Field Guide to Weeds of the Willamette Valley



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Photo credits

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Acknowledgements

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Cover photo of bull thistle by LaWatha Wisehart.

Report plants with this symbol by calling 1-866-INVADER or visiting www.weedmapper.org



R

M Plants with this symbol are toxic to humans.

How to use this guide

Weeds that are imminent "new invaders" as well as those that are already known to occur in the area are included. Plants are arranged by type and then by color. The purpose of this guide is to help land management agency field staff and private landowners identify non-native invasive plants in the Willamette Valley (see map below) and prevent their spread.



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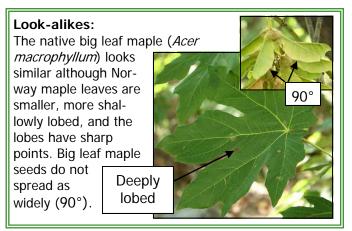
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Norway maple Acer platanoides

Description: Tree with shallowly-grooved gray bark generally growing 40-60 ft (12-18 m) tall. Leaves are oppositely arranged and palmately lobed (5-7 sharply acuminate lobes) with large but few teeth. The leaves are 4-7 in (10-18 cm) wide and usually dark green (sometimes red) turning yellow in the fall. The leaf petioles exude a white sap when broken. Yellow-green flowers appear in April and May and produce seeds in widelyspreading pairs (180°).

Where found: Escaped ornamental plant found in forests, open disturbed areas, roadsides, vacant lots, and yards.





Tree of Heaven

Ailanthus altissima

Description: Tree with smooth grey bark growing up to 80 ft (24 m) tall and 3 ft (1 m) in diameter. Leaves are compound, ranging from 1-4 ft (3-12 dm) long with up to 30 leaflets. Leaflet edges are smooth, not toothed or serrated. Clusters of twisted papery seeds can be found on trees through winter. All parts of the tree have a strong, unpleasant odor. New shoots are usually visible sprouting from the roots of adult trees.

Where found: Fields, roadsides, fencerows, woodland edges, urban areas and forest openings.

Tree of Heaven spreads rapidly to create dense thickets, obstructing road visibility and outcompeting native species. This tree is allelopathic, producing substances toxic to neighboring plants.

Look-alikes:

Black walnut (*Juglans nigra*) looks similar but can be distinguished by its strong tannic aroma emitted from crushed leaves. Sumac (*Rhus* sp.) also appears similar but has serrated leaves and a small, red, fuzzy drupe (fruit) that persists through the winter.

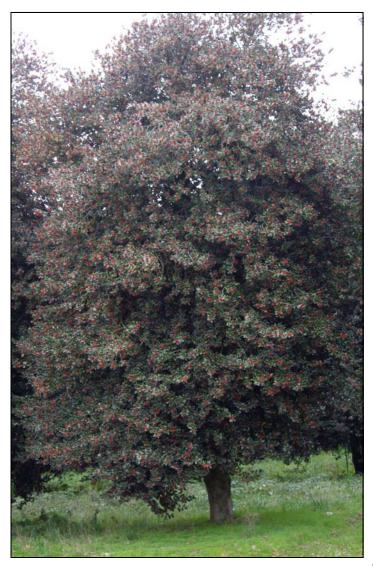


English holly Ilex aquifolium

Description: Evergreen tree or shrub growing 15-50 ft (5-15 m) tall. Leaves are thick, glossy, dark green and wavy, 1-3 in (2.5-8 cm) long, and alternately arranged on stems. Sharp, stout, spines occur along leaf edges. The flowers are small, whitish, and sweetly scented. Clusters of red, yellow or orange berries can be found on female trees in winter.

Where found: English holly is an ornamental plant that has escaped to invade a variety of habitat types, especially woodlands and forests.







English laurel

Description: Evergreen tree or shrub, up to 20 ft (6 m) tall. Leaves are leathery with a glossy sheen and slightly toothed edges (3-7 in/7.5-18 cm long). Fragrant white flowers are borne in elon-gated clusters. Fruits are fleshy and black with a large pit.

English laurel is highly toxic if ingested. Poisonous parts include, twigs, berries and seeds.

Portugal laurel

Description: Evergreen tree or shrub growing 10-50 ft (3-15 m) tall. Plant is densely branched with alternately arranged leaves 4.5 in (12 cm) long. The leaves are glossy and dark green and-toothed with wavy margins. Small, fragrant, white flowers produced in elongated clusters give rise to dark purple-black fruits.

