

# Noxious Weeds That Harm Washington State

## Eastern WA Field Guide



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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 the native plants elk eat by 90%.

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.

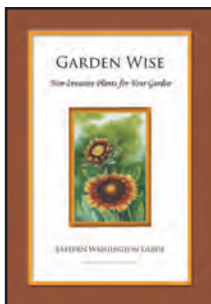
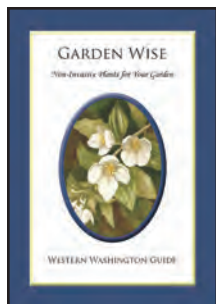
Class A noxious weeds are the ones you are least likely to see – but the ones that are most important to report. If you see a plant you think might be a Class A noxious weed, please report it to your County Weed Board or to the State Noxious Weed Control Board. Note the exact location, and if possible, 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, when possible, reduce their occurrence where they are widespread and to prevent them from spreading to those parts of the state where they are uncommon or absent.

**Class C noxious weeds** are often already widespread in Washington. In some cases, county weed boards may require control, but more often they simply try to educate residents about why controlling them is a good idea. Often the county noxious weed programs work with landowners to develop a long-term control program incorporating all the tools of integrated pest management (IPM).

For a complete list of Washington State noxious weeds and additional information go to:  
[www.nwcb.wa.gov](http://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](http://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

# kochia

## *Kochia scoparia*

Identification: Kochia is a branching annual that grows up to 5 feet tall. Stems can be red-tinged later in the summer. Its leaves are narrow with hairy edges and undersides. Tiny flowers bloom along the stems in clusters at leaf bases, producing thousands of seeds per plant. Old plants can spread seed by breaking at the base and tumbling around.

Impact: Kochia is a crop pest and can reduce yields as it competes with desirable plants for resources. Kochia spreads readily through its high seed production and establishes in pastures, rangelands, roadsides, ditch banks and other disturbed areas.

Control: Pull or till plants prior to seed production. Establish desirable plants to provide competition. Several herbicides can be effective; treatment of young seedlings is often more effective. Rotating herbicides may be needed to avoid the development of herbicide resistance.

Leslie J. Mehrhoff, U of Connecticut, Bugwood.org



Sue Winterowd, SCNWCB



Sue Winterowd, SCNWCB



Sue Winterowd, Stevens County NWCB



## Class B Noxious Weed

# leafy & myrtle spurge

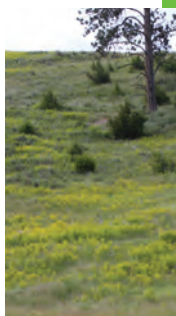
*Euphorbia esula* and *E. myrsinites*

Identification: **Leafy spurge** is a perennial, typically 1-3 feet tall, with a single stem that branches near the top of the plant. Leaves are narrow and about 3 inches long. Flowers are inconspicuous, but flower bracts are yellow-green and heart-shaped. **Myrtle spurge**, is a low-growing, sprawling plant that is only 4-6 inches tall but can grow 18 inches long. Fleshy leaves are arranged in a spiral pattern around the stem. Both species are bluish-green and contain a toxic, milky sap.

Impact: Both spurge species are escaped ornamentals that can invade and quickly overwhelm native plants in dry rangelands. Leafy spurge is more widespread and damaging than myrtle spurge. **The latex sap of both plants can cause severe blistering and temporary blindness if it comes in contact with the eye.**

Control: For small infestations, hand-pull or dig up plants. Wear gloves. Selective herbicides can provide control but re-treatment may be necessary. Goats and sheep will eat leafy spurge, and there are several effective biocontrol insects. A combination of control strategies is best.

## leafy spurge

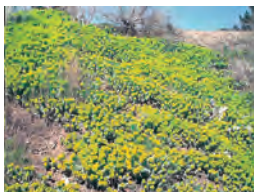


Sue Winterowd,  
Stevens County NWCB



## myrtle spurge

Sue Winterowd



# 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.

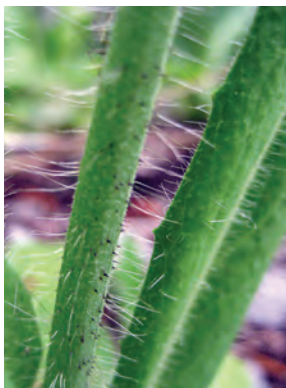
Impact: Like other non-native, invasive hawkweeds, orange hawkweed is an aggressive competitor that overwhelms pasture and rangeland plant species, and reduces forage for livestock and wildlife. Infestations can become extremely dense, with the basal leaves forming a thick carpet.

