

Field Guide to Weeds of Eastern Oregon



Authors

Rachel Schwindt, Thomas N. Kaye and Lori Wisheart
Institute for Applied Ecology

Produced with cooperation and funding from
Oregon Bureau of Land Management

Photo credits

Photos by staff at Institute for Applied Ecology unless
otherwise noted.

Cover photo: Black henbane (*Hyoscyamus niger*)

Acknowledgments

Information contained in this guide was compiled from numerous sources including Flora of the Pacific Northwest (Hitchcock and Cronquist, 1973), Weeds of the West (Whitson et al., 2006), and Weeds of California (DiTomaso and Healy, 2007). We thank the BLM District Weed Coordinators and staff at Oregon Department of Agriculture for their comments and assistance during development of the guide.



Report plants with this symbol by calling

1-866-INVADER or visiting

www.oregoninvasiveshotline.org



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 in this book. Plants are arranged by type and then by color. The purpose of this guide is to help land managers and private landowners identify non-native invasive plants in Eastern Oregon (see map below) and prevent their spread.



Contents



Trees and shrubs

Tree of heaven	1
Scotch & Portuguese broom	3
Japanese & Giant knotweed	5
Himalayan blackberry	7
Saltcedar	9



Grasses

False brome	11
Medusahead rye	13
Ventenata & Cheatgrass	15



Forbs

Plumeless & Musk thistle	17
Scotch thistle	19
Canada & Bull thistle	21
Russian knapweed	23
Purple starthistle	25
Diffuse & Spotted knapweed	27
Meadow knapweed	29
Squarrose knapweed	31
Common crupina	33
Hound's tongue	35
Purple loosestrife	37

Contents



Forbs continued

Cutleaf & Common teasel	39
Garlic mustard	41
Poison hemlock	43
Field bindweed	45
Whitetop	47
Perennial pepperweed	49
African rue	51
Mediterranean sage	53
Black henbane	55
Maltese starthistle	57
Yellow starthistle	59
Rush skeletonweed	61
Leafy spurge & Myrtle spurge	63
Orange & Meadow hawkweed	65
St. Johnswort	67
Yellow flag iris	69
Dyer's woad	71
Dalmatian toadflax & Butter and eggs	73
Sulphur cinquefoil	75
Tansy ragwort & Common tansy	77
Puncturevine	79
Latin name index	81



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; reducing 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.



Toby Colvay



Twisted,
papery seeds

Emily Brown

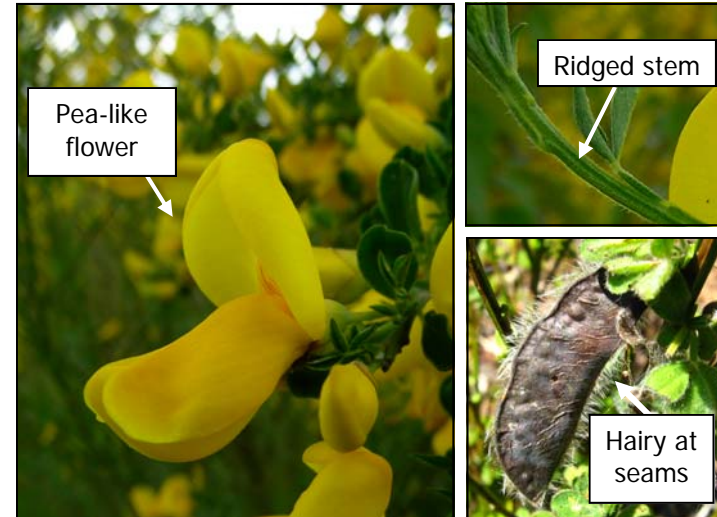


Scotch broom

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.