Where found: Both trees are landscape plants that have escaped to invade diverse natural areas, especially conifer forests.

English laurel



Portugal laurel





Spurge laurel

Daphne laureola

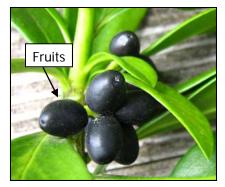
Description: Evergreen shrub growing 2-4 ft (.6-1.2 m) tall, with dark green, glossy, 4 in (10 cm) long oblong leaves that are spirally arranged and clustered at shoot tips. Plants bloom from March to May. Honey-scented yellow-green bell-shaped flowers grow in clusters between leaves near the top of stems. Fruits are green egg-shaped berries (<0.5 in/1 cm long) that ripen to black.

Where found: Spurge laurel is an escaped landscape plant that is found invading oak woodlands and shady places.

This recent invader blocks out sunlight, outcompetes native plants and alters soil chemistry.

Seeds are spread by birds.

Leaves, bark and fruit are toxic to humans and pets.





Scotch broom Cytisus scoparius

Description: Evergreen shrub growing 3-10 ft (1-3 m) tall. Stems are distinctly 5-ridged with leaves that are generally 3-parted and may be slightly hairy below, although stems may be leafless for much of the year. Pea-like flowers (1 in/2.5 cm long) varying from yellow to red occur singly or paired in leaf axils and are not fragrant. Fruit pods are flattened and have hairs mostly at the seam.

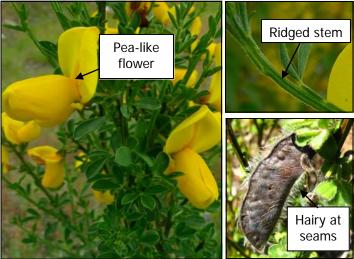
Invasive brooms in the region may be distinguished by their flowering times. French broom blooms before Scotch broom and Spanish broom flowers late in summer when Scotch broom is nearly done flowering.



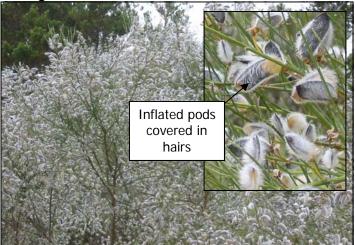
Portuguese broom

Description: Evergreen shrub growing 7-10 ft (2-3 m) tall. Stems are 8 to 10-ridged and sparsely covered in 1 to 3-parted leaves. Flowers are pale yellow, not fragrant, and occur singly or paired in leaf axils. Seed pods are inflated and covered in hairs.

Scotch broom



Portuguese broom



French broom Genista monspessulana

Description: Evergreen shrub growing 3-8 ft (1-2.5 m) tall. Stems are 8 to 10-ridged and covered in silvery hairs. Leaves are three parted, leaflets are waxy above and slightly hairy below. Flowers (< 1/2 in/1.5 cm) are yellow, not fragrant, and clustered in groups of 4 to 10 at the ends of short branchlets. Seed pods are slightly flattened and hairy all over.

Spanish broom

Spartium junceum

Deciduous shrub growing 3-13 ft (1-4 m) tall. The stems are smooth (no ridges) and nearly leafless. Fragrant yellow flowers are clustered at the stem tips. Pods are flattened and finely hairy.

Where found: Brooms are found in prairies, savannas, woodlands, pastures, vacant lands, roadsides, etc.

Seeds are toxic and plants form dense stands that replace native vegetation, impede wildlife movement and may serve as potential fire hazards.

Spanish broom flowers @JMR -The Nature Conservancy, French broom fruits @MT -The Nature Conservancy

French broom



Spanish broom



Armenian blackberry

Rubus armeniacus Also mistakenly identified as Himalayan blackberry (*Rubus discolor*)

Description: Perennial evergreen shrub composed of thick arching stems with large thorns. Leaves are large, rounded to oblong, toothed and usually in groups of five. Clusters of small white to pink flowers produce green fruits that ripen to red then black in late summer.

Where found: Pastures, riparian areas, vacant lands, open areas, tree farms and roadsides.

Look-alikes:

Above: The native trailing blackberry (*Rubus ursinus*) is smaller, has three leaflets, and grows along the ground.

