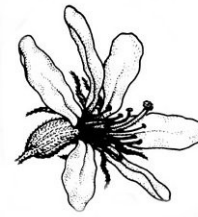
Other Partners:



Columbia County



Oregon



COLUMBIA INVASIVE WEED CONTROL PARTNERSHIP

Guide to Weed Identification and Management



(Kris Johnson, Great Smoky Mountains Natl Park)

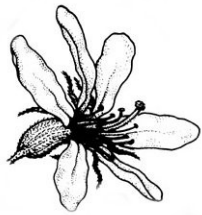
COLUMBIA COUNTY'S **LEAST WANTED**

- What they look like
- How they spread
- What to do
- Who to call



(North Dakota State University)

Date: July 2008



COLUMBIA INVASIVE WEED CONTROL PARTNERSHIP



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TABLE OF CONTENTS

<u>SPECIES</u>	<u>PAGE</u>
English Holly	3
Purple Loosestrife	4
Knotweed complex	6
Giant Hogweed	8
Butterfly Bush	10
English Ivy	12
Tansy Ragwort	14
Garlic Mustard	15
Gorse	16
Scotch Broom	17
Yellowflag Iris	18
Weed reporting form Partners	19 back cover

Please indicate the type(s) of habitat covered by weeds by ticking the appropriate box: You are not obligated to complete the section below concerning ownership, but this information may be of use to us.

Date: _____

Name: _____

Address _____

Telephone _____

Email Address _____

Location of Site _____

Weed Species Sighted: _____

Description of Site:

- River's Edge Hedge Farmland
- Woodland Garden Derelict Land
- Roadside Industrial Commercial
- Railway Other _____

Contact information for landowner, if known:

Please send this form to:

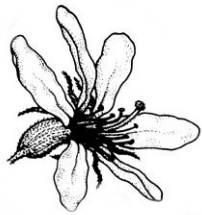
Columbia Soil & Water Conservation District

Attn: Tyler Joki

2514 Sykes Rd.

St. Helens, OR 97051

Fax: 503-366-0864



COLUMBIA INVASIVE WEED CONTROL PARTNERSHIP

YELLOWFLAG IRIS

Iris pseudoacorus

Native Range: Europe, North Africa



DESCRIPTION:

Yellowflag iris is a perennial forming dense stands in aquatic areas. It has stout rhizomes, 1-4 cm in diameter, with stems 10–30 cm long. When flowering, the very showy, yellow iris flowers are the best identifying characteristic. They are the only yellow irises in the United States. Otherwise, it is a tall plant with long, dark green, flattened, sword-like leaves.

ECOLOGICAL THREAT:

It spreads downstream by broken rhizomes and seeds. This plant is fast-growing and fast-spreading which allows it to outcompete native wetland species and reduce wildlife habitat.

(Nancy Loewenstein, Auburn University)

CONTROL:

Be careful when removing manually, as this plant is known to cause skin irritation. The entire rhizome system needs to be removed or else the plant will resprout. Herbicides may be necessary for larger populations, but consult the ODA or OSU Extension office before applying, as care needs to be taken in aquatic systems to avoid chemical runoff.



(Todd Pfeiffer, Klamath County Weed Control)



COLUMBIA INVASIVE WEED CONTROL PARTNERSHIP

ENGLISH HOLLY

Ilex aquifolium

Native to Europe

DESCRIPTION:

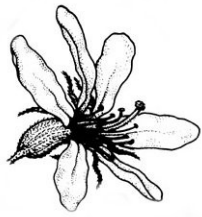
Growing in size from a large evergreen shrub to small tree, it is hardy, tough and adaptable. English Holly is originally from the woodlands in Europe, East Asia and North Africa. While both male and female plants flower, seed produced in the absence of both sexes is sterile. Leaves are thick and tough, dark green, glossy, indented and ferociously spiky. On older branches they may be quite smooth. Flowers are inconspicuous: small, whitish and sweetly scented. Bees must be able to visit male and female flowers during the same excursion for cross pollination to occur. Bunches of bright red berries, poisonous to humans, but not to birds, are borne on female trees in winter.

ECOLOGICAL THREAT: This species can invade the tall shrub layer in moist, nutrient-rich sheltered fir forests, displacing native species.