Scotch broom

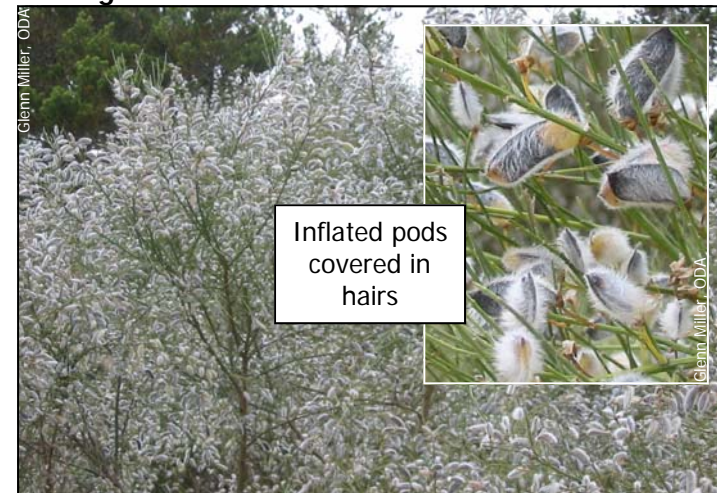


Portuguese broom

Cytisus striatus

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.

Portuguese broom





Japanese knotweed

Fallopia japonica

Also known as *Polygonum cuspidatum*

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

Fallopia sachalinensis

Also known as *Polygonum sachalinense*

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.



Bruce Newhouse

Japanese knotweed



Giant knotweed



Bruce Newhouse



Himalayan blackberry

Rubus bifrons

(Also identified as *R. procerus*, *R. armeniacus*, or *R. 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 invasive non-native cutleaf blackberry (*Rubus laciniatus*) has deeply cut leaves.





Saltcedar

Tamarix ramosissima

Description: Deciduous shrub or small tree growing up to 20 ft (6 m) tall. Stems are smooth with reddish brown bark. Leaves are blue-green, alternate, and scale-like on branching stems. Small, white to pink 5-petaled flowers occur in finger-like clusters (2 in/5 cm long). Toothed sepal margins distinguish this plant from other *Tamarix* species. Petals remain on the fruit.

Where found: Along rivers, streams, drainage ditches and moist areas in deserts. Saltcedar reduces the water table and releases salts from its tissues.



Look-alikes: French tamarisk (*Tamarix gallica*), another invasive, is similar to saltcedar but the scale-like leaves are ovate to linear and the petals fall off the fruit. It is not currently known to be in Oregon.





False brome

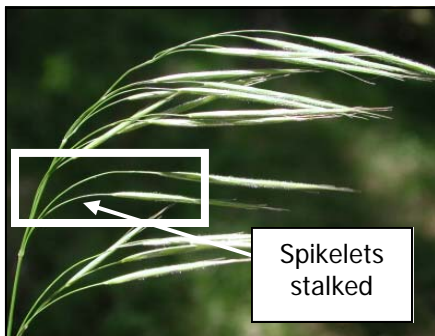
Brachypodium sylvaticum

Description: Perennial bunchgrass growing in short clumps 1.5-2.5 ft (4.5-7.5 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 grasslands.

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

Look alike:
Columbia brome
(*Bromus vulgaris*)
has spikelets that
are stalked.



11



12



Medusahead rye

Taeniatherum caput-medusae

Description: Winter annual grass growing 6-24 in (1.5-6 dm) tall. Flowers are in spikes with two spikelets per node and two florets per spikelet. Florets have long (1-4 in/2.5-10 cm) awns that can twist when mature. Leaves are narrow ($\frac{1}{8}$ in/3 mm) and rolled. The spikes do not break apart as they mature and instead the florets fall away leaving long bracts (glumes).