Below: The non-native cutleaf blackberry (*Rubus laciniatus*) has deeply cut leaves.











Butterfly bush Buddleja davidii

Description: Perennial shrub growing 10-15 ft (3-5 m) tall with arching branches. The stems and leaves are typically hairy. The leaves are narrow, opposite, and green to blue-gray with toothed edges. Plants bloom from mid to late summer with small, purple flowers.

Where found: Disturbed areas, natural forests, riparian zones, urban places, riparian areas, and wetlands.

Butterfly bush is a landscape plant that has escaped from cultivation. This plant crowds out native species, alters soil nutrient concentrations, and can cause erosion along rivers.

Report escaped populations outside urban areas or gardens.





Japanese knotweed

Polygonum cuspidatum Also known as *Fallopia japonica*

Description: Shrub-like herbaceous perennial growing in clumps 8 ft (2.4 m) tall. Stems are hollow and reddish, bearing 4-6 in (10-15 cm) long oval leaves with flat bases. Small white to green flowers are borne in clusters that droop from the leaf axils.

Giant knotweed

Polygonum sachalinense Also known as *Fallopia sachalinensis*

Description: Shrub-like herbaceous perennial growing in mounds 12 ft (3.7 m) tall. Plants appear similar to Japanese knotweed but are taller and have larger leaves (up to 1 ft / 3 dm) long that are more heart-shaped.

Look-alike: Bohemian knotweed (*Fallopia xbohemica*) is a hybrid between giant and Japanese knotweed and has leaves that are intermediate between Japanese and giant knotweeds.



Japanese knotweed



Giant knotweed



R Himalayan knotweed

Polygonum polystachyum

Description: Herbaceous perennial growing 6 ft (1.8 m) tall with red stems and leaf stalks. Leaves are oblong, lance-shaped and 4-8 in (10-20 cm) long. Brown persistent sheaths are present at the base of leaf stalks. The white to pink flowers occur in loose, branched clusters.

Where found: Knotweeds are escaped ornamental plants which have been found along trails, roadsides, and riparian areas.

Knotweeds are able to spread by root and stem fragments. They form dense monocultures that shade out other vegetation and inhibit tree establishment along streams. All parts of the plants may be mildly toxic to livestock.

Himalayan knotweed





Old man's beard

Clematis vitalba Also known as traveler's joy

Description: Perennial, woody, deciduous vine. Leaves are opposite, and compound with five leaflets. Plants bloom in summer, producing small, greenish white, perfect flowers (stamens and pistils in each flower), found in clusters in upper leaf axils. Seed heads remain visible in winter.

Where found: Roadsides, river banks, gardens, disturbed forest, forest edges, and waste areas, often growing up and overtaking trees. May be moderately toxic to livestock.

Report if found outside the Portland metro area.

Look-alike: Western white clematis (*Clematis ligusticifolia*) is native and looks very similar to old man's beard. Western white clematis has imperfect flowers (male or female only), the leaves on its flowering stems are generally toothed (smooth on old man's beard), and seed heads don't persist through winter. However, the best characteristic for distinction is growth habit: the native Western white clematis does not demonstrate the aggressive growth that old man's beard does.









English and Irish Ivy

Hedera helix and H. hibernica

Description: English and Irish ivy look nearly identical. They are perennial evergreen vines with long, trailing, stems. Leaves are alternately arranged on the vining stems and have a waxy coating. Each dark green leaf has light colored veins and 3-5 lobes. Plants bloom only when light and nutrients are optimal. Clumps of green or white flowers produce black berry-like fruits.

Where found: English and Irish ivy can creep along the ground or climb trees and shrubs in open forests, forest edges, and fields.

Both species are landscape plants that have escaped to native habitats where they create large monocultures. The plants may release chemicals from their roots that retard the growth of other species. Ivy mulch can be used to suppress the growth of ground-covering vegetation. Ivy seeds are spread by birds but the foliage may be mildly toxic to pets.



Reed canarygrass

Phalaris arundinacea

Description: Perennial grass growing 3-6 ft (0.9-1.8 m) tall. Stems are hollow, up to 0.5 in (1.5 cm) wide, with reddish coloring near the top. Leaf blades are wide, flat, and hairless, and come off the stem at a 45 degree angle. The flowers are formed in large, compact to open, spikes. Reed canarygrass may be distinguished from Harding grass by having more open flower spikes and distinct rhizomes (root stems).