CONTROL: The best step in controlling this invader, is to not plant it in the first place.



(www.weedsbluemountains.org.au/english_holly.asp)



COLUMBIA INVASIVE WEED CONTROL PARTNERSHIP

PURPLE LOOSESTRIFE

Lythrum salicaria

Native to Europe and Asia



DESCRIPTION:

Purple loosestrife is an erect perennial herb in the loosestrife family found growing in water. The stem is square and woody with opposite or whorled leaves. Leaves are lance-shaped, stalkless, and heart-shaped or rounded at the base.

Loosestrife plants grow from four to ten feet high, depending upon conditions, and produce a showy display of magenta-colored flower spikes throughout much of the summer. Flowers have five to seven petals. Mature plants can have from 30 to 50 stems arising from a single rootstock.

* This plant is often confused with two native plants: Spirea (*Spirea douglasii*) and Fireweed (*Epilobium angustifolium*).

* This plant is often found at the waters edge and may be in standing water.

ECOLOGICAL THREAT:

Purple loosestrife adapts readily to natural and disturbed wetlands. As it establishes and expands, it out competes and



COLUMBIA INVASIVE WEED CONTROL PARTNERSHIP

SCOTCH BROOM

Cytisus scoparius

Native to southern Europe and northern Africa

DESCRIPTION:

Scotch broom is loosely branched with green, slender ribbed branches and small, simple leaves up to half an inch long. It grows from 3 to 10 feet in height. Blooming from May to June, the bright yellow flowers are pea-like, about three-quarters of an inch long. Its seed is borne in dark brown to black hairy, flattened pea-like pods, which when ripe, burst and scatter seeds for yards. Scotch broom grows primarily in open, dry meadows and along roadsides. Introduced into the Pacific Northwest as an ornamental, and used to stabilize eroded areas, Scotch broom has become an extremely expensive problem as it costs millions of dollars to reforest infested areas.

ECOLOGICAL THREAT:

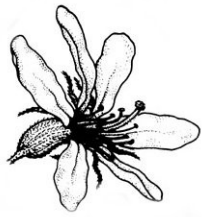
Scotch broom has invaded many disturbed areas, such as roadsides, pastures, and grasslands. Unless controlled, Scotch broom forms dense brush fields that choke out native species. Scotch broom's many seeds are able to survive in a dormant state for up to 80 years. Seeds can be transported from one place to another on mud stuck to vehicles, on shoes, the feet of animals, and may be established along streams by seeds carried in runoff water.

CONTROL:

Handpulling can be effective, but it may be difficult to get all of the roots. Picloram and triclopyr are effective. **ALWAYS READ AND FOLLOW THE LABEL.** Please consult the OSU Extension Office or the Oregon Department of Agriculture before applying any chemicals. The ODA currently approves the use of *Bruchidius villosus*, a seed beetle shown effective to help reduce the future spread of Scotch broom.



From a distance, Scotch Broom and Gorse appear similar, however, there are no spines on Scotch Broom.



COLUMBIA INVASIVE WEED CONTROL PARTNERSHIP

GORSE

Ulex europaeus

Native to the Mediterranean region of western Europe

DESCRIPTION:

Gorse is a dense, spiny, dull grayish-green shrub that typically grows to about 10 feet in the Pacific Northwest. It has small leaves that are generally shorter than its conspicuous spines. From early spring, yellow pea-like flowers develop in clusters on the ends of its branches becoming hairy black seed pods by late summer. A typical shrub produces about 8000 seeds annually. Gorse seed can lay dormant in the soil for up to 40 years and still germinate. Soil disturbance during road building and tree harvesting present opportunities for the successful germination of seed. Due to its spiny nature, it has the potential to make a site virtually inaccessible to everyone. The resinous quality of the plant increases wildfire danger.



(ECan, New Zealand)

ECOLOGICAL THREAT:

This shrub threatens the biodiversity of areas where it establishes. It tends to exclude native vegetation by establishing itself quickly with a carpet of individual plants. Once established, gorse can successfully occupy a site indefinitely. As it is hardier than many native plants and establishes easily on dry sites and poor soils, gorse has probably not reached the limits of its range in the Pacific Northwest.



Note the spines on this sample (ODA)

Gorse is not presently known in Columbia County, but is common in parts of Clatsop County. If you see this plant, please contact the OSU Extension Office.

