

Noxious Weed Threats To The Florence Region

Noxious weeds are nonnative plants that pose a threat to our environment and our economy by reducing biodiversity, increasing fire hazards, reducing land value, and lowering crop yields. Invasion by these species is second only to direct habitat loss in reducing and eliminating native biodiversity. Noxious weeds typically grow in monocultures (solid stands) on ground that was previously productive and diverse. These plants often take advantage of disturbed sites such as recently cleared lots, eroded banks, and roadsides.



Scotch Broom Control – King County, WA Weed Control

Once established, noxious weeds are difficult to eradicate due to a number of factors including long seed life, no natural predators, rapid early growth and maturation, prolific reproductive abilities, and specialized adaptations for spreading long distances. When invasive plants escape to neighboring private property and public sites, extensive volunteer or paid public staff time may be invested and use of herbicides may be needed to control their spread.

Included in this brochure are some of the noxious weeds that are a threat to our local environment and economy in Florence. Consult the Lane County Public Works Noxious & Invasive Weed Management List for the complete list of plants considered noxious by the City of Florence. Consult the Oregon Department of Agriculture's most re-

cent Noxious Weed Policy and Classification System for a complete list of all plants considered noxious by the State of Oregon.

Some species in this brochure are not well established in the Florence area and the goal is eradication, including Gorse north of Heceta Head, Portuguese Broom, Giant and Japanese Knotweed, Yellow Flag Iris, Jubata Grass, Spartina, and Japanese Eelgrass. Others are well established and the goal is elimination of new populations and control of existing populations where feasible or infesting special habitat areas. These include Gorse south of Heceta Head, Scotch Broom, Himalayan Blackberry, Butterfly Bush, and English Ivy.

Oregon Invasives Reporting Hotline

If you spot a potential invasive species in Oregon, use the online form to report it at:

<http://oregoninvasiveshotline.org>

or call the toll-free number:

1-866-INVADER

Report all sightings of:

- Gorse north of Heceta Head
- Portuguese Broom
- Giant and Japanese Knotweed
- Yellow Flag Iris
- Jubata Grass or Pampas Grass in natural habitats
- Cordgrass and Japanese Eelgrass in estuary habitats

GORSE

Ulex europaeus

Description:

Perennial (lasts 3 or more years) that blooms March to May. Grows one to nine feet tall. A stiff, spiny, much-branched shrub, often forming dense thickets. Branches dark green with conspicuous spines and clusters of yellow pea-like flowers near the ends.



Norman E. Rees, USDA
Agricultural Service, Bugwood.org



Ken French, Oregon Department of Agriculture

Impacts: Gorse is a persistent, spiny, pioneer species adapted to a wide range of environmental conditions. Plant growth and stand density increase at a rapid rate, crowding out native plants, impacting forest production, inhabiting parklands and pastures, and rendering infested land unusable.

Control costs are high and reinfestation is a constant problem. Gorse stands develop a long-lived persistent seed bank requiring long-term management of established sites. High levels of natural oils in the spines make this plant highly flammable and an extreme fire hazard. Gorse contributed to the Bandon Fire of 1936, in which nearly the entire town burned to the ground. Gorse is well established south of Florence and to the north to about Heceta Head.

Control: Prevention is the key to reducing new gorse infestations. Immediately pull or treat new plants found on your property. Although well-established gorse may be impossible to eradicate, a combination of chemical, mechanical, and biological methods have been found to pro-

vide the most effective control. Two biological control agents, *Exapion ulicis*, a seed weevil and *Tetranychus lin-tearius*, a spider mite, have been approved for release and are established in Oregon, however, they have not been effective at controlling populations in the state. Refer to reference 10 for more information on control of Gorse.

Report all Gorse sightings north of Heceta Head to:
www.oregoninvasiveshotline.org

HIMALAYAN BLACKBERRY

(Armenian blackberry) - *Rubus armeniacus*

Identification: Himalayan Blackberry (generally known scientifically as *Rubus discolor*, *R. procerus* or *R. fruticosus*, but technically *R. armeniacus*) is a robust, perennial, sprawling, more or less evergreen, shrub of the Rose family (Rosaceae). Leaves are large, round to oblong and toothed, and typically come in sets of three (side shoots) or five (main stems). The most characteristic feature is probably the robust red stems supporting large, stiff prickles. Flowers are 5 petaled, bloom June to August, and are white to pink resulting in black fruits.

Impacts: Introduced from Western Europe as a cultivated crop. This blackberry is the most widespread and economically disruptive of all the noxious weeds in western Oregon. It aggressively displaces native plant species, dominates most riparian habitats, and has a significant economic impact on right-of-way maintenance, agriculture, park maintenance, access to recreation, and forest production.

Plants are adaptable to various soil types and form impenetrable thickets that can block all access to a portion of your property. Stems can grow more than 20 feet per season.



Eric Coombs, ODA

Control: Hand grubbing roots and root crowns can be effective if done thoroughly. The entire root must be removed to control re-growth. This is suitable only for relatively small areas. Refer to references 1 and 2 for more information on control of Himalayan Blackberry.

SCOTCH BROOM

Cytisus scoparius

Description:

Perennial; blooms April to June. Grows 3 to 10 feet tall. Evergreen shrub with many slender, erect, dark green angled branches with small, simple leaves. Abundant small, yellow, pea-shaped flowers. Seed pods are fuzzy on the edges, 1-2 in. long, and will explode when mature.



Eric Coombs, Oregon Department of Agriculture, Bugwood.org

Impacts: This aggressive, rapid spreading plant can grow 3 feet in the first year and forms dense impenetrable stands that prevent forest regeneration, create fire hazards, crowd out native species, and destroy wildlife habitat. Scotch broom reproduces by seed or vegetatively from the resprouting of the root crown. It readily invades disturbed sites, natural areas, dunes and public and private forest lands.



Eric Coombs, Oregon Department of Agriculture, Bugwood.org

Gil Wojciech, Polish Forest Research Institute, Bugwood.org

Shrubs can produce up to 60 seed pods per bush by their second year. Seeds are viable for more than 50 years and mature plants are prolific seed producers. Maintenance of rights-of-way, facilities, parkland and private property costs millions of dollars each year because of rapid growth of young plants and the plant's persistent nature. It is estimated that Scotch Broom costs Oregon \$47 million dollars annually in lost timber production.

Control: Hand pull, hand hoe or dig out small plants. Larger plants can be lopped to within 3 inches of the ground during the driest period only (late July to early October). Avoid soil disturbance as much as possible to limit germination from residual seeds in the soil. Although not providing complete control, three biological control agents are currently used: the Scotch Broom seed weevil (*Apion fuscirostre*), twig miner (*Leucoptera spartifoliella*), and the Gorse or broom tip moth (*Agonopterix nervosa*). Refer to references 8 and 9 for more information on control.

PORTUGUESE BROOM - *Cytisus striatus* (striated broom and hairy-fruited broom)



Glenn Miller, Oregon Dept. of Agriculture

Description:

Perennial; blooms April to June. Grows 3 to 10 feet tall. Evergreen shrub similar to Scotch Broom except pods inflated and hairy all over, giving appearance of pussy willow buds. Stems more silvery, but difficult

to distinguish from Scotch Broom until leaves and flowers fall off. Currently reported only in Lane and Douglas Counties in Oregon.

Impacts:

Portuguese Broom is similar to Scotch Broom in growth form except for two major differences: it grows much larger and lives longer.



Glenn Miller, Oregon Department of Agriculture

Infestations in Douglas county Oregon are highly competitive in commercial timberland with the canopies of individual plants reaching almost 20 feet across.

Control: Mechanical control similar to Scotch Broom. Approved biological control agents are not yet available. Refer to reference 9 for more information on control.

Report all Portuguese broom sightings to:

www.oregoninvasiveshotline.org or by calling the toll-free number 1-866-INVADER.

BUTTERFLY BUSH

(summer lilac) - *Buddleja davidii*

Identification: Perennial shrub; flowers mid to late summer. Grows up to 10 feet tall. Leaves narrow, opposite (arranged across from each other on the stem) and green to blue-gray. Flower heads lilac-like but come to a more definite point. Flowers small and purple.

Impacts: This plant is a pioneering species that dominates open habitats. It poses an ecological threat to dry-land meadows, open slopes, and dunes, dominating these sites as much as Scotch Broom has historically. It is also invading riparian zones and other areas in western Oregon and Washington and can out compete native willows which are essential host plants for native butterflies. It has been identified in forested areas of the Willamette National Forest and in commercial timberland on Oregon's south coast. Butterfly Bush is extremely invasive in natural areas. There are serious infestations on the North Fork of the Willamette River near Oakridge and along the Coquille River near the coast. It has spread to most of the counties in western Oregon and Washington.



Both OSU and ODA scientists are encouraging home gardeners to pay close attention to choosing butterfly bushes that are cultivated varieties, not the straight wild species *Buddleia davidii*. Only *Buddleia davidii*, not specially bred cultivars, are subject to Oregon's noxious weed listing. The OSU Extension Service Center at Aurora has been testing several cultivars of butterfly bush in an attempt to identify those that are not invasive.

Tom Forney, ODA

Control: If the infestation is only a few small plants, pulling and digging are effective. The stump must be removed, as it is likely to re-sprout if only cut. Refer to references 3, 4, and 5 for more information on control of Butterfly Bush.

ENGLISH IVY

Hedera helix

Description:

Perennial, woody, evergreen vine with long, trailing stems. Leaves alternate (arranged singly, not opposite, on the stem), waxy. Juvenile leaves lobed, mature leaves larger and pointed with no lobes. Green or white flowers produce black berries.



Chuck Barger, University of Georgia, Bugwood.org

Impacts: Widespread and considered very invasive West of the Cascades. An immense and expensive problem. Rapid and massive vegetative growth of English Ivy vines reaches to tree tops and woody ornamentals. Can completely overrun forest understories and riparian areas. English Ivy frequently becomes intertwined with forest shrubs creating difficulties for manual removal or herbicide use. Removal costs in some Oregon parks have reached \$2000 per acre.



Chris Evan, River to River CWMA, Bugwood.org

Control: Mechanical treatments such as cutting, pulling, and digging can be effective. Persistent effort by mechanical and chemical methods is often required for large areas. Refer to references 6 and 7 for more information on control of English Ivy.

GIANT KNOTWEED

(Sakhalin knotweed) - *Polygonum sachalinense* and
JAPANESE KNOTWEED

(Mexican Bamboo) - *Polygonum cuspidatum*

Description: Perennials that emerge from extensive rhizomes (underground stems that send out root and shoots) from March through April. Grow very rapidly to 6 to 16 feet tall by midsummer and bloom July to October. Stems (canes) of knotweed are upright, hollow, jointed, and unbranched.



Giant Knotweed—Glen Miller, Oregon Dept. Agriculture

Leaves are broad and oval to heart-shaped. Small greenish-white flowers are arranged in dense clusters that originate where leaves join stems. Species are hard to tell apart with Giant Knotweed distinguished from Japanese Knotweed by heart-shaped



Japanese Knotweed-USDA—Forest Service

leaf bases, fuzzy leaf undersides, and flower clusters that are much shorter than the leaf underneath them. Hybrids are common and most infestations are either Japanese knotweed or Japanese-giant hybrids.

Impacts: Plants grow vigorously along roadsides, waste areas, streams, and ditch banks and create dense colonies that exclude native vegetation and greatly alter

natural tree regeneration. Thickets can clog small waterways and displace streamside vegetation, increasing bank erosion during winter dieback and lowering the quality of riparian habitat for fish and wildlife. They spread primarily by rhizomes and can be transported to new sites by water, wind, as a contaminant in fill-dirt, or on the soles of shoes. Research indicates that Giant Knotweed produces chemicals from the roots which inhibit growth of other plants and aid in its dominance and rapid colonization. Once established, these stands are very difficult to eradicate.

Control: Control via cutting, mowing, and/or uprooting may be possible on small, isolated knotweed patches if treatments are thorough and repeated often. To prevent further spread of knotweed, dispose of all plant materials properly – completely dry, burn, and bury at least 10 feet deep, or dispose of at a landfill. Large infestations can be eliminated with approved herbicides, but treatments are costly and time consuming. Refer to references 11, 12 and 13 for more information on control of knotweeds.

Report all knotweed sightings to:

www.oregoninvasiveshotline.org or by calling the toll-free number 1-866-INVADER.

YELLOW FLAG IRIS - *Iris pseudacorus*
(water flag, yellow flag, and yellow iris)

Descrip-

tion: Yellow Flag Iris is a very showy species growing 3-4 feet in height with the most vigorous growth attained in the wettest environments. The broad, sword-shaped leaves are stiff, erect, and green with a grayish-blue cast. The leaves are 0.4-1.2 inches wide and have a central ridge on both sides of the blades. Flowers are white to cream or often yellow, with several flowers on each stem and bloom from April-June. Disk-like seeds are shed from capsules throughout the fall and winter. Reproduction can occur asexually through rhizome fragmentation or by seed production.



Robert H. Mohlenbrock, USDA - NRCS

Impacts: An infestation of Yellow Flag Iris presents a dual impact on both human interests and native environ-

ments. This plant displaces native plants including sedges and rushes and has invaded estuarine and freshwater wetland habitats. This can reduce the carrying-capacity of wetlands for waterfowl and disrupt other ecological relationships. Many over-wintering waterfowl species are dependent on sedge and rush seeds as a high-energy food source. Removal can be costly requiring large excavation equipment or herbicides. Any rhizome fragments that remain after treatment will quickly reestablish a population. All parts of the plant are poisonous.

Control: Dig up small infestations, removing the entire rhizome root system. Caution should be used if pulling out this plant because it can cause skin irritation. Refer to ref-



J.S. Peterson, USDA - NRCS

erence 14 for more information on control of Yellow Flag Iris.

Report all Yellow Flag Iris sightings to:

www.oregoninvasiveshotline.org or by calling the toll-free number 1-866-INVADER.

JUBATA GRASS and PAMPAS GRASS

Cortaderia jubata and *Cortaderia selloana*



Jubata Grass - Glenn Miller, ODA

Description: These grasses have escaped cultivation and infested thousands of acres of the California coast. Jubata Grass is also established along the Oregon south and mid-coast,

crowding out native species and is a greater problem here. A large Jubata Grass plant, which does not require pollination to form viable seed, is capable of producing a million tiny seed that are easily dispersed by wind. The tussocks of Jubata Grass are less erect and more spreading and not fountain-like, when compared to



Jubata Grass - California Invasive Plant Council

tussocks of Pampas Grass. One of the easiest ways to distinguish between these grasses is the fact that mature Jubata Grass tussocks (not including flowering stems) are typically 3-5 feet tall while Pampas Grass tussocks are 6-13 feet tall.

Impacts: Jubata Grass is one of the most invasive plants along the California and southern Oregon coast. It establishes dense populations that can severely impact native plant diversity and conifer seedling establishment following forestry operations. It creates a fire hazard with excessive build-up of dry leaves, leaf bases, and flowering stalks.

Control: Pulling or hand grubbing of Jubata Grass seedlings is highly effective. To prevent resprouting, it is important to remove the entire crown and top section of the roots. For more information on control see reference 15.

Report all Jubata Grass or Pampas Grass sightings in natural habitats to www.oregoninvasiveshotline.org or by calling the toll-free number 1-866-INVADER.

ESTUARY INVADERS

Invasive water plants are a potential problem in all Oregon estuaries. Of special concern are 4 species of Cordgrass (genus *Spartina*) and Japanese Eelgrass (*Zostera japonica*).

CORDGRASS

Spartina species

Two *Spartina* species, Saltmeadow Cordgrass (*Spartina patens*) and Smooth Cordgrass (*Spartina alterniflora*), have been found historically in the Siuslaw estuary. Dense *Spartina* stands reduce biodiversity and habitat for native wetland birds, animals, and invertebrates. Interference



Smooth Cordgrass—Photo by: V. Howard,

with oyster aquaculture has also occurred.

Interference with oyster aquaculture has also occurred.

Description:

Leaf blades are green and hairless and have ridges on the upper surface. The ligule, a thin membrane where the leaf

blade meets the

stem, consists of a row of fine hairs. A cordgrass information brochure is available at the City of Florence Community Development office. For more information on cordgrasses refer to references 16, 17, and 18.

JAPANESE EELGRASS

Zostera japonica

Japanese Eelgrass often invades mudflats that are naturally devoid of vegetation, altering intertidal habitat structure, water flow, and sedimentation. Colonizes higher levels of the estuary than native Common Eelgrass (*Zostera marina*).



Left—Japanese Eelgrass

Right—Common Eelgrass

Photo by Oregon Sea Grant—OSU

Spreads by currents, seed dispersal and root-like rhizomes.

Description: Japanese Eelgrass blades are much narrower (.8-1.5mm in width) than Common Eelgrass— See Photo.

See references 17 and 18 for more information.

References for More Information on Plants Included in This Brochure

1. Soll, J. 2004. Controlling Himalayan Blackberry in the Pacific Northwest (*Rubus armeniacus* (*R. discolor*, *R. procerus*)). Edited by Brian Lipinski. The Nature Conservancy. Available at <http://www.invasive.org/gist/moredocs/rubarm01.pdf> .
2. Bennet, M. 2006. Managing Himalayan Blackberry in Western Oregon Riparian Areas. Oregon State University. Available at <http://extension.oregonstate.edu/catalog/pdf/em/em8894.pdf> .
3. OSU Extension Center News Story on Butterfly Bush available at http://extension.oregonstate.edu/news/story.php?S_No=770&storyType=garde .
4. Weed of the Week, Butterfly Bush. 2005. USDA Forest Service, Forest Health Staff, Newtown Square, PA. WOW 09-27-05. Available online at http://na.fs.fed.us/fhp/invasive_plants/weeds/butterfly_bush.pdf .
5. Invasive Weeds in Forest Land – Butterfly Bush. 2008. OSU Extension Service. Available online at <http://extension.oregonstate.edu/catalog/pdf/ec/ec1589-e.pdf> .
6. Plant Conservation Alliance Fact Sheet – English Ivy. 2006. Available online at <http://www.nps.gov/plants/alien/fact/pdf/hehe1.pdf> .
7. Invasive Weeds in Forest Land – English Ivy. 2008. OSU Extension Service. Available online at <http://extension.oregonstate.edu/catalog/pdf/ec/ec1595-e.pdf> .
8. Weed of the Week, Scotch Broom. 2006. USDA Forest Service, Forest Health Staff, Newtown Square, PA. WOW 11-13-06. Available online at <http://www.na.fs.fed.us/fhp/invasive%5Fplants/weeds/scotch-broom.pdf> .
9. Invasive Weeds in Forest Land – Brooms. 2008. OSU Extension Service. Available online at <http://extension.oregonstate.edu/catalog/pdf/ec/ec1598-e.pdf> .
10. Invasive Weeds in Forest Land – Gorse. 2008. OSU Extension Service. Available online at <http://extension.oregonstate.edu/catalog/pdf/ec/ec1593-e.pdf> .
11. Weed of the Week, Giant Knotweed. 2006. USDA Forest Service, Forest Health Staff, Newtown Square, PA. WOW 01-23-06. Available online at <http://www.na.fs.fed.us/fhp/invasive%5Fplants/weeds/giant-knotweed.pdf> .

Report all Cordgrass or Japanese Eelgrass sightings in Oregon to: www.oregoninvasiveshotline.org or by calling the toll-free number 1-866-INVADER.

12. Invasive Weeds in Forest Land – Knotweeds. 2008. OSU Extension Service. Available online at <http://extension.oregonstate.edu/catalog/pdf/ec/ec1597-e.pdf> .

13. Weed of the Week, Japanese Knotweed. 2004. USDA Forest Service, Forest Health Staff, Newtown Square, PA. WOW 09-14-04. Available online at <http://www.na.fs.fed.us/fhp/invasive%5Fplants/weeds/japanese-knotweed.pdf> .

14. Weed of the Week, Yellow Iris. 2006. USDA Forest Service, Forest Health Staff, Newtown Square, PA. WOW 03-18-06. Available online at http://www.na.fs.fed.us/fhp/invasive_plants/weeds/yellow-iris.pdf .

15. California Invasive Plant Council Report on Jubata Grass at <http://www.cal-ipc.org/ip/management/ipcw/pages/detailreport.cfm?usernumber=33&surveynumber=182.php> .

16. The Spartina Watch Program Web Page by Portland State University at <http://www.clr.pdx.edu/projects/ans/spartina.php> .

17. Marine Invasive Species Identification Guide for the Puget Sound area at http://vmp.bioe.orst.edu/Documents/mism_ID_Cards5print.pdf .

18. On the Lookout for Aquatic Invaders. 2008. Oregon Sea Grant and OSU.

Additional Invasive Plant Information :

Oregon Invasives Reporting Hotline - If you spot a potential invasive species in Oregon, use the online form to report it <http://oregoninvasiveshotline.org> . Or call the toll-free number 1-866-INVADER.

Silent Invasion Quick Guide at <http://www.opb.org/programs/invasives/guide.php> . Allows search for plants by region and links to more plant information.

Oregon Department of Agriculture, Noxious Weed Control and Oregon Weed List. Contains complete Oregon Noxious Weed List, plant profiles and maps of occurrence in Oregon at: <http://www.oregon.gov/ODA/PLANT/WEEDS/index.shtml>

USDA Forest Service, Forest Health Staff, Newtown Square, PA. Invasive Plants website: http://www.na.fs.fed.us/fhp/invasive_plants

Center for Invasive Species and Ecosystem Health: <http://www.invasive.org/>

Avoid the Establishment of Noxious and Invasive Plants

Utilize plenty of locally native perennial species in your landscaping to eliminate bare ground areas that aid establishment of invasive plants. The native plant gardening and landscaping plant booklets produced by the Lane County Emerald Chapter of the Native Plant Society of Oregon are helpful in this regard:

NPSO-Emerald Chapter Web Site:
<http://www.EmeraldNPSO.org>.

Emerald Chapter Landscaping Booklets:
<http://www.emeraldnpsso.org/NGAPguides/HerbaceousBooklet.pdf>
<http://www.emeraldnpsso.org/NGAPguides/ShrubsBooklet.pdf>
<http://www.emeraldnpsso.org/NGAPguides/NativeTreesBooklet.pdf>

Also consult:
Garden Smart Oregon, A Guide to Non-invasive Plants. 2008. Replacements for invasive plants.
<http://www.opb.org/programs/invasives/extras/gardensmartguide.pdf>

Garden Wise Non-Invasive Plants for Your Garden. 2008. Halpern, Cool, and DeMarsh-Dodson. Western Washington Guide. Available online at http://www.invasivespeciescoalition.org/GardenPlants/Western_Garden_Wise_Web.pdf/



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