Where found: Wetlands, roadsides, ditches and streams.

Harding grass

Phalaris aquatica

Description: Perennial grass growing 3-4 ft tall (1-1.3 m) with grayish to bluish green, hairless, leaves. Plants often form dense clumps. Flowering heads are very dense, spike-like and usually 2-5 in (5-13 cm) long.

Where found: Wetlands, pastures, roadsides, ditches and streams.

Reed canarygrass



Harding grass



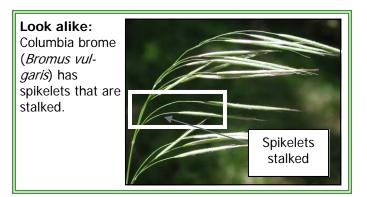


False brome Brachypodium sylvaticum

Description: Perennial bunchgrass growing in short clumps 1.6-2.3 ft (5-7 dm) tall. Leaves are broad, flat, bright yellow-green and have hairs along the edges. Leaf sheaths are open to the base. Flowers are in spikes and the spikelets are not stalked. Flower spikes droop noticeably.

Where found: Found along roadsides and in forests, pastures and prairies.

False brome may prevent tree seedlings from establishing, has low forage value, and replaces threatened and endangered species.







Bull thistle

Description: Herbaceous biennial that grows 1-7 ft (0.3-2 m) tall. Branching, somewhat woolly stems are covered in green to brown spines and hairs. Leaves are lobed, with prickles on the upper side and cottony hairs underneath. Plants bloom July-September. Dark pink to purple flowers are borne in large heads 1.5-2 in (4-5 cm) wide subtended by tightly-spaced spine-tipped bracts.

Where found: Disturbed sites, pastures, rangeland, and recently logged sites.

Canada thistle

Cirsium arvense

Description: Herbaceous perennial that grows 1.5-7 ft (0.5-2 m) tall. Leaves are wavy-margined to lobed with yellowish prickles along leaf edges. Leaves may be somewhat woolly underneath. Plants bloom in midsummer with clusters of small purple flower heads. Canada thistle is the only invasive thistle that is rhizomatous, forming dense stands that are difficult to eradicate.

Where found: Cultivated fields, rangeland, forests, roadsides, wetlands and waste areas.



Milkthistle Silybum marianum

Description: Herbaceous annual or biennial that grows 1.5-8 ft (0.5 to 2.5 m) tall. Stems are branching with large, broad, clasping leaves. Leaf edges and stems have spines. White marbling is noticeable along the veins of leaves. Plants bloom April-October producing one large, pink-purple, spiny flower per stem.

Where found: Roadsides, ditches, fencerows, waste and disturbed areas, and grazed lands.







Italian thistle

Description: Herbaceous annual that grows 8 in-6.5 ft (2-20 dm) tall. Stems are spiny-winged with oblong or lance-shaped leaves up to 6 in (15 cm) long and 3 in (8 cm) wide that are divided into spiny-toothed segments. Cobwebby hairs cover the stem and underside of leaves. Plants bloom in late spring producing 1-5 pink cylindrical flower heads with hairy bracts, born in clusters at branch tips.

Where found: Dry, open areas, pastures, rangelands, roadsides and waste areas.







Readow knapweed

Centaurea debeauxii Also known as *Centaurea pratensis*

Description: Herbaceous perennial that grows up to 3.5 ft (11 dm) tall. Plants consist of one to several upright branched stems extending from a woody root. Leaves are usually larger at the base of the plant compared to higher up the stem. Plants bloom June to September, producing heads of bright pink to purple flowers with fringed bracts. Unlike other knapweeds the bracts are not spine-tipped and meadow knapweed flowers are generally larger.



Meadow knapweed



L. Flowering head, M. fringed bracts of flower head, R. basal rosette. Below: meadow knapweed in bloom.





Diffuse knapweed

Centaurea diffusa

Description: Herbaceous annual or perennial that grows 0.7-3.3 ft (0.2-1.0 m) tall. The greengray leaves are divided into lobes. The flowers are white, rose or purple and have bracts covered with "comb-like" spines.

Spotted knapweed

Centaurea stoebe ssp. *micranthos* Also known as *Centaurea maculosa*

Description: Herbaceous biennial or perennial that grows to 3 ft (1 m) tall. Plants are multistemmed with several stems arising from the crown. Blooms from midsummer to fall with purple flowers. Tips of flower head bracts are black, giving the heads a spotted appearance.