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

# Dalmatian & yellow toadflax

## *Linaria dalmatica* & *L. vulgaris*

Identification: **Dalmatian toadflax** is a showy perennial that ranges from 2-4 feet tall. The light green leaves are waxy, heart-shaped and clasp the stem. **Yellow toadflax** ranges from 2-3 feet tall. It has soft, long, narrow, pale green leaves that also clasp the stem. Both species have bright yellow flowers resembling those of snapdragons, with an orange or purplish throat and long spur.

Impact: Both species are highly competitive, have extensive root systems and are prolific seed producers. A mature Dalmatian toadflax may produce up to 500,000 seeds that can remain viable for 10 years. They spread along roadsides and colonize pastures, rangeland, and natural areas, where they displace native and desirable species.

Control: Both species are difficult to control. Hand-pulling can be effective on small infestations and can provide eradication if done consistently for 5-6 years. Selective herbicides can also provide control if applied in the spring or fall. Biocontrol agents can provide considerable control on large infestations.

## Dalmatian toadflax - Class B noxious weed



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Bugwood.org



Eric Coombs, ODA,  
Bugwood.org

## yellow toadflax - Class C noxious weed



Wendy VanDyk Evans, Bugwood.org

# puncturevine

## *Tribulus terrestris*

Description: Puncturevine, also known as goathead, is a low-growing annual that grows from a central taproot and sprawls along the ground. Leaves are oppositely arranged on the stems and are divided into oval-shaped leaflets. Flowers are small, 5-petaled, and yellow. The fruit is a distinctive woody bur with very sharp, rigid spines resembling a goat head.

Impact: The spines of the fruit are so sharp and rigid they puncture bicycle tires and shoe soles. Because it grows along roadsides, it is the bane of bicyclists. Puncturevine is inedible to livestock, and the spines can injure the mouths, stomach, and intestines of grazing animals.

Control: Hand-pulling can provide good control if done prior to seed formation. If done after seed set, pick up any loose seeds (wear gloves!) to prevent re-infestation. Selective herbicides can also provide effective control. Biocontrols are also available.



Rich Old, [www.xidservices.com](http://www.xidservices.com)



# rush skeletonweed

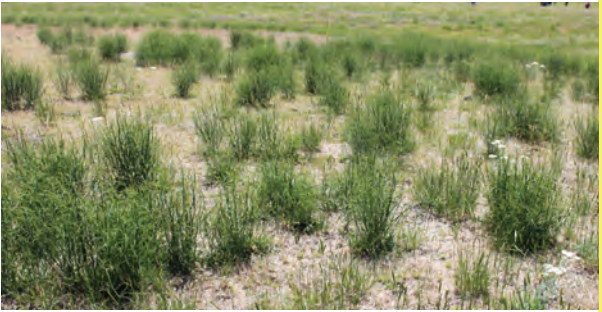
## *Chondrilla juncea*

Description: Rush skeletonweed is a perennial that can grow up to 4 feet tall and has a taproot that can grow 7 feet deep. Nearly all leaves are basal and green in the spring but die as the stem starts to grow. Each rosette produces a single stem with coarse, downward-pointing brown hairs at the base and numerous branches above. Flowers are small and yellow and are followed by dandelion-like puffballs.

Impact: Rush skeletonweed is highly invasive in both rangeland and cropland. It spreads along roadsides and once it establishes in croplands, it is spread through cultivation. It outcompetes beneficial or crop plants, and the latex sap gums up harvesting machinery.

Control: Hand-pulling or tilling is not recommended because root fragments can increase the infestation size. Selective herbicides can provide control, and biocontrols (a mite, a midge, and a rust that attack this plant) are available and can provide effective control on large infestations.





Class B Noxious Weed

# 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.

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.





Class B 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. Hawkweed can have leaves at the base of the plant and/or stem leaves. Leaves may have smooth or toothed edges.

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](http://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](http://www.xidservices.com)

## Class B Noxious Weeds

# yellow starthistle

## *Centaurea solstitialis*

Identification: Yellow starthistle is a winter annual or biennial that grows up to 3 feet tall. Young plants start as a basal rosette with lobed leaves that resemble dandelion leaves. Stem leaves are alternate, and both leaves and stem are covered with fine, woolly hairs giving the plant a grayish tinge. The knapweed-like yellow flowers have long, yellowish spines at the base.

Impact: Yellow starthistle is an aggressive invader that can colonize nearly all semi-arid rangeland, where it rapidly displaces native vegetation and desirable forage plants. It causes chewing disease in horses, which is fatal. It is also a contaminant in seed alfalfa, clover, hay, and straw.