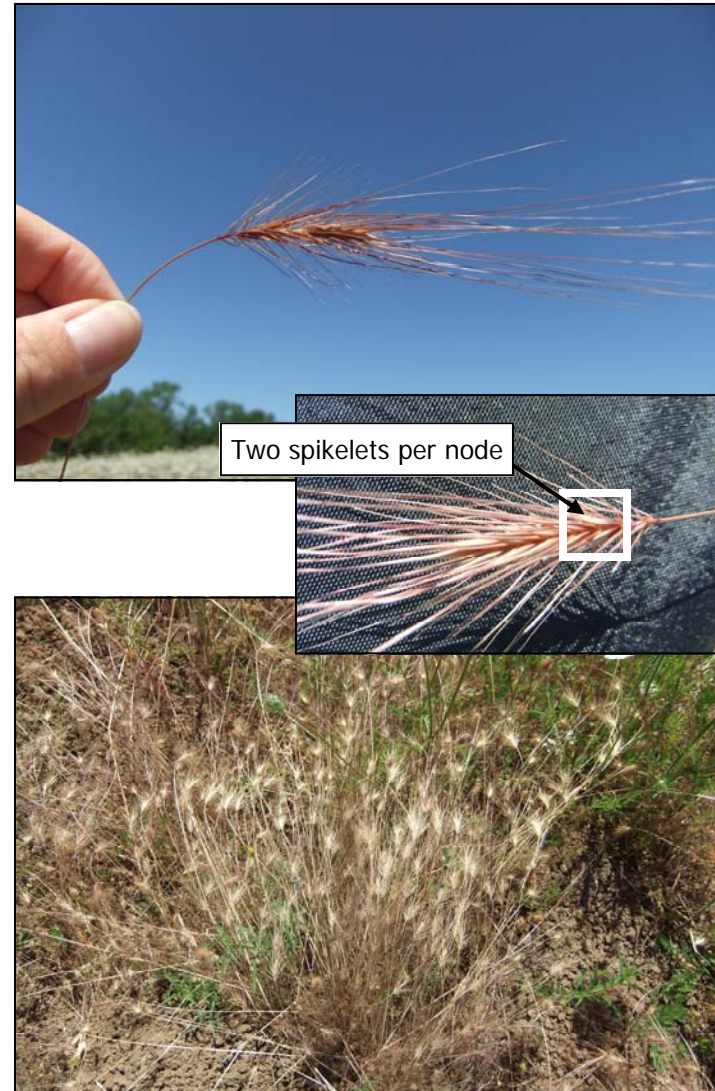
Where found: Grasslands, rangeland, oak woodlands and disturbed sites.

Medusahead is not palatable to livestock due to its silica content and stiff awns that irritate eyes, nostrils, and mouths.

Look alike: The native squirreltail (*Elymus elymoides*) also has long awns and two spikelets per node but it is a perennial bunchgrass and its spikelets break apart when mature.



13



14



Ventenata

Ventenata dubia

Description: Annual grass growing 6-27 in (15-70 cm) tall. Flowers are in open panicles up to 8 in (20 cm) long. Spikelets have 2-3 florets. Awns on the lower floret are short and straight while those on the low floret(s) are long and twisted or bent. Leaves are 0.3-0.1 in (0.8-2.5 mm) wide. Blooms from June to August.

Where found: Fields, grasslands, disturbed areas.

Cheatgrass

Bromus tectorum

Description: Annual grass typically about 12 in (30 cm) tall, but ranging from 4 to 30 in (10-76 cm). Flower spikes drooping to one side, with long awns 3/8 to 5/8 in (10-16 mm) long. All parts of the plant are covered by soft hair. Seed heads often dry to light brown or reddish color. Blooms from May to June.

Where found: Rangeland, fields, grasslands, disturbed areas.

Ventenata



Cheatgrass





Plumeless thistle R

Carduus acanthoides

Description: Taprooted biennial or winter annual growing up to 5 ft (1.5 m) tall. Stems with spiny wings. Leaves and stems prickly. Lower leaves 4-8 in (1-2 dm) long. Red to purple flowers are on solitary or clustered flower heads. Flower head bracts are < 0.1 in (2 mm) wide and hairy. Blooms May to August.

Look-alike: The invasive, non-native Scotch thistle is similar, but has wide wings on the stems and hairy leaves. See page 19.

Musk thistle

Carduus nutans

Description: Taprooted biennial growing up to 6 ft (1.8 m) tall. Leaves and stems prickly. Lower leaves 4-15 in (1-4 dm) long. Stems with narrow spiny wings, <0.4 in (1 cm) wide. Solitary purple flower heads nod when mature. Flower head bracts are 0.1-0.3 in (3-8 mm) wide. Blooms June to September.

Where found: Disturbed areas, rangelands.

Plumeless thistle



Musk thistle





Scotch thistle

Onopordum acanthium

Description: Biennial, or sometimes annual, growing up to 12 ft (3.5 m) tall. Forms rosette of spiny leaves the first year up to 4 ft (1.2 m) wide. Second year plants have tall spiny stems noticeably winged along the entire margin, 0.8-1.2 in (2-3 cm). Leaves are covered in pale gray hairs. White or purple flowers occur on flower heads that are solitary or in clusters of 2-7 with smooth, spiny bracts. Flower heads lack chaffy bristles between the purple flowers.

Where found: Roadsides, fields, pasture, rangeland, and riparian areas.