Diffuse knapweed L. plant, Top R. flower head, Below R. basal rosette.



Spotted knapweed L. plant, Top R. flower head, Below R. basal rosette.





Russian knapweed

Acroptilon repens

Description: Herbaceous perennial that grows 4 ft (1.2 m) tall. Plants form dense colonies and have erect branching stems. Lower leaves are deeply lobed, 2-4 in (5-10 cm) long; upper leaves are entire or toothed. Plants bloom from summer to fall producing one small, cone-shaped, flower-ing head with pink to lavender flowers at each branchlet tip. Bracts below the flower are rounded with papery margins.

Russian knapweed



Policeman's helmet

Impatiens glandulifera

Description: Herbaceous annual that grows 3-10 ft (1-3 m) tall. Stems and leaves are smooth and hairless. Stems grow upright, are easily broken, and have a purplish tinge. The leaves are oblong to egg-shaped and have serrated edges. The leaves are oppositely arranged or whorled. Flowers are solitary and white to pink or purple with five petals, two sepals, five fused stamens, and a flower shape that resembles a British policeman's helmet.

Where found: Riparian areas, moist forests, and roadsides.







Purple loosestrife

Lythrum salicaria

Description: Herbaceous perennial with stiff, four-sided stems, growing 6-10 ft (1.8-3 m) tall. Leaves are opposite or whorled, lance-shaped and stalkless with rounded to heart-shaped bases and smooth edges. Small magenta flowers with 5-7 petals are produced on tall, showy, flower spikes from July to September.

Where found: Moist or marshy areas and shorelines.

Look-alikes: (R) Rose spiraea (*Spiraea douglasii*) is a native shrub with round stems and toothed leaf tips. Flowers are tiny and lighter pink, appearing in dense clusters at top of plant.





(L) Fireweed (*Chamerion*

angustifolium) has round stems and longer leaves with a distinctive midvein. Flowers on stalks with four petals.

Long capsules split open to release fluffy white seeds.

(R) Cusick's checkermallow (*Sidalcea cusickii*) is native and has pale to medium-pink flowers in congested spikes. Leaves orbicular and palmately veined.







Paterson's curse

Echium plantagineum

Description: Herbaceous annual. Seeds germinate in late summer or early fall and the young plants over-winter as a basal rosette of leaves. In spring, plants produce erect, branched flowering stems 8 in-3 ft (2 dm-1 m) tall. Basal leaves are oval or elongated, 4-12 in (1-3 dm), while stem leaves are small and narrow. The stem and leaves are covered with small, stiff hairs. Flowers are bluish purple to pink or white, 0.75-1.25 in (2-3 cm) long and tubular, growing on one side of a coiled flower stalk.

Where found: Grasslands and pastures.





Hound's tongue

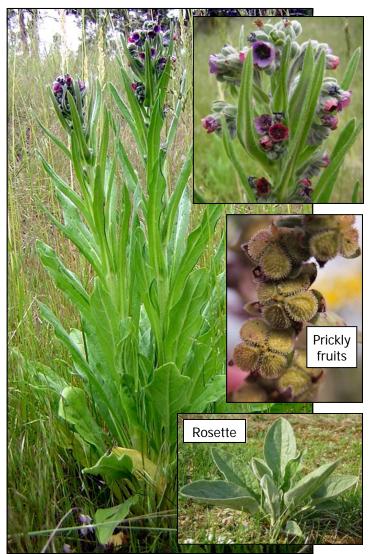
Description: Herbaceous biennial that grows 1-4 ft (3 dm-1.2 m) tall. Plants form rosettes in the first year and send up flowering stalks in the second year. Leaves are alternate, rough-hairy and 1-12 in (2.5-30 cm) long, 1-3 in (2.5-7.5 cm) wide. Plants bloom from June-August. Small reddish-purple flowers with five petals form at ends of outwardly drooping stems. Fruits are prickly nutlets arranged in fours.

Where found: Disturbed areas, forests, roadsides, meadows, rangeland and pastures.

Hound's tongue is very invasive and can significantly reduce forage for livestock. This plant is toxic to cattle and horses.

Look-alike: The native Pacific hound's tongue (*C. grande*) has much larger flowers that are usually blue (not reddish-maroon as with *C. officinale*) although they may fade to purple.





Evergreen bugloss Pentaglottis sempervirens

Description: Herbaceous perennial that grows to 3.3 ft (1 m). Stem and leaves covered in stiff hairs. Leaves are alternately arranged. Flowers are blue, 0.35 in (8-10 mm) across, and clustered at ends of stems. The fruits are ridged nutlets with a knob-like stalked base.

Where found: Moist soils on roadsides, open areas, riparian areas and forest understories.

Look-alike: The native Pacific hound's tongue has fewer hairs and they are smaller and softer, also, the white inner portion of the petals are larger compared to evergreen bugloss. (See photo in look-alike box on previous page).







Common teasel and Cutleaf teasel

Dipsacus fullonum and D. laciniatus

Description: Tap-rooted biennials growing to 6 ft (1.8 m) tall. Stem leaves are oppositely arranged, large, oblong and prickly. Cut-leaved teasel leaves are irregularly lobed while common teasel leaves have smooth or wavy margins. Basal leaves are similar to stem leaves and form rosettes that stay green most of year. Plants bloom from July to August with flowers on large oval heads, many to a plant. Flowers of cut-leaved teasel are white and common teasel flowers are lavender.

Where found: Both kinds of teasel are found in grasslands, roadsides and waste areas. Common teasel is frequently found in the Willamette Valley while cutleaf teasel is just beginning to invade the state.

Teasels form monocultures that can replace native plant communities and desirable forage and crop species.

Common teasel



Cutleaf teasel









Garlic mustard

Alliaria petiolata

Description: Herbaceous biennial. First year plants are clusters of 3-4 dark green, kidneyshaped, scallop-edged leaves rising 2-4 in (5-10 cm) high. In early spring, second-year plants produce 1-2 flowering stems 2-3.5 ft (6-10 cm) tall. Stem leaves are alternate, stalked, triangular to heart-shaped and coarsely toothed. Crushed leaves and stems smell like garlic. Small white flowers composed of four petals forming a cross are produced in button-like clusters.

Where found: Forest understory, forest edges, shaded roadsides, urban areas, riparian areas, flood plains, hiking trails and agricultural land.

Look-alikes:

Native saxifrage species (*Tellima grandiflora* and *Tolmiea menziesii*) can be distinguished from garlic mustard by long hairs on the leaf stems and by their greenish to pink flowers. The non-native money plant (*Lunaria annua*) also looks similar vegetatively, but has pink petals.











Giant hogweed

Description: Herbaceous perennial that grows 10-15 ft (3-5 m) tall. Stalk and flower head develop after two to four years, then the plant dies back. Stems are 2-4 in (5-10 cm) wide and hollow, with purple blotches and coarse hairs. Leaves are 3-5 ft (1-1.5 m) wide, compound and deeply incised. White flowers are produced on 2.5 ft (8 dm) wide umbrella-like flower heads.

Where found: Moist disturbed soils, roadsides, ditches, unmanaged yards and vacant lots.

Giant hogweed sap can cause blistering of skin, permanent scarring, and sensitivity to light.

Look-alike: The native cow parsnip (*Heracleum lanatum*) may grow in the same areas as giant hogweed, but cow parsnip is usually much shorter (<6 ft/1.8 m tall), has smaller flower heads (8-12 in/2-3 dm wide), and the hairs on the undersides of leaves are soft, wavy, and shiny, not coarse.







Shining geranium

Description: Herbaceous low-growing annual with red stems and shiny, green, obtusely lobed leaves with scattered hairs. The leaves become red and waxy at the end of summer. Small pink to purple flowers with five petals (<0.5 in/8-10 mm long) produce fruits with a long, straight, pointed beak.



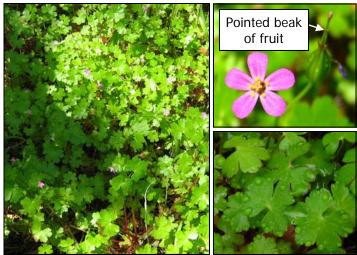
Herb Robert

Geranium robertianum

Description: Herbaceous low-growing winter or spring annual, biennial or perennial. The stems are often dark red and covered in white glandular hairs giving the plant a sticky or oily feel. Leaves are fern-like and light green, turning red in fall. Small pink to purple flowers with five petals (0.25-0.5 in/7-14 mm long) produce fruits with a long, straight, pointed beak. Plants give off a strong odor when crushed.