Control: Small infestations can be hand-pulled, especially when the plants are young. Selective herbicides are available that can provide effective control for larger infestations. Biocontrols (insects that attack this plant) are available and can help control large infestations by reducing viable seed production, since this species spreads only by seed.



# hoary cress & hairy whitetop

## *Cardaria draba* & *C. pubescens*

Identification: **Hoary cress** is a perennial that grows to 3 feet tall. Leaves are grayish-green and shaped like arrowheads. It forms dense flower clusters of tiny 4-petaled, white flowers. Fruits are 1/8-inch wide hollow globes, not covered in fuzzy hairs. **Hairy whitetop** is a deep-rooted perennial that reaches about 1.5 feet tall. It is similar in appearance but its fruits are even rounder and covered with fuzzy hairs.

Impact: While both species are prolific seed producers, they spread more aggressively by their extensive root networks. In moist or irrigated areas, they can form dense stands that outcompete native plants and are a threat to wheat and other crops.

Control: Intensive tilling, repeated regularly for 3-4 years, can provide control by killing the roots. Selective herbicides can also be effective. Repeated grazing by sheep or goats can prevent plants from going to seed. Caution should be taken to prevent new infestations when moving tillage equipment to new sites by removing any root fragments.



## hoary cress

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Klickitat County NWCB

Montana Noxious Weed Awareness and  
Education Program, MSU, Bugwood.org



## hairy whitetop

Rich Old, [www.xidservices.com](http://www.xidservices.com)



# hoary alyssum

*Berteroa incana*

Identification: Hoary alyssum is an annual or short-lived perennial. It has alternate, thin leaves that are about 1-2 inches long and about  $\frac{1}{4}$ - $\frac{1}{2}$  inch wide. The tall and wiry plant has clusters of small white flowers at the ends of stems. Each flower has 4 petals, each of which has a deep cleft down the middle, giving the appearance of 8 tiny petals.

Impact: Hoary alyssum is a growing problem in the northeastern part of the state. It spreads incredibly fast by seed and can outcompete native or beneficial plants, especially when the habitat is stressed. This plant is also poisonous to horses, whether green or dried in hay.

Control: Hand-pulling can be effective on smaller infestations if done for a period of years. Selective herbicides can provide control when applied before seed set. As with all noxious weed control, bare ground should be replanted with desirable species.





Sue Winterowd, Stevens County NWCB



# knotweeds

***Polygonum sachalinense*, *P. cuspidatum*,  
*P. x bohemicum*, and *P. polystachyum***

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



# 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. 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.



# white bryony

*Bryonia alba*

Identification: White bryony is a perennial herbaceous vine with climbing stems. The roots are large, thick, and light yellow. Its leaves have 3-5 lobes and look similar to that of a cucumber plant. Long, curling tendrils grow from where leaves attach to the stem. The greenish-white flowers are around a half inch across and are either male or female. Green berries mature to purple-black, each containing 3-6 seeds. **All parts of the plant are toxic.**

Impact: White bryony's vigorous growth forms dense mats that degrade wildlife habitat and outcompete native plants it is growing upon. It is commonly spread by birds and invades riparian areas and disturbed habitats.

Control: Wear protective clothing when controlling white bryony. Carefully digging up the roots can provide effective control. Foliar herbicides are difficult to selectively apply to this twining weed, although cut-stem treatments may give effective control while improving selectivity. Monitor locations for resprouts and seedlings.



Robin Kusske FCNWCB



Robin Kusske FCNWCB



Vic Reeve FCNWCB



Robin Kusske FCNWCB



## annual & common bugloss, blueweed

*Anchusa officinalis*, *A. arvensis*, *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](http://www.xidservices.com)

## bluweed



Fran Lucero



Sue Winterowd

## common bugloss



Sue Winterowd



Sue Winterowd



Fran Lucero

# indigobush

## *Amorpha fruticosa*

Identification: Indigobush is a shrubby plant or small shrubby tree that can grow up to 20 feet in height and twice as wide. Leaves are hairy and consist of 13-25 leaflets, each 1-2 inches long. Flowers are dull purple spikes at the ends of branches, and are about  $\frac{1}{4}$  inch long. Indigobush grows in prairies, road shoulders, and along rivers and streams. It is particularly problematic along the Snake and Columbia Rivers.

Impact: Indigobush forms nearly impenetrable thickets along riverbanks, where it displaces native species such as a rare species of yellowcress in southwestern Washington. It also reduces wildlife habitat. Because it fixes nitrogen, indigobush can thrive on sandy gravel where few other plants can survive.