Look-alikes: The invasive, non-natives plumeless thistle (*Carduus acanthoides*) and musk thistle (*Carduus nutans*) have narrower wings on their stems than Scotch thistle. These plants are also less robust. The flowers of plumeless thistle are smaller. Musk thistle has solitary drooping flower heads. See page 17 for full descriptions.





Canada thistle

Cirsium arvense

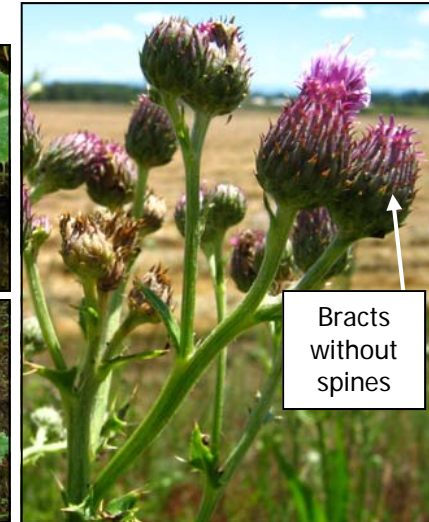
Description: Herbaceous perennial growing 1.5-7 ft (4.5-21 dm) tall. Leaves are wavy-margined to lobed with yellowish prickles along leaf edges. Leaves may be somewhat woolly underneath. Plants bloom in midsummer with clusters of small purple flower heads. Canada thistle is the only invasive thistle that is rhizomatous, forming dense stands that are difficult to eradicate.

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

Canada thistle



Smooth upper surface



Bracts without spines

Bull thistle

Cirsium vulgare

Description: Herbaceous biennial growing 1-7 ft (3-21 dm) tall. Branching, somewhat woolly stems covered in green to brown spines and hairs. Leaves are lobed, with prickly hairs on the upper side and cottony hairs underneath. 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. Plants bloom July-September.

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

Bull thistle



Prickly upper surface



Flower bracts with spines



Russian knapweed

Acroptilon repens

Description: Herbaceous perennial that grows to 4 ft (1.2 m) tall. Plants form dense colonies with dark creeping roots 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, flowering head with pink to lavender flowers at each branch tip. Bracts below the flower are rounded with papery margins.

Where found: Fields, pastures, disturbed sites.

Russian knapweed is toxic to horses.

Look-alike: The invasive, non-native common crupina (*Crupina vulgaris*) is superficially similar, but bristles on the flower head are not membranous and it has spiny hairs on the leaf margins. See page 33.



Russian knapweed





Purple starthistle ^R

Centaurea calcitrapa

Description: Herbaceous annual or biennial growing to 6 ft (1.8 m) tall. Basal rosette of leaves with spiny center forms in spring, then plant blooms mid-summer through fall. Leaves and stems with fine hairs. Purple flowers are on 0.8-1 in (15-20 mm) long flower heads. Straw colored flower head bracts are spine tipped. Seeds are not plumed.

Where found: Fields, pastures, rangelands, disturbed sites.

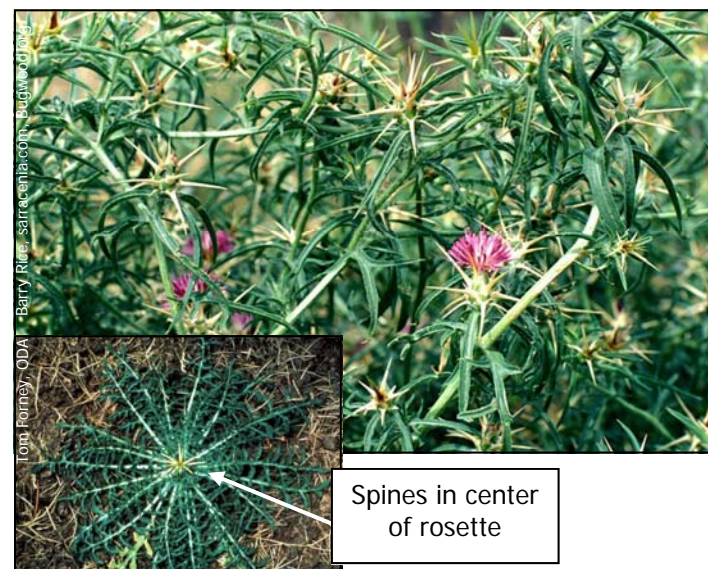
Look-alike: Non-native Iberian starthistle (*Centaurea iberica*) is similar vegetatively, but flowers are pink to white. Flower head bracts are slightly smaller than those of purple starthistle bracts. In contrast to purple starthistle, the seeds are plumed.