<http://www.for.gov.bc.ca/hfp/pubs/interest/gorse/>

replaces native grasses, sedges, and other flowering plants that provide a higher quality source of nutrition for wildlife.

The highly invasive nature of purple loosestrife allows it to form dense, homogeneous stands that restrict native wetland plant species, including some federally endangered orchids, and reduce habitat for waterfowl.



(Invasiveplants.net)

CONTROL:

Physical removal of the entire plant is required to be effective. Plant parts removed should be dried and burned. Any parts that remain are capable of resprouting.

Four biocontrol agents, two leaf beetles, a root weevil and a seed weevil, are approved for release and are established in Oregon. All four of these have been released in Columbia County. Contact ODA for more info.

Applications of glyphosate while the plant is in full flower stage are shown to be effective. **ALWAYS READ AND FOLLOW THE LABEL**. Please consult the OSU Extension Office or the Oregon Department of Agriculture before applying any chemicals.

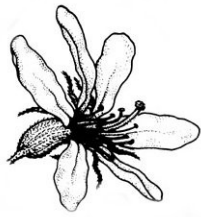
Common Look-a-likes



Fireweed
(U of Manitoba)



Spirea
(Fish & Wildlife Service)



COLUMBIA INVASIVE WEED CONTROL PARTNERSHIP

KNOTWEED COMPLEX



(WA Noxious Weed Control Board)

Polygonum cuspidatum Sieb. & Zucc and other related species

Native to Eastern Asia

DESCRIPTION:

Japanese knotweed, a member of the Buckwheat family, is an upright, shrub-like, herbaceous perennial that can grow to over 10 feet in height on either dry or wet ground. As with all members of this family, the base of the stem above each joint is surrounded by a membranous sheath. Stems of Japanese knotweed are hollow, smooth, stout and swollen at joints where the leaf meets the stem. Although leaf size may vary, they are normally about 6 inches long by 3 to 4 inches wide, broadly oval to somewhat triangular and pointed at the tip. The minute greenish-white flowers occur in attractive, branched sprays in summer and are followed soon after by small winged fruits.

Japanese knotweed is designated a noxious weed in the State of Oregon.



(Township of Langley, BC, Canada)



COLUMBIA INVASIVE WEED CONTROL PARTNERSHIP

GARLIC MUSTARD

Alliaria petiolata

Native Range: Europe

DESCRIPTION:

Garlic mustard is a biennial herb of the Brassicaceae, or mustard, family. In its first year, it appears as basal rosettes, and in the second year bolts to produce a flower and copious amounts of seeds in long slender pods. The presence of a taproot facilitates easy uptake of water and nutrients. It is most commonly found under deciduous forests and is usually connected with human-caused disturbances: trails, roads, rail roads. When the leaves are crushed, an aroma of garlic is produced.



Garlic Mustard rosettes (Chris Evans, River to River CWMA)

ECOLOGICAL THREAT:

Garlic mustard crowds out native vegetation and can quickly proliferate creating monocultures. It will then use up all available resources, making it difficult for native plants to sprout.



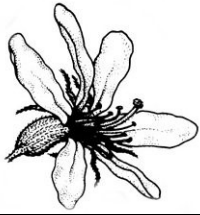
Garlic mustard seed pods (Chris Evans, River to River CWMA)

CONTROL:

Manual removal of garlic mustard is possible, but needs to occur before the plant goes to seed. Chemical control may be possible. **ALWAYS READ AND FOLLOW THE LABEL.** Please consult the OSU Extension Office or the Oregon Department of Agriculture before applying any chemicals.



(Chris Evans, River to River CWMA)



COLUMBIA INVASIVE WEED CONTROL PARTNERSHIP

TANSY RAGWORT

Senecia jacobaea

Native Range: Western Europe

DESCRIPTION:

Stems: 1-6 ft tall, thinly covered by cobwebby hairs with many branches near the top. Leaves are divided into lobed and toothed segments, the terminal lobe generally larger than the lateral. Stem leaves are dark green, and ruffled, with blunt tips. First year plant is a rosette with leaves up to 9 inches long. Numerous flower heads, yellow, 1 inch wide, and daisy-like. Flowering season from July- September. Seeds are tiny, tipped with hair-like plumes that carry them on the wind for long distances. Tansy ragwort can spread by root fragments, or by seed. Its seeds (approximately 150,000 seeds per plant) are wind-dispersed, and animals can also spread seeds in their fur and feathers.