Control: One reason indigobush is difficult to control is because it resprouts vigorously from cut or broken stems. Selective herbicides applied to freshly cut or foliage can provide effective control.



Class B Noxious Weed

# purple loosestrife

## *Lythrum salicaria*

Identification: Purple loosestrife is a long-lived perennial, 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 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

# Invasive sages

*Salvia sclarea*, *S. pratensis*, *S. aethiopis*.

Description: **Clary sage** is a tap-rooted biennial or perennial herb that grows 6 feet tall. It has hairy, egg-shaped leaves and a strong sage odor. Flowers are arranged in spikes, have petal-like bracts right below the flowers, and may be white, pink, or purple. **Meadow clary** is a fibrous-rooted perennial, 1-2 feet tall. It has long, pointed leaves and a single flowering stem with blue to violet flowers. **Mediterranean sage** is a biennial or short-lived perennial up to 3 feet tall. It is covered with dense, felt-like hair, giving it a silver-green appearance. Flowering stems have many branches that bear small, white flowers at the tips.

Impact: These invasive sages are particularly problematic in eastern Washington. They invade pastures, rangeland, and meadows, where they reduce forage quality and crowd out native plants. Mediterranean sage also invades alfalfa and grain crops.

Control: Hand-pull or dig up plants and dispose of them, being careful to include the roots. Selective herbicides can effectively control these sages.



## clary sage



Sue Winterowd

Sue Winterowd

## meadow clary



Larry Hudson

Larry Hudson OCNWCB

## Mediterranean sage



K. George Beck and James Sebastian, Colorado State University,  
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Lloyd Andres, USDA Agricultural Research  
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# common crupina

## *Crupina vulgaris*

Identification: Common crupina is a winter annual that grows 1-3 feet tall. Alternately arranged leaves are finely divided into lace-like leaflets, with short stiff hairs. Flowers are lavender-pink and are ½ inch long. Petal tips partially protrude through a whorl of bracts. Each plant can have as many as 40 flower heads.

Impact: A prolific seed producer, it forms dense stands that displace native plants and desirable forage species. Livestock and wildlife do not eat mature plants due to the short, stiff, spine-like hairs covering the leaves and stems. Common crupina is also a federally listed noxious weed.

Control: Hand-pulling can be effective, if done several times during the growing season. Selective herbicides can also provide good control, but timing is crucial.





PPQ Archive, USDA APHIS PPQ, Bugwood.org



Class A Noxious Weed

# flowering rush

## *Butomus umbellatus*

Identification: Flowering rush is a freshwater perennial, which can grow either as a submersed or emergent plant. 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 and can reach up to 3 feet above the water surface. Each flower stalk bears a single cluster of white to pink flowers at the tip, arranged like umbrella spokes.

Impact: Flowering rush rapidly colonizes wetlands, lake shorelines, and slow-moving rivers. 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 control board. For small infestations it may be effective to cut below water surface several times during the summer months. Isolated plants can be dug up and disposed of, but be sure to include all rhizomes. Herbicides labeled for aquatic use are also available, but a special permit is required.



Ben Legler



Tim Miller



Ben Legler



Ben Legler



Laurel Baldwin WCNWCB

# houndstongue

## *Cynoglossum officinale*

Description: Houndstongue is a biennial or short-lived perennial that can grow to 4 feet tall. Leaves are covered with rough hairs. The lower leaves are 4-12 inches long and  $\frac{3}{4}$ -inch wide. Upper leaves are smaller but lack stems. Flowers are dull, reddish-purple at the end of upper stems, blooming from May until frost.

Impact: Houndstongue is poisonous to livestock, and they will usually avoid eating it. Horses are especially at risk. The seed hulls are covered in tiny spines, giving them a Velcro-like ability to cling to clothing and the hair or fur of animals, allowing this noxious weed to easily spread. Contact with the plant has been known to cause dermatitis in people. Burred seeds are also an irritant to cattle, and infestations reduce the marketability of rangeland for livestock and recreational uses.

Control: Hand-pull or dig up and dispose before it produces seed. Mowing or clipping flowering stems before they produce seed can also help to reduce infestations. Selective herbicides can be effective. Re-seed problem areas with fast growing grasses, and do not overgraze.