Where found: Both species are found in shady areas including forest understory, oak woodlands, riparian areas and roadsides.

Shining geranium



Herb Robert

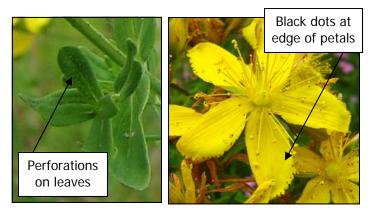


St. Johnswort *Hypericum perforatum* Also known as Klamath weed

Description: Herbaceous perennial that grows 1-3 ft (3-9 dm) tall. Stems are erect, many-branched, somewhat 2-ridged, rust-colored and woody at the base. Leaves are oppositely arranged on the stem, oblong, less than 1 in (2.5 cm) long and covered in transparent dots (perforations). Plants bloom from June to July. Flowers are yellow with occasional small black dots around the edges.

Where found: Pastures, rangeland, prairies, roadsides and other disturbed areas.

St. Johnswort is toxic to cattle, sheep and horses.





Common tansy Tanacetum vulgare

Description: Herbaceous perennial that grows 1-3 ft (3-9 dm) tall. Plants have stout, erect stems with dark green, fern-like (deeply divided) leaves. Plants bloom from July to August, producing button-like yellow flowers arranged in flattopped clusters at the top of the plant. Common tansy flower heads do not have ray flowers.

Where found: Roadsides, fence rows, pastures, stream banks and waste areas.

Tansy ragwort Senecio jacobaea

Description: Herbaceous biennial or short-lived perennial reaching 1.5–6 ft (4.5-18 dm) tall. Stems are erect and branched near the top. Leaves are dark green and deeply lobed. Plants bloom from midsummer to fall. Multiple yellow flower heads form at branch tips.

Where found: Pastures, clearcuts, roadsides, and other disturbed areas.

Leaves and stems are poisonous to livestock.

Common tansy





Tansy ragwort







Yellow starthistle

Centaurea solstitialis

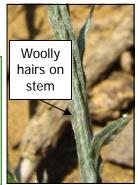
Description: Herbaceous winter annual growing 1.5-3 ft (4.5-9 dm) tall. Stems are rigid, winged, and many-branched. Both the stems and leaves are dull green and covered in woolly hairs. The basal leaves are deeply lobed and the stem leaves are narrowly oblong. Flower heads consist of yellow flowers and long, sharp spines.

Where found: Disturbed areas, roadsides and rangelands.

Yellow starthistle may deplete soil moisture in grasslands, reduce land value and recreational opportunities, displace native plants and decrease wildlife forage and native plant and animal diversity. This plant is poisonous to

livestock.

Look alike: Yellow starthistle looks very similar to Maltese starthistle (next page) which is also non-native. The spines on yellow starthistle are longer than on Maltese starthistle.







Maltese starthistle

Centaurea melitensis

Description: Winter annual growing up to 3 ft (1 m) tall. Stems are stiff and openly branched near or above the base or unbranched in small plants. Stem leaves are alternate, mostly straight and narrow to oblong. Leaf margins may be smooth, toothed, or wavy and leaf bases extend down the stems giving stems a winged appearance. Flowering usually occurs from April to June (at least one month before yellow starthistle blooms), producing heads of yellow flowers with spines shorter than those found on yellow starthistle.

Where found: Open, disturbed sites, grasslands, rangelands, open woodlands, fields, pastures, roadsides and waste places.

Maltese starthistle is toxic to horses.







Lesser celandine

Ranunculus ficaria

Description: Herbaceous perennial. Grows 4-12 in (1-3 dm) tall. Plants form a basal rosette of dark green, shiny, heart-shaped leaves then bloom from March to April. The flowers are yellow, generally have eight petals, and are borne singly on stalks rising above the leaves. Pale colored bulblets at stem bases appear at the end of the flowering period.

Where found: Moist disturbed areas, forested floodplains, shaded streambanks and some drier upland areas.

Look-alike: The native marsh marigold (*Caltha palus-tris*) looks similar but has glossy, rounded or kidney-shaped leaves and flowers on stalks that are 8 in (20.3

cm) high or taller. Marsh marigold does not have tubers or bulblets at the stem bases and it does not form a continuous carpet of growth like lesser celandine.











Sulphur cinquefoil

Potentilla recta

Description: Herbaceous perennial that grows 1-3 ft (3-9 dm) tall with one or more stems. The stems and leaves are covered with stiff hairs. Leaves are palmately compound with five to seven toothed leaflets. Flowers consist of five light yellow heart-shaped petals.

Where found: Meadows, pastures, open forest, roadsides, old fields and other disturbed areas.

Look-alike: The native slender cinquefoil (*Potentilla gracilis*) is shorter than sulphur cinquefoil and has white wooly hair on the undersurface of leaves. The undersurfaces of sulphur cinquefoil leaves are not covered in white woolly hairs.





Dalmatian toadflax

Linaria dalmatica

Description: Herbaceous perennial that grows 2-3 ft (6-9 dm) tall. The stem and leaves have a waxy coating The leaves are heart-shaped and clasp the stem at their bases. Plants bloom from summer to fall, producing bright yellow flowers that are 1 in (2.5 cm) long with orange markings and long spurs.

Where found: Rangelands, pastures, forests and rights-of-way.

Dalmatian toadflax out-competes desirable forage plants for moisture and nutrients.





Butter and eggs

Linaria vulgaris

Description: Herbaceous perennial. Grows 1-2 ft (3-6 dm) tall. Plants consist of multiple stems arising in clumps with simple, alternate, stalkless-leaves attached directly to the stem. The leaves are 1-2.5 in (2.5-6.5 cm) long, smooth, and pointed at both ends. The flowers are pale to bright yellow and "snapdragon-like" with a dull orange spot on the lower lip. Fifteen to 20 flowers are produced per stem.

Where found: Waste areas, pastures, roadsides, cultivated fields, meadows.

Moderately poisonous to livestock.











Yellow flag

Description: Aquatic perennial that grows 3-4 ft (1-1.5 m) tall. Large plant clumps are formed from lateral growth of rhizomes. Leaves are long, flattened and sword-like. Multiple yellow flowers are produced per stalk. The fruit capsules are large, 3-angled and up to 4 in (10 cm) long with disk-like seeds.

Where found: Riparian areas, open water features and irrigation ditches.

Flow in waterways including irrigation canals and flood control ditches can be severely restricted by this plant. All parts of the plant, especially the rhizomes, may be moderately to severely poisonous to livestock.

Look-alike: When not flowering, it may be difficult to distinguish between yellow flag and cattail (*Typha latifolia*). In summer, look for yellow flag fruits. At other times of the year look for the fan-shaped base of the yellow-flag plant which distinguishes it from cattail.





Fanshaped base



Nymphoides peltata

Description: Aquatic perennial. Yellow floatingheart is a waterlily-like plant that carpets the water surface with long-stalked heart-shaped leaves that have purple undersides. The flowers are yellow, 1 in (2.5 cm) in diameter with five fringed petals. Two to five flowers are produced on a stalk.

Where found: Slow moving rivers, lakes, reservoirs, and ponds.

Dense patches of yellow floatingheart exclude native species and create areas of low oxygen levels impacting fish and wildlife habitat, recreation and water quality.

Look alike: Spatterdock (*Nuphar polysepala*) is a perennial water-lily like plant that is native to the northwest. The yellow flowers of spatterdock are globe-like and the leaves are large and elephant-ear-shaped.

Fragrant water lily (*Nymphaea odorata*) is also non-native and has similar leaves but the showy flowers are white or pink.





Hieracium aurantiacum

Description: Herbaceous perennial. Grows to heights ranging from 8 in-2.3 ft (2-7 dm). The stems are usually leafless, stiff, and hairy. The basal leaves are hairy, lance shaped and up to 5 in (13 cm) long. Above-ground runners root at the tips creating dense mats of plants. Orange-red flowers are clustered at the top of a leafless stem. Black, glandular hairs cover the flower stalks and all parts of the plant exude a milky juice when cut.

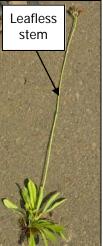
Where found: Meadows, gravel pits, forest openings, pastures, roadsides, and hayfields.

Orange hawkweed displaces native vegetation and can dominate pastures, lawns and roadsides. It is unpalatable to livestock.









How to get copies

A digital version of this guide is available on the Institute for Applied Ecology website: www.appliedeco.org

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