Weed Society of America



Barry Rice, sarra.com, Bugwood.org



Tom Forney, ODA - Barry Rice, sarra.com, Bugwood.org

Spines in center of rosette



Diffuse knapweed

Centaurea diffusa

Description: Herbaceous annual or perennial that grows $\frac{3}{4}$ -3 ft (2-10 dm) tall. The green-gray leaves are divided into lobes. The flowers are white, rose or purple and the flower heads have bracts covered with "comb-like" spines.

Where found: Fields, pastures, rangeland, disturbed sites.

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 multi-stemmed 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.

Where found: Fields, pastures, rangeland, disturbed sites.

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



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





Meadow knapweed

Centaurea x moncktonii

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 and starthistles the bracts are not spine-tipped and meadow knapweed flowers are generally larger.



29

Meadow knapweed



Below: meadow knapweed in bloom.



30



Squarrose knapweed[®]

Centaurea virgata

Description: Woody-based, multi-branching, perennial growing to 3 ft (1 m) tall. Upper leaves are not toothed on the margins. Plants bloom from June to August with small pink to pale purple flower heads that have reflexed spine-tipped bracts.

Where found: Disturbed areas, roadsides and rangelands.



All photos: Steve Dewey, Utah State University, Bugwood.org

Look alike: Diffuse knapweed (*Centaurea diffusa*) is similar though the spines are not curved. See page 27.



Straight floral bracts





Common crupina

Crupina vulgaris

Description: Herbaceous annual that forms a rosette of leaves in fall and grows to 3 ft (1 m) tall in spring. Leaves lobed with spiny margins. Stem leaves are alternate and sessile. Main and side branches terminate in 1-5 flower heads. Flowers are pink to purple and bloom from June to July. Seeds are topped with bristles.

Where found: Disturbed areas, riparian areas, roadsides, and rangelands.

Look alike: The invasive Russian knapweed (*Acroptilon repens*) resembles common crupina but the flower head has bristles and the leaf margins lack spines. See page 23.



Steve Dewey, Utah State University, Bugwood.org



Joseph M. DiTomaso, UC Davis

Joseph M. DiTomaso, UC Davis

Steve Hurst, USDA NRCS PLANTS Database

5mm



USDA APHIS PPO Archive, Bugwood.org



Hound's tongue

Cynoglossum officinale

Description: Herbaceous biennial that grows 1-4 ft (3 dm-1.2 m) tall. Plants form rosettes of leaves 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.

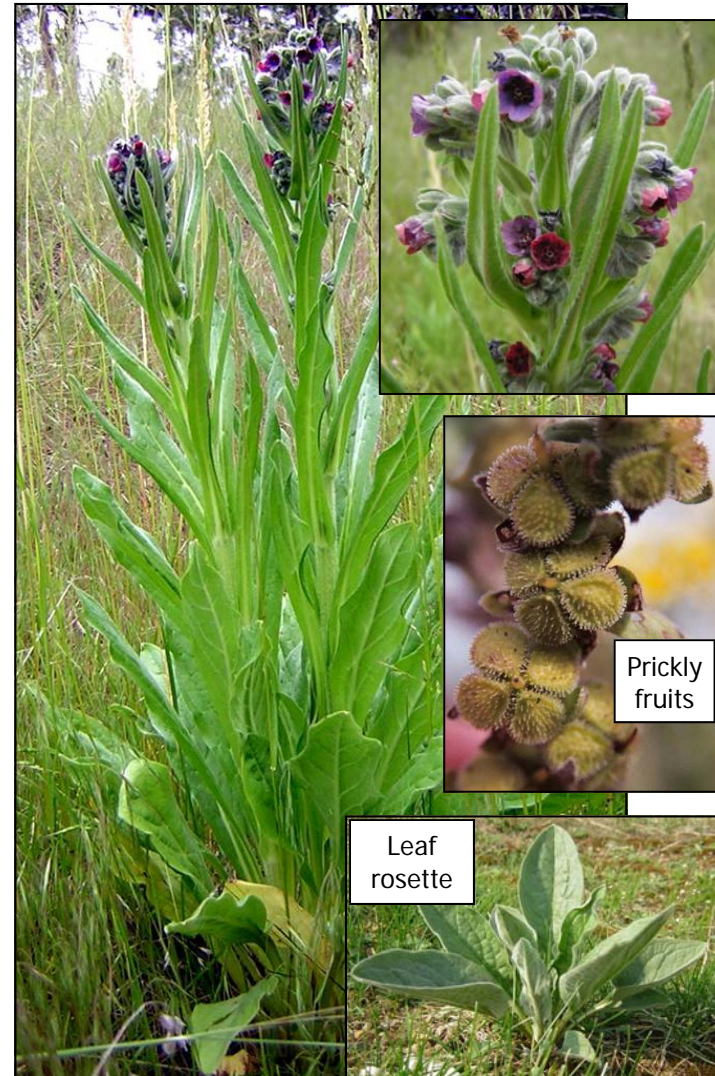
Where found: Disturbed areas, forests, roadsides, meadows, rangeland and pastures.