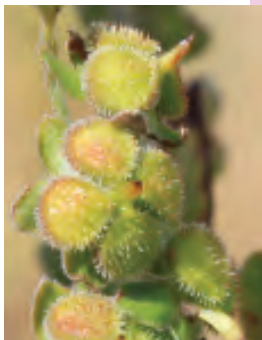
Sue Bird, Yakima County NWCB



Spokane County NWCB



Sue Winterrowd



# Russian knapweed

## *Acroptilon repens*

Description: Russian knapweed is a bushy perennial, growing to 3 feet tall and forming dense colonies. Stems of young plants are whitish and woolly, but then turn dark brown to black. Leaves are blue-green, and its creeping roots are black. Basal leaves are deeply notched, and stem leaves have toothed edges. The pinkish-to-purple flowerheads are pineapple-shaped and grow singly on the ends of the stems.

Impact: With its vigorous, spreading root system, Russian knapweed forms extremely dense monocultures that quickly crowd out native plants.

Control: Tilling is not recommended, as root fragmentation can cause new infestations. Depending on the moisture regime, nitrogen fertilizer applied in conjunction with an herbicide may significantly improve the competitiveness of residual grasses. Re-seed with competitive species after herbicide treatment. Improved grazing management will also aid the efficacy of control efforts.





Sue Winterowd



Sue Winterowd



Class B Noxious Weed

# knapweeds: spotted, diffuse, & meadow

*Centaurea stoebe*, *C. diffusa*, & *C. jacea* x *nigra*

Identification: These members of the thistle family range from 2-5 feet tall, are spineless, and bear flowerheads with showy petals 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



# saltcedar

## *Tamarix ramosissima*

Description: Saltcedar is a deciduous shrub or small tree that grows 5-20 feet tall. It has numerous slender branches, and the leaves are small and scale-like, resembling cedar. Pale pink flower spikes cluster at the branch tips from late spring through summer.

Impact: Saltcedar rapidly forms monotypic stands in riparian areas of arid lands. It replaces willows, cottonwoods and other native riparian species that provide wildlife habitat. Stems and leaves secrete salt, which forms a crust above and below ground and prevents other plants from growing. This tree also absorbs an enormous amount of water - up to 200 gallons per day - further stressing native vegetation. Roots may extend 150 feet or more in search of water.

Control: Saltcedar can be difficult to control because of its ability to resprout from roots. Effective control efforts utilize both mechanical and chemical methods. There has been some research on insects that may be used as biocontrol agents, although none is currently available in Washington.



Leslie J. Mehrhoff, U of Connecticut, Bugwood.org



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

# thistles: musk, Scotch & bull

*Carduus nutans*, *Onopordum acanthium*  
& *Cirsium vulgare*

Description: These thistles are robust biennials with spiny “winged” stems. **Musk thistle**, also called nodding thistle, may grow 6 - 7 feet tall. Leaves are alternate, spiny, and deeply lobed. Flowerheads are very distinctive: reddish-purple pincushion-like flowers are surrounded by broad, purplish-green bracts. **Scotch thistle** can grow to 10 feet tall. The entire plant is covered in woolly hairs, giving it a silvery appearance. Leaves are long and wide, with basal leaves up to 2 feet long. Flowerheads are up to 2 inches wide and are spiny. **Bull thistle** is a biennial, with stems growing to 5+ feet, and covered in stiff hairs. Purple flowerheads are up to 2 inches wide.

Impact: Like other invasive thistles, these thistles infest pastures, meadows, and fields , reducing forage for livestock and wildlife and creating impenetrable thickets.

Control: Hand-pulling or digging plants prior to flowering throughout the growing season can provide effective control. Biocontrols are also available and can do an impressive job eliminating seed production. Selective herbicides are also effective.

## **musk thistle - Class B noxious weed**



## **Scotch thistle - Class B noxious weed**



Sue Winterowd

Spokane County NWCB

Sue Winterowd

## **bull thistle - Class C noxious weed**



# Have you seen these noxious weeds?

## spurge flax



Spurge flax is a slender, wiry plant that can grow up to 2 feet and has small, narrow leaves. This Class A noxious weed can be easily spread and hard to find among other plants.

## wild four o'clock



This Class A noxious weed is a perennial that grows 3-4 feet tall, has opposite heart-shaped leaves, and purple-pink flowers. It invades a variety of habitats including riverbeds, rangelands, and cultivated fields.

## oriental clematis



This yellow-flowered clematis is a Class A noxious weed that invades riverbanks, roadsides, irrigation canals and hillsides. Its vines grow up into trees and blanket the ground.

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



# Production Credits

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For more information call (360) 725-5764 or e-mail [noxiousweeds@agr.wa.gov](mailto:noxiousweeds@agr.wa.gov)

**\*Noxious weed listings may change, please check our website [www.nwcb.wa.gov](http://www.nwcb.wa.gov).**

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