(Oregon State University)

ECOLOGICAL THREAT:

Tansy ragwort can rapidly invade pastures and grassland habitats. Its toxic qualities have brought this plant to the attention of ranchers, farmers, and the Dept of Agriculture. A poisonous plant, highly toxic to livestock, it contains pyrrolizidine alkaloids, which cause liver damage to horses and cattle. Goats and sheep are generally not poisoned by it.

CONTROL:

Handpulling prior to flowering is effective. Three biological control agents, a seed head fly, a flea beetle and a moth, have been approved for release and are established in western Oregon. Picloram, dicamba, and triclopyr are the favorite chemical control agents. **ALWAYS READ AND FOLLOW THE LABEL**. Please consult the OSU Extension Office or the Oregon Department of Agriculture before applying any chemicals.



(Eric Coombs, ODA)

ECOLOGICAL THREAT:

Japanese knotweed spreads quickly to form dense thickets that exclude native vegetation and greatly alter natural ecosystems. It poses a significant threat to riparian areas, where it can survive severe floods and is able to rapidly colonize scoured shores and islands. Once established, populations are extremely persistent. Due to its ability to inhibit the growth of native vegetation, stream bank stabilization is reduced.

CONTROL:

Using a pulaski or similar digging tool, remove the entire plant including all roots and runners. Juvenile plants can be hand pulled depending on soil conditions and root development. Any portions of the root system not removed will potentially resprout. All plant parts should be bagged and disposed of to prevent reestablishment.

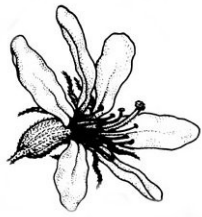
Dicamba and glyphosate are both effective. **ALWAYS READ AND FOLLOW THE LABEL**. Please consult the OSU Extension Office or the Oregon Department of Agriculture before applying any chemicals.



(Glen Miller, ODA)



(Rich Old, XID Services)



COLUMBIA INVASIVE WEED CONTROL PARTNERSHIP

GIANT HOGWEED

Heracleum mantegazzianum

Native to the Caucasus Mountains and southwest Asia

DESCRIPTION: Giant hogweed is a member of the parsley or carrot family, Apiaceae. As its name indicates, it is characterized by its size and may grow to 15 to 20 feet in height. Except for size, it closely resembles cow parsnip, a plant native to Oregon and Washington. It is further distinguished by a stout dark reddish-purple stem and spotted leaf stalks. Stalks and stem produce sturdy pustulate bristles. The stem and stalks are hollow and vary from 2 to 4 inches in diameter. The compound leaves of giant hogweed may expand to five feet in breadth. Each leaflet is deeply incised.

Giant hogweed is a perennial with tuberous root stalks which form perennating buds each year. The inflorescence is a broad flat-topped umbel composed of many small white florets. Each inflorescence may attain a diameter of 2-1/2 feet. The florets produce large elliptic dry fruits marked with brown swollen resin canals up to 1 mm in diameter.

Giant hogweed is currently on the federal noxious weed list.

ECOLOGICAL THREAT:

Because of its tenacious and invasive nature it soon becomes a pest within the ornamental garden and readily escapes. It has naturalized in many of the places where it was first introduced. Growing along streams it forms a dense canopy shading out native



(National Park Service)

ECOLOGICAL THREAT:

English ivy is an aggressive invader that threatens all vegetation levels of forested and open areas, growing along the ground as well as into the forest canopy. The dense growth and abundant leaves, which spring from the stems like small umbrellas, form a thick canopy just above the ground, and prevent sunlight from reaching other plants. Similarly, vines climbing up tree trunks spread out and surround branches and twigs, preventing most of the sunlight from reaching the leaves of the host tree. Loss of host tree vigor, evident within a few years, is followed by death a few years later. The added weight of vines makes infested trees susceptible to blow-over during storms (*see below*). English ivy also serves as a reservoir for bacterial leaf scorch (*Xylella fastidiosa*), a plant pathogen that is harmful to native trees such as oaks, and maples.

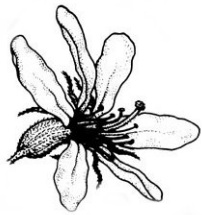
CONTROL:

Handpulling is shown to be effective, but be sure to wear gloves as contact with skin may cause adverse reactions.



The tree that is leaning in the upper left corner of the photo on the left fell in a spring windstorm.

http://www.noivyleague.com/Pages/english_ivy.html



COLUMBIA INVASIVE WEED CONTROL PARTNERSHIP

ENGLISH IVY

Hedera helix L.

Native Range: Europe, western Asia and northern Africa

DESCRIPTION: English ivy is an evergreen climbing vine. Vines attach to the bark of trees, brickwork, and other surfaces by way of numerous, small rootlike structures, which exude a gluelike substance. Older vines are known to reach a foot in diameter. Leaves are dark green, waxy, somewhat leathery, and are arranged alternately along the stem. English ivy has many recognized leaf forms, the most common being a 3-lobed leaf with a heart-shaped base. Leaves in full sun are often



(National Park Service)

unlobed, oval and have wedge-shaped bases. Umbrella-like clusters of small, greenish-white flowers appear in the fall if sufficient sunlight is available. Fruits mature in Spring and are black with a fleshy outer covering enclosing one to a few hard, stone-like seeds.



© Erv Evans

(Erv Evans, NC State University)

NOTE: Compounds in English Ivy are somewhat toxic and include glycosides that cause vomiting, diarrhea, nervous conditions and dermatitis in sensitive individuals.

riparian species and results in an increase in soil erosion along the stream banks where it occurs.

Proliferating populations in urban and suburban areas represents an

EXERCISE EXTREME CAUTION



(Township of Langley, BC, Canada)

If you spot a potential invasive species in Oregon, please call the Invasive Species Hotline number, 1-866-INVADER (1-866-468-2337). This number is toll-free. You may also call this number if you have a question regarding a specific invasive pest.

The clear watery sap renders skin photosensitive. Exposure to sunlight following contact can cause blisters, burns and painful dermatitis. These blisters can develop into purplish or blackened scars.

Contact with the eyes can lead to temporary or, in some cases, permanent blindness.

If you do come into contact with the plant, and especially the sap, you are advised to wash the affected areas immediately, keep them out of direct sunlight and seek medical advice as soon as possible.

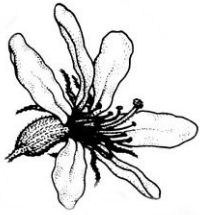
In the 1970s, many cases of poisoning were seen in Great Britain, where children played with the hollow stems of the plants as pea-shooters or telescopes. Parents should note that contact with the eyes can lead to temporary or permanent blindness.



Hogweed Burns



<http://www.ecy.wa.gov/programs/wq/plants/weeds/aqua012.html>



COLUMBIA INVASIVE WEED CONTROL PARTNERSHIP

BUTTERFLY BUSH

Buddleia davidii

Native to China

DESCRIPTION:

Large, rounded shrub with arching branches. Fragrant flowers are small lavender, lilac, purple, white, yellow, or pink flowers on 4 to 10" panicles from summer to fall. Foliage: opposite, simple gray-green to blue-green leaves; 4 to 10" long; with white tomentose beneath. It emerges late in spring. Butterfly Bush is drought tolerant, easy to transplant and flowers on new growth. It is aggressively invasive throughout Oregon.

Butterfly bush has been added to the State of Oregon Noxious Weed List (B)



(Thurston County, WA, Noxious Weed Control Agency)

ECOLOGICAL THREAT:

Butterfly bush has long been recognized as a serious invasion threat in England and New Zealand. The species that is seeding itself into Pacific Northwest riparian areas, roadsides and other spaces goes by the scientific name *Buddleia davidii*. Many popular varieties and cultivars of Butterfly bush are derived from that species, although they are thought to present less invasion threat. It can invade reforested sites, resulting in a loss of forest productivity.



(Tom Forney, ODA)



(Thurston County, WA, Noxious Weed Control Agency)

CONTROL:

To prevent seed spread, home gardeners should remove the flowers as they begin to turn color and promptly dispose of them.