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.



35



36



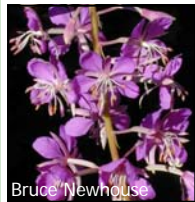
Purple loosestrife

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 areas and shorelines.

Look-alikes: Spiraea species (e.g., *Spiraea douglasii*) are native shrubs with round stems and toothed leaf tips. Flowers are tiny and pink, appearing in dense clusters at top of plant.



Bruce Newhouse

Fireweed (*Chamerion angustifolium*), a native forb, has round stems and longer leaves with a distinctive mid-vein. Flowers on stalks with four petals.

Blue verbena (*Verbena hastata*) is a native forb with square stems and blue to violet flowers in spikes. The leaves are opposite but are stalked. It is also found in moist areas.



Glenn Miller, ODA

Toby O'Leary



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 across Oregon 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, kidney-shaped, 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 dm) 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, camp grounds, 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*) looks similar vegetatively, but has pink petals and coin-shaped pods.





Poison hemlock

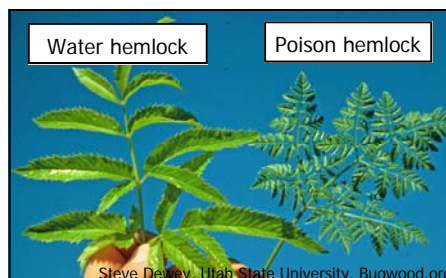
Conium maculatum

Description: Herbaceous biennial growing to 8 ft (2.5 m) tall. Stems purple-spotted, hollow, with ridges. Triangular shaped leaves are hairless and feathery. Rounded flower clusters (umbels) contain small white flowers. Reproduces by seed.

Where found: Riparian areas, ditches, roadsides, fields, other disturbed moist areas.

Poison hemlock is highly poisonous to humans and animals if ingested. Livestock will avoid if other forage is available. Some people may get contact dermatitis from handling the plant.

Look alike: Water hemlock (*Cicuta douglasii*), a poisonous native forb that occurs in moist habitats, has similar flowers. Its leaves are 1-2 times compound and



Steve Dewey, Utah State University, Bugwood.org

it lacks purple spots on stems. The stem base has horizontal chambers when cut open.





Field bindweed

Also known as field morningglory
Convolvulus arvensis

Description: Perennial vine with extensive roots. Trails 1-4 ft (3-12 dm) along the ground and over other plants. Leaves alternate and arrow-shaped but variable, depending on environmental conditions. Flowers white to pink and funnel-shaped from 0.5-1.2 in (1.5-3 cm) long. Flowers April-October or until frost. Reproduces vegetatively from roots and seeds.

Where found: Cultivated fields, pastures, roadsides, gardens, and disturbed areas.

Look alike: Native bindweeds (*Calystegia* spp.) occur in eastern Oregon also. These plants tend to have larger flowers (1-2 in/3-5 cm) and occur in drier habitats than field bindweed.



Funnel-shaped
flowers





Whitetop

Lepidium draba (formerly *Cardaria draba*)

Also known as hoary cress

Description: Herbaceous, deep-taprooted perennial growing up to 2 ft (6 dm) tall, with blue-green leaves to 3.5 in (9 cm) long and 1.5 in (4 cm) wide on erect stems. Leaves clasp stem and are hairy. White 4-petaled flowers grow in flat-topped to