

Noxious Weeds That Harm Washington State

Western Washington Field Guide



Washington State Noxious Weed Control Board
www.nwcb.wa.gov

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What is a noxious weed?

Noxious weed is the legal term for invasive plants in Washington that are so aggressive they harm our local ecosystems or disrupt agricultural production. These plants crowd out the native species that fish and wildlife depend on. They also cost farmers millions of dollars in control efforts and lost production. Noxious weeds are both terrestrial and aquatic and include non-native, invasive plants, shrubs, and trees that grow both on land and in wetlands, lakes, shorelines and streams.

How do noxious weeds spread?

Many of the noxious weeds in Washington are escapees from gardens, and that explains why



so many of them are quite beautiful. Others came to Washington as stowaways on ships, as seed contaminants, or on the wheels or shoes of travelers. The more people travel – and the more globally connected our world becomes – the more we

spread seeds and plant fragments from place to place.

Why are there laws about noxious weeds?

Weed laws establish all property owners' responsibility for helping to prevent and control the spread of noxious weeds. Since plants grow

without regard to property lines or political jurisdictions, everyone's cooperation is needed to combat them. City gardeners, farmers, public land owners, foresters, and ranchers all have a role to play in this effort.

Washington's first noxious weed law was passed in 1881 to combat the spread of invasive plants that threatened farmers' fields. For many decades, the agricultural community led efforts to combat the spread of invasive plants. More recently, people have recognized the harm invasive plants cause to native ecosystems and wildlife. For instance, when spotted knapweed spreads in mountain meadows, it can reduce 90% of the native plants elk eat.

Washington's state weed law (RCW 17.10) established the State Noxious Weed Control Board, and authorized counties to establish County Noxious Weed Control Boards. Many County Noxious Weed Control Boards are financed with a small assessment.

What are the three classes of noxious weeds?

Class A noxious weeds are very limited in their distribution and it is the goal of state and local weed boards to completely eradicate them before they get a foothold in Washington. There are many success stories in the early detection and eradication of Class A weeds. For instance, kudzu – a notoriously invasive plant in the South – was found in Clark County. Kudzu was listed as a Class A invader and eradicated. So far, it has not turned

up anywhere else in our state.

Class A noxious weeds are the ones you are least likely to see – but the ones that are most important to report. If you see a plant you think might be a Class A noxious weed, please report it to your County Weed Board or to the State Noxious Weed Control Board. Note the exact location, and if possible, take pictures.

Class B noxious weeds are abundant in some areas of the state, but absent or uncommon in others. The goal for Class B weeds is to contain and reduce their occurrence where they are widespread, and to prevent them from spreading to other areas of the state where they are less common. In areas where Class B weeds are uncommon or absent, control may be required to prevent their establishment.

Class C noxious weeds are often already widespread in Washington or are of special interest to the state's agriculture industry. In some cases, county weed boards may require their control, but more often control is not required and the focus is on educating residents about why controlling them is a good idea and providing management advice.

Make a plan

Develop a long-term, integrated pest management plan (IPM), which will often use a combination of control methods, to manage noxious weeds on your property and prevent new

weeds from establishing. These control methods may include manual and cultural methods, biological control, and herbicides. See the recommendations listed in this book and contact your county weed board for more information.

It's more than just controlling weeds

Solely focusing on the control of noxious weeds may not allow you to reach your landscape goals. Developing and managing healthy plant communities that contain a diversity of native and non-invasive plants will help your landscape resist weed invasions, while meeting other land-use goals. Select plants that are best adapted to your local site conditions, making sure to include plants that will support pollinators from spring to fall.

For a complete list of Washington State noxious weeds and additional information go to:

www.nwcb.wa.gov or call 360-725-5764.



How can you help prevent and control invasive noxious weeds?

- Be careful what you plant. Many noxious weeds are escapees from gardens, ask questions before you buy plants or seeds. The State Noxious Weed Control Board can send you a publication (also available online at www.nwcb.wa.gov) called Garden Wise that lists alternatives to common garden plants known to be invasive.
- Prevent the spread of noxious weeds when traveling. Seeds ride along in wheels, stick to your shoes, boots, clothing and pets. Take care not to take invasive plant seeds with you when you go hiking.
- Clean your boat thoroughly between trips. Aquatic invaders are spread by even the smallest plant fragments.
- Do your part to control or eradicate invasive plants on your property. If you need help or advice, contact your County Weed Board.
- Volunteer to participate in weed pulls and native plant restoration projects. Many organizations sponsor these events.

common reed

Phragmites australis

Identification: Common reed is a large perennial grass with woody, hollow stems up to 12 feet tall. The lance-shaped leaves are up to 16 inches long and 1.5 inches wide and will often twist to one side in the wind. The flowerheads are dense, silky, brownish-purple plumes that can reach 16 inches long. Bloom time is July to October. Common reed has an extensive, creeping rhizome network.

Impact: This robust grass species forms dense colonies in both freshwater and saline wetlands and ditches. These stands alter hydrology, displace native vegetation, and degrade valuable wetland habitat.

Control: Since rhizomes can produce new plants, care must be taken to prevent dispersal. Mowing, when timed correctly, can reduce populations. For large infestations, selective aquatic herbicides can be effective, with late-summer through fall applications appearing to be most effective.



King County NWCB



Rich Old, www.xidservices.com



Rich Old, www.xidservices.com



King County NWCB

Class B Noxious Weed

spurge laurel

Daphne laureola

Identification: Spurge laurel is a shade-tolerant evergreen shrub 1.5-5 feet tall with yellow tinged gray bark. Leaves are dark green and glossy. They are spirally arranged around the stem and densest near branch tips. Inconspicuous, yellow-green flowers are clustered at the base of the leaves and bloom in late winter or early spring. Fruits are bluish-black.

Impact: Spurge laurel has escaped cultivation, primarily near urban areas where birds eat its fruit and disperse the seeds into nearby forests. The shrub rapidly forms monotypic stands that outcompete native understory plants. Oak woodland forests are at the greatest at risk. Plant parts are toxic to people and animals.

Control: Due to the irritating toxins in the sap, stem, leaves, and fruits, it is advisable to wear gloves and other protective gear when handling spurge laurel. Seedlings can be hand-pulled and small shrubs can be dug up. Larger shrubs can be treated with a selective herbicide or cut below soil line. Herbicide applied to the cut stump prevents sprouting.



Laurel Baldwin WCNWCB



Italian arum

Arum italicum

Identification: Leaves and flowers grow from tubers, with oval to arrowhead-shaped leaves emerging in the fall. Leaf blades can have cream, silver-gray or other colored markings. Leaves will remain all winter and die back in the summer (or in colder climates leaves die back in the winter, re-emerge in the spring and then die back again in the summer). Flowers bloom in the spring and summer, are made up of a finger-like spadix wrapped in a greenish petal-like spathe, and form orange-red berries.

Impact: Spread by birds, and in yard debris and contaminated compost, Italian arum can escape from gardens into natural areas, impacting native plant communities. Ingestion of plants can cause sickness and may require medical treatment. Contact with plant parts may cause skin irritation for sensitive individuals.

Control: Make sure to wear gloves when working with plants. Small infestations can be dug out, taking care to remove tubers. Continue to dig out tubers as new leaves appear. Tubers left in the soil will resprout. This method can take many years. Cut and bag the fruit before the berries mature. Bag and trash plants and tubers, as improper disposal spreads infestations. Do not move soil from infested sites. A recent greenhouse study showed that several herbicides killed the foliage, but damage to tubers was only variable. Check with your county weed board for recommendations.



Class B Noxious Weed

orange hawkweed

Hieracium aurantiacum

Identification: Orange hawkweed can easily be identified by its bright orange flower clusters on the end of long, leafless stems up to 2 feet tall. Each dandelion-like flower is about 1 inch across. Leaves are long and taper to a point and grow from the base of the plant. The stems, leaves, and flower buds are covered with small, bristly hairs. Stems exude a milky sap when broken.

Impact: Like other non-native, invasive hawkweeds, orange hawkweed is an aggressive competitor that overwhelms pasture and rangeland plant species, and reduces forage for livestock and wildlife. Infestations can become extremely dense, with the basal leaves forming a thick carpet.

Control: For small, scattered patches, the simplest control is to hand-pull or dig up and dispose of plants and roots. Selective herbicide control can be effective on large, well-established infestations.



Fran Lucero



Fran Lucero



Class B Noxious Weed

buffalobur

Solanum rostratum

Identification: A member of the tomato family, buffalobur is an annual plant that reaches a height between ½ to 2 feet. The flowers are about 1-1½ inches across, with five yellow petals. The leaves are alternate and irregularly divided into 5-7 lobes. The entire plant is covered with straight, yellow spines.

Impact: Buffalobur is native to the Midwest, where it is highly aggressive and invasive in pastures and dry rangeland. It is also a host for the destructive Colorado beetle. Seeds of this plant often contaminate other seed crops, and so buffalobur plants occasionally appear beneath bird feeders and in gardens. Although it only appears occasionally in Washington, controlling it is important to prevent it from becoming widespread.

Control: Isolated plants or small infestations can be controlled by hoeing or digging them out. Be certain to wear gloves. Selective herbicides can also be effective.



John D. Byrd, Mississippi State
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Class C Noxious Weed

common fennel

Foeniculum vulgare

Identification: Unlike the non-invasive annual bulbing fennel, common fennel is a large perennial herb that typically grows 4 to 6 feet tall and has a large taproot. Alternate leaves are dark green or bronze with fine, feathery leaflets. Common fennel has flat-topped clusters of small, yellow flowers. All parts of the plant smell distinctively like anise or licorice.

Impact: Common fennel colonizes disturbed areas and grasslands, where dense stands outcompete native plants. Already a problem in coastal California, common fennel is beginning to escape gardens and landscapes along rights-of-ways and shorelines in western Washington. It poses a particular threat to our few remaining grasslands.

Control: Young plants can be hand-pulled and larger plants can be dug out with a shovel, but be sure to get the entire root as roots left in the soil can resprout. Do not mow if plants have already set seed, as this will help spread the seeds. Selective herbicides can be effective on large infestations, typically applied in the spring to full-sized leaves, but prior to plants flowering.



Thurston County NWCB



European coltsfoot

Tussilago farfara

Identification: European coltsfoot is a rhizomatous perennial groundcover, growing up to 20 inches, forming extensive colonies. Plants first send up flowering stems in the spring, with small narrow leaves and topped with a single, yellow, daisy-like flowerhead. Just before or after flowers have formed fluffy balls of seeds, basal leaves on long petioles (leaf stems) grow from the ground. These leaves are somewhat roundish to heart-shaped, about 2 to 11 inches wide and more or less white-woolly on the undersides.

Impact: This plant grows readily in open to shaded, disturbed habitats. It is a known weed in European agricultural systems, where it is difficult to control, as well as in native plant communities. In Washington, it has been found on disturbed sites, including riparian areas after knotweed control.

Control: European coltsfoot thrives in disturbed habitats; where possible, minimize soil disturbance during management. Young plants and small infestations may be carefully dug out, removing all rhizome fragments, bagging and trashing them. Establishing competitive perennial plants can reduce populations. Herbicide may be used when plants are fully leafed out. Check with your county weed board for recommendations.

Patrick Sowers King County



Three upper left photos by Leslie J. Mehrhoff, University of Connecticut, Bugwood.org



King County NWCP



Tim Miller, WSU Extension



Tricia MacLaren, King County



Class B Noxious Weed

garden loosestrife

Lysimachia vulgaris

Identification: This perennial has extensive rhizomes and can grow to 3 feet or taller. Leaves are opposite each other on the stems or in whorls of 3 to 4. Flowers are yellow, have 5 petals, and occur in clusters at or near stem tips. Small capsules form that contain tiny seeds. Yellow loosestrife (*Lysimachia punctata*) looks similar but its star-like flowers are clustered at leaf bases along the stems, not just near the tips. Yellow loosestrife is not a noxious weed.

Impact: Invading wetlands and other moist areas, garden loosestrife aggressively spreads by rhizomes and seed. It forms dense stands that displace native plant communities and impact wildlife habitat.

Control: Control of garden loosestrife is complicated by its growing in sensitive areas. Small patches can be dug out, making sure to remove the rhizomes. Selective or non-selective herbicides may be effective. Aquatic herbicide formulations may be needed, contact your county weed board with questions. Re-growth is likely with any method, so follow-up is critical for effective control.

Garden loosestrife



King County NWCB

Yellow loosestrife



King County NWCB



King County NWCB

Class B Noxious Weed

gorse, Scotch broom, and French broom

Ulex europaeus, *Cytisus scoparius* &
Genista monspessulana

Description: Gorse, French and Scotch broom are shrubs in the pea family with bright yellow flowers.

Gorse is easily identified by its prominent spiny thorns on mature stems instead of leaves. **Scotch broom** has 5-angled stems and deciduous leaves, either undivided or with 3 narrow leaflets. One or two flowers grow from leaf axils. **French broom** leaves all have 3 narrow leaflets and smaller flowers in clusters of 4 to 10. Gorse blooms early, in late February to April, while Scotch and French broom generally bloom from April to June.

Impact: These noxious weeds displace grassland habitat, outcompete native and beneficial plants, and shade out tree seedlings in regenerating forests. They also pose a fire hazard due to their volatile oils. Scotch broom is far more abundant than gorse and is a familiar sight along western Washington highways. French broom is rarely found in Washington.

Control: Young plants can be hand-pulled and tools such as Weed Wrenches™ can uproot even large shrubs. Herbicides are most effective when applied directly to cut stems. Because seeds of these species can remain viable for many years, long-term management is necessary. Biocontrols are available for gorse and Scotch broom.

gorse - Class B



Scotch broom - Class B



Robert Vidéki, *Doronicum Kft.*, Bugwood.org



French broom - Class A



lesser celandine

Ficaria verna (syn. *Ranunculus ficaria*)

Identification: Lesser celandine is a hairless perennial with tuberous roots. It grows to around 12 inches in a mounded rosette with basal and stem leaves. Solitary yellow flowers bloom at stem tips and form clusters of seeds. Plants emerge early in the spring, bloom and die back by June-July.

Impact: Lesser celandine emerges earlier in the spring than our native spring ephemerals, forming a dense layer that crowds out other species. Plants quickly spread vegetatively via root tubers and stem bulbils (vegetative reproductive structures), that are easily dislodged from plants.

Control: Timing control efforts is a challenge due to its short lifecycle. Small patches can be dug out, but care must be taken to remove all root tubers and stem bulbils. Bag and dispose of plant material and roots. Monitoring and repeat control will be needed. Mowing is not recommended as it can spread bulbils. Smothering plants with a deep mulch layer may provide some control. Herbicide can be effective, working best when applied before flowering.



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sulfur cinquefoil

Potentilla recta

Identification: Sulfur cinquefoil is a perennial plant up to 3 feet tall. Palm-shaped leaves have 5-7 leaflets that are covered in stiff hairs on both the upper and lower surfaces and are finely toothed. The flowers are pale yellow with 5 heart-shaped petals. Native cinquefoil species also occur in Washington, check with your local county weed board for identification assistance.

Impact: Sulfur cinquefoil can form dense stands that displace native and beneficial plants and grasses. Because this species is not palatable to livestock and wildlife, infestations can significantly reduce the forage value of rangelands and pastures.

Control: For small, scattered patches, the simplest control is to hand-pull or dig up and dispose of plants and roots. Selective herbicides provide fair control of large, well-established infestations, but treatments are more effective when combined with other control techniques, such as planting competitive grasses.



tansy ragwort & common tansy

Senecio jacobaea & *Tanacetum vulgare*

Description: **Tansy ragwort** is a biennial that grows 2-4 feet tall. Young plants form basal rosettes with ruffled leaves and mature plants have leaves with deep lobes rounded at the tip. **Common tansy** is a perennial that grows 1-5 feet tall and has feather-like leaves. **Tansy ragwort** has yellow, daisy-like flowers, typically with 13 petals. **Common tansy** has yellow, button-like flowers without petals.

Impact: Tansy ragwort is toxic to cattle and horses whether fresh or dried in hay, causing irreversible liver damage. It spreads aggressively and seeds prolifically, with seeds remaining viable in the soil for over 10 years. Common tansy is also toxic but is not as commonly grazed. It spreads by rhizomes and seeds, but seed longevity is unknown.

Control: For small patches, hand-pull or dig plants before they set seed and discard plants in the trash. Be sure to wear gloves. Do not mow - plants will just re-flower at a height shorter than the mower blade. For large infestations, selective herbicides can be very effective. Biocontrols are also available for tansy ragwort. Keep animals out of infested pastures and inspect hay for dried plants.

tansy ragwort

Class B

common tansy

Class C

Rich Old, www.xidservices.com



Sue Winterowd SCNWCB



yellow archangel

Lamium galeobdolon

Identification: Yellow archangel is a fast-growing, herbaceous perennial that trails along the ground. Its stems are square and hairy. Opposite, coarsely toothed leaves are distinctively variegated with green and silvery-gray. Hooded flowers are small and yellow and are arranged in whorls on upright stems. Bloom time is brief and occurs in April or May.

Impact: This plant is commonly used in hanging baskets and as a groundcover. Unfortunately, it easily escapes cultivation due to improper disposal of garden cuttings or hanging baskets. It forms dense colonies in forests and parks and is becoming an increasing problem in western Washington.

Control: Small infestations can be hand-pulled, although it is time consuming. All roots and stems need to be bagged and disposed of (not put in home compost). Infestations can be cut and covered with cardboard and woodchips. Cutting alone will not kill yellow archangel, and may even end up spreading plants. Plants can be controlled using foliar applications of glyphosate, triclopyr, or imazapyr; mixtures of glyphosate with either triclopyr or imazapyr may be more effective than single-product treatments. Additional applications over the course of the year will likely be needed. Monitor for resprouts and seedlings.



Nancy Ness,
Grays Harbor NWCB



Class B Noxious Weed

yellow flag iris

Iris pseudacorus

Identification: This invasive perennial grows about 3 feet tall. Sword-shaped leaves, clasping at the base like a fan, grow from thick brown rhizomes, while smaller leaves occur on flowering stems. The iris flowers are pale to dark yellow with brownish purple mottled markings. The flowers develop large, drooping, green seed pods in the summer and early fall.

Impact: Yellow flag iris spreads aggressively in wet areas, dominating the edges of lakes, streams, ponds, wetlands and in shallow water. It can sicken livestock if ingested, though is generally avoided by herbivores. Contact with the resins can cause skin irritation.

Control: Wear gloves for protection when handling plants. Plants spread by seed and rhizomes. Remove and dispose of seed pods. Manually remove individual plants or small infestations, making sure to remove rhizomes. Herbicides can be effective and a product labeled for aquatic sites may be needed. Check with your local county weed board for further information and restrictions when working in aquatic areas. Do not buy or plant yellow flag iris, there are many non-invasive alternatives. Caution, before flowering, yellow flag iris can look like native cattail and Sparganium (bur-reed). Look for flowers and fruit to confirm identification.



Eileen Sande, Ferry County NWCB



Joseph M. DiTomaso, U of CA - Davis,
Bugwood.org

Class C Noxious Weed

non-native yellow hawkweeds

Hieracium species

Identification: Yellow hawkweeds are a complex of herbaceous perennials that can look similar. Dandelion-like flowerheads are made of yellow flowers and grow in clusters at the top of a stem that exudes a milky white sap when broken. Different types of hairs on the plants can help identify particular species. Also, some species have leafy stolons (above ground stems) that grow along the ground and create mats. Hawkweeds can have leaves at the base of the plant and/or stem leaves. Leaves may have smooth or toothed edges. Some native hawkweeds have yellow flowers, check with your county weed board if you need help with identification.

Impact: Yellow hawkweeds reproduce by seed, stolons and/or rhizomes and are aggressive competitors in mountain meadows, rangelands, and may even invade cultivated fields. They are unpalatable and crowd out more desirable forage. There are several non-native yellow-flowered hawkweed species and they are grouped by two subgenera on the noxious weed list as Class B noxious weeds. Learn more about them at www.nwcb.wa.gov.

Control: Small infestations may be hand-pulled or dug out, but the entire plant must be removed since it can resprout. For larger infestations, selective herbicides can be effective. Re-vegetation of the site may be needed for long-term control.



King County NWCB



Rich Old, www.xidservices.com



garlic mustard

Alliaria petiolata

Description: Garlic mustard is a biennial plant that can have a garlic odor when crushed. During the first year, the plants form a basal rosette of kidney-shaped leaves. The second year, the stem grows up to 3 feet tall, and the leaves are heart-shaped or triangular and coarsely toothed. Bloom time is early spring, and the flowers are white with four petals. The seed pods are narrow and curve upward. Plants can flower at much shorter heights depending on habitat conditions and disturbance.

Impact: This aggressive, shade-tolerant plant can completely dominate forest floors and displace native species. It releases compounds into the soil that prevent other plants from growing. Fruits can eject the tiny black seeds over ten feet, and the seeds are also dispersed by animals, boots, equipment, and mulch.

Control: Contact your county noxious weed control board if you think you have seen this plant. Pull up plants - including the roots - before they finish flowering, bag and discard them in the trash. Selective herbicides can be effective for large populations. Clean boots, clothing, and equipment before leaving a garlic mustard site.

Fran Lucero



Fran Lucero

King County NWCB



Vicky Nuzzo, Natural Areas Consultants, Bugwood.org

giant hogweed

Heracleum mantegazzianum

Identification: Giant hogweed is a member of the parsley family that can grow up to 15 feet tall. Its hollow stem is 2-4 inches in diameter, covered in stiff hairs, and has dark, purplish blotches. The umbrella-like, flat-topped flowerhead can reach a diameter of two feet, and consists of small white flowers arranged in clusters. The leaves are compound and huge – 2 to 5 feet wide – with jagged edges and stiff hairs.

Impact: Giant hogweed is a public hazard, as the plant exudes a clear watery sap that sensitizes the skin to sunlight. This can result in severe burns, causing blistering and scarring. It also forms dense canopies, outcompetes native species, and increases soil erosion along streambanks.

Control: Always wear protective clothing and avoid getting sap on skin. If plants are blooming, cut and bag flowerheads and put them in the trash. Plants can be dug out, but be sure to remove all of the root stock. Selective herbicides can be very effective.



knotweeds

Polygonum sachalinense, *P. cuspidatum*, and *P. x bohemicum*, also placed in the genus *Fallopia* or *Reynoutria*. Himalayan knotweed is known by names that include *Polygonum polystachyum*, *Persicaria wallichii* and *Koenigia polystachya*.

Identification: The four knotweed species - giant, Japanese, Bohemian, and Himalayan - are tall, shrub-like, perennial, herbaceous plants. Stems often grow to over 10 feet tall and are segmented and hollow, resembling bamboo. Knotweeds form dense colonies that sprout in April, and bear clusters of small white flowers in late summer. Each species produces differently shaped leaves, ranging from heart-shaped to arrow-shaped to long and slender.

Impact: The knotweeds' greatest impact is along streams and in riparian areas where they can completely displace native vegetation, erode stream banks, and change the nutrient cycle at the expense of salmon and other animals. Knotweed roots can grow so vigorously that they erupt through blacktop and damage foundations and other infrastructure.

Control: Knotweed's extensive roots and vigorous growth makes it extremely difficult to control. Although small patches can be dug up, it may take several years to eradicate, and most stands require repeated applications of herbicide over several years. County noxious weed control boards can provide advice and assistance.



Skamania County NWCB



Tim Miller, WSU-NWREC



Island County NWCB



old man's beard

Clematis vitalba

Identification: Old man's beard is a deciduous, perennial, climbing vine. It grows long stems that cover the ground and climb up and over shrubs and trees. Leaves are divided into 5 leaflets, having smooth to somewhat toothed edges. Small, white flowers grow in clusters and have 4-6, petal-like sepals. Pom-poms of hairy seeds develop and can be seen on plants throughout the winter. It can look similar to our native white flowering clematis (*C. ligusticifolia*), but the native species is mainly found east of the Cascade mountains.

Impact: The dense growth of old man's beard blankets and smothers low growing plants, competing for light and other resources. It also grows up trees, adding weight that can weaken them or cause collapse over time. It quickly spreads by vegetative growth and by producing thousands of seeds each year.

Control: Seedlings and small plants can be dug out, making sure to remove the roots. Vines growing into trees can be cut, leaving stems in trees to die. Remove lower stems and roots or paint cut stems with herbicide.



King County NWCB

Class C Noxious Weed

poison hemlock

Conium maculatum

Identification: This biennial member of the parsley family can grow up to 8 feet tall. Small, white, 5-petaled flowers grow in 4-inch clusters on stalks that radiate out like umbrella spokes. Leaves are dark glossy green and fernlike. The stem is smooth and hollow with distinctive purple splotches. Crushed leaves also have a unique musty odor.

Impact: All parts of the plant are extremely toxic to humans and livestock. Accidental human poisonings have occurred when the plants were mistaken for parsley, parsnip, or wild carrot. It also causes livestock deaths. Poison hemlock easily colonizes roadsides, vacant urban lots, pastures, and waterways.

Control: Always wear gloves when handling this poisonous plant. Small patches can be dug out. Selective herbicides are effective on this noxious weed. Because poison hemlock foliage remains toxic after drying, it is critical to dispose of it in the trash.



Class B Noxious Weed

wild chervil

Anthriscus sylvestris

Identification: Wild chervil is a biennial member of the parsley family that can grow 1-4 feet tall. Stems are hollow, noticeably ridged, and lower portions of the stem are covered in soft, felt-like hairs. Leaves are fernlike and slightly hairy, especially the undersides. Flowers are white and arranged in clusters on stalks arranged like umbrella spokes. Bloom time begins as early as March. Look for rod-shaped black fruits at maturity.

Impact: Wild chervil is highly adaptable and will grow in almost any type of soil. It forms dense infestations that outcompete native plants and reduce habitat quality for wildlife. It spreads rapidly along roadsides and other rights-of-way.

Control: For small patches, dig up and dispose of plants, being careful to remove the taproot. Selective herbicides can be effective, especially when controlling large infestations. Tilling plants into the soil, followed by seeding with competitive grasses, can control wild chervil.



Rich Old, www.xidservices.com



Sue Winterowd, Stevens County NWCB



Class B Noxious Weed

butterfly bush

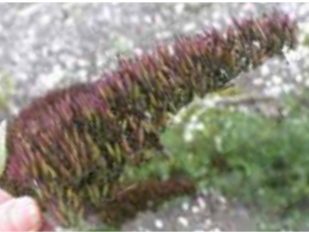
Buddleja davidii

Identification: Butterfly bush is a deciduous shrub with arching branches that can reach a height of 15 feet. It has showy flower spikes 4-10 inches long, consisting of numerous, bell-shaped flowers that are often purple with an orange center. Leaves are 4-10 inches long, lance-shaped, oppositely arranged, finely toothed along the edges, and have fuzzy whitish undersides.

Impact: Butterfly bush has tiny seeds that are spread far and wide by the wind. It colonizes roadsides, freeway medians, and disturbed areas, but its greatest impact comes when it spreads to streambanks, where it displaces native vegetation - changing stream habitat, and reducing food supplies for native butterfly larvae and other animals.

Control: If you have butterfly bush on your property, prevent the plant from establishing elsewhere by deadheading flowerheads before they set seed. Seedlings can be hand-pulled and adult plants dug up. Herbicide applied to foliage or cut stems can help reduce infestation.

Laurel Baldwin, WCNWCB



Tim Miller, WSU-NWREC



Class B Noxious Weed

annual & common bugloss, blueweed

Anchusa arvensis, *A. officinalis*, *Echium vulgare*

Identification: All three species are covered in stiff, bristly hairs and have small, funnel-shaped flowers that grow close together in coiled stalks that unfold as the flowers open. **Annual bugloss** is between 4-12 inches tall with lance-shaped, alternate, wavy-edged leaves and sky-blue, curved flowers about $\frac{1}{4}$ -inch long. **Common bugloss** is a perennial between 1-2 feet tall with lance-shaped alternate leaves and purplish-blue flowers about $\frac{3}{4}$ -inch long. **Blueweed** is a biennial between 1-3 feet tall with broader-tipped leaves and showy, bright blue flowers up to $\frac{3}{4}$ inch long.

Impact: These invasive borages are highly competitive and spread through pastures, rangelands, and alfalfa fields. They outcompete native and desirable plants and are unpalatable to livestock and wildlife.

Control: Hand-pulling or digging can be effective for small infestations but be sure to remove the deep taproots of common bugloss and blueweed. Selective herbicides can also be effective for larger infestations.

annual bugloss



Rich Old, www.xidservices.com

blueweed



Fran Lucero



Sue Winterowd



common bugloss



Sue Winterowd



Sue Winterowd



Fran Lucero

purple loosestrife

Lythrum salicaria

Identification: Purple loosestrife is a long-lived perennial, growing 6-10 feet tall. It has small, purple-to-magenta flowers with 5-6 petals arranged in upright flower spikes. Leaves are lance-shaped and either opposite on the stem or whorled in threes. The leaves are stalkless and clasp the stem, which is distinctively square in cross-section.

Impact: Purple loosestrife displaces large areas of riparian and wetland native plants needed by waterfowl and other wildlife for food, nesting, and groundcover. This invasive wetland species changes the nutrient cycle, affecting the food web. It also clogs irrigation canals and drainage ditches.

Control: Small patches can be dug up and discarded. Cutting alone will not control purple loosestrife because of its extensive and vigorous root systems. Because one plant is capable of producing 2 million seeds, flowers need to be disposed of properly along with roots and stem fragments, which can resprout. For large infestations, selective, aquatic herbicides can be effective, but a special permit is required. Several biocontrol insects are also available.

Jennifer Andreas



Jennifer Andreas WSU Extension



Class B Noxious Weed

flowering rush

Butomus umbellatus

Identification: Flowering rush is a freshwater perennial, which can grow either as a submersed or emergent plant. Leaves grow from rhizomes, which also produce bud-like structures (bulbils) that can break away to form new plants. The leaves are fleshy and triangular in cross-section, growing either below, above, or floating on the water surface. Flower stalks, when present, are usually taller than the leaves, reaching up to 3 feet above the water surface. Each flower stalk bears a cluster of pink flowers at the tip, arranged on umbrella-like spokes. Depending on the plant's biotype, bulbils may also grow at the base of these umbrella-like spokes.

Impact: Flowering rush rapidly colonizes wetlands, lake shorelines, and slow-moving rivers. Native species can be outcompeted, reducing habitat for native fish. It forms dense stands in previously unvegetated areas, which can reduce recreational activities such as swimming, boating, and fishing. This species also clogs unlined irrigation canals and drainage ditches.

Control: Flowering rush can be difficult to control, so if you find it, contact your county noxious weed board. Isolated plants may be dug up and disposed of, making sure to include all rhizomes. Diver hand-pulling and bottom barriers, which require a permit, are often used to control submersed infestations. Herbicides labeled for aquatic use are available, but a special permit is also required.



Ben Legler



Tim Miller



Ben Legler



Greg Haubrich



hairy willow-herb

Epilobium hirsutum

Identification: Hairy willow-herb is a perennial with stems reaching 3-6 feet tall. Plants are covered in soft hairs. Stems have opposite, lance-shaped leaves, slightly clasping the stem, with toothed edges. Flowers bloom in early spring, are around 3/4 inches wide, and have four heart-shaped, pink-purple petals. Seed pods are long and slender and contain tiny seeds with long, wispy hairs attached.

Impact: Plants can grow and spread in a wide range of habitats with moist soils, including wetlands, ditches, streambanks, low fields, pastures and meadows. Hairy willow-herb can form dense stands that outcompete wetland plants, reducing food sources and habitat for wildlife.

Control: Plants spread by seed and rhizomes. Small infestations may be hand dug, but care must be taken to remove rhizomes and any rhizome fragments. Sites must be checked for re-growth. Mowing may be an option to prevent seed production but will not kill the plant. A number of herbicides can provide control, check with your county weed board about recommendations and restrictions. Replant areas with native and non-invasive desirable species to provide competition and habitat.



Class B Noxious Weed

shiny geranium & herb-Robert

Geranium lucidum & *G. robertianum*

Identification: **Shiny geranium** is a small winter annual. Stems are hairless and often have a reddish tinge. Leaves are shiny, divided into 5-7 lobes, and sparsely covered with stiff hairs. The flowers have 5 bright pink petals, and each of the 5 green sepals (beneath the petals) has a distinctive ridge. **Herb-Robert** is also an annual. It's covered in short, glandular hairs and produces a musky odor when crushed. Leaves are fern-like and bright green, though sometimes reddish. The flowers also have 5 bright pink petals and the sepals are burgundy to green and hairy.

Impact: Both invasive geranium species are most problematic in forests. They spread quickly and can dominate forest floors, displacing native herbaceous plants. While herb-Robert already has spread throughout western Washington, shiny geranium is a new invader with a more limited distribution.

Control: Both species have shallow root systems, and small infestations can be easily hand-pulled, ideally before they flower. Bag and dispose of plants in the garbage, not the compost. Selective herbicides can be effective for larger infestations.

shiny geranium



Ben Legler

herb-Robert



Ben Legler



shiny geranium (left) &
herb-Robert (right)

knapweeds: spotted, diffuse, & meadow

Centaurea stoebe, *C. diffusa*, &
C. x moncktonii (*C. x gerstlaueri*)

Identification: These members of the thistle family range from 2-5 feet tall, are spineless, and bear flowerheads with clusters of showy flowers atop round or egg-shaped bases. Leaves are small, lobed, and often bluish-green. All three species start as basal rosettes in the spring. Spotted and meadow knapweed are perennials with stout taproots and pinkish-purple flowers. Diffuse knapweed is a biennial with white to purple flowers and small spines covering the base of the flower.

Impact: Invasive knapweeds rapidly spread along rights-of-way and colonize meadows, rangeland, prairies, and open forests. They quickly crowd out native and desirable plants, dramatically reducing available forage and habitat for livestock and wildlife.

Control: Knapweed species are prolific seed producers, so preventing the flowers from going to seed is critical. Hand-pulling or digging can be effective for small patches. Mowing is not a good option, because taproots can resprout. For large infestations, both selective herbicides and biocontrol are very effective options. Revegetate with desirable species to provide competition.

spotted knapweed



Spokane County NWCB



diffuse knapweed



Okanogan County NWCB



meadow knapweed



impatiens: small-flowered jewelweed, policeman's helmet & spotted jewelweed

Impatiens parviflora, *I. glandulifera* & *I. capensis*

Identification: All three are annuals that develop narrow seed pods, which explosively open and propel seeds a short distance. **Policeman's helmet** grows 3 to 10 feet tall; leaves have sharply toothed margins; pale pink or purplish flowers resemble the shape of an English policeman's helmet and do not have a spur.

Spotted jewelweed grows 2 to 5 feet tall; leaves have scalloped margins with a small, sharp point on each scallop; flowers are orange with red to orange spots (rare forms with varied colors) and have a recurved spur. **Small-flowered jewelweed** grows up to 3 feet tall, but can be much shorter; flowers are small, pale yellow and have a short, straight spur.

Impact: Plants can self-seed and colonize lowland riparian areas, including moist forests, streambanks, and roadside thickets, where it dominates native plant communities. Small-flowered jewelweed can grow in drier, shaded understories.

Control: Plants have shallow root systems, so they can be hand-pulled when the ground is moist. Selective herbicides can be effective if applied prior to flowering. Seeds in the soil may be viable for two years in some species, follow-up monitoring and control is recommended.

small-flowered jewelweed, Class A

Udo Schmidt, CC Attribution-Share Alike 2.0 generic license



Alexander J. Wright



spur

policeman's helmet, Class B

King County NWCB



Fran Lucero



spotted jewelweed, Class C

left and center:
Laurel Baldwin, WCNWCB



spur



Rob Routledge, Sault College,
Bugwood.org

Class B Noxious Weed

thistles: slenderflower & Canada

Carduus tenuiflorus & *Cirsium arvense*

Identification: Both thistle species are spiny and have clusters of pinkish-purple flowers.

Slenderflower thistle is an annual that can reach 6 feet tall. Stems have a fringe of spiny, leaf-like wings. Spiny leaves are lobed, and are white underneath with dense, woolly hairs. Flower clusters consist of 5-20 blossoms. **Canada thistle** is a perennial with rhizomes, reaching 1-4 feet tall. Leaves are spiny, lobed, and shiny. Stems lack spiny, leaf-like wings. It has small, weakly spined flowerheads, and seed heads form cottony tufts.

Impact: Like other invasive thistles, these species reduce forage quality of rangeland and pastures. Dense infestations of Canada thistle can severely damage croplands.

Control: For small patches, dig up and discard slenderflower thistle before flowers set seed. Selective herbicides can be effective for larger populations. Canada thistle's extensive root system produces numerous shoots, making control difficult. For small infestations, frequent tilling or mowing can be effective. Larger infestations may be more effectively controlled with selective herbicides or with biocontrol.

slenderflower thistle - Class A noxious weed



Canada thistle - Class C noxious weed



thistles: milk, Scotch & bull

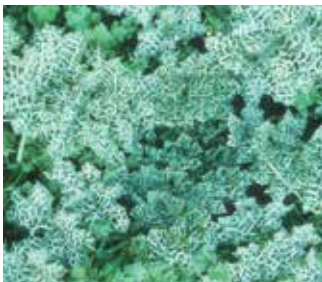
Silybum marianum, *Onopordum acanthium*
& *Cirsium vulgare*

Identification: **Milk thistle** is a large winter annual or biennial, 2-6 feet in height. It has distinctive white marbling on its shiny green leaves. Purple flowerheads are 2 inches wide with thick spine-tipped bracts. **Scotch thistle** is a biennial with spiny-winged stems that can grow to 10 feet tall. The entire plant is covered in felt-like hairs, giving it a silvery appearance. Leaves are large with the basal leaves reaching 2 feet long. Flowerheads are up to 2-inches wide and are covered in spines. **Bull thistle** is a biennial, with spiny-winged stems growing to 5+ feet and covered in stiff hairs. Leaves lack white marbling. Purple flowerheads are up to 2 inches wide.

Impact: Species form dense stands in pastures and rangelands, reducing forage for livestock and wildlife and creating impenetrable thickets. Ingestion of large quantities of milk thistle by cattle causes nitrate poisoning, which can be lethal.

Control: Digging before flowers set seed can effectively control these thistles. Mowing before flowers open can prevent seed production but does not reduce infestations. Selective herbicides can be used to treat larger infestations. Goats will graze Scotch and bull thistle.

milk thistle - Class A noxious weed



Scotch thistle - Class B noxious weed



Sue Winterowd

Sue Winterowd

Spokane County NWCB



bull thistle - Class C noxious weed



Have you seen these noxious weeds?

Please let us know!

kudzu



Only found once before in Washington, eradication is required of this Class A noxious weed. Kudzu is a perennial vine with 3-parted, oval to heart-shaped leaves.

Malta starthistle



Bud Harwick

This Class B noxious weed is a new noxious weed that looks very similar to yellow starthistle. One trait that sets it apart is its spined-tipped bracts at the base of the flowerhead - the spines are typically purplish-brown and about 1/2 inch long.

perennial pepperweed



This Class B perennial, widespread in eastern WA, is a newer invader of saltwater shorelines and brackish marshes in western WA. Plants have small white flowers with 4 petals and are clustered at branch tips. Leaves are waxy, alternate and can have a whitish midvein.

ricefield bulrush

Joe DiTomaso UC, Davis



Ben Peterson, King County



This Class A perennial is found in wetlands and areas with moist soils, like pond edges and ditches. It has stiff triangular stems that grow 2 to 3 feet tall. The inflorescence is a cluster of cone-shaped flowers at the top of the stem with a reflexed leaf (bract) under the clusters. This plant has recently been found in a few western WA counties.

Please visit our website for more information about these and other noxious weeds in Washington state.

***Noxious weed listings may change, please check our website www.nwcb.wa.gov.**

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**For information on biological control, please contact:
Integrated Weed Control Project, WSU Extension at
253-445-4657; <http://invasives.wsu.edu>**

**Washington State Noxious Weed Control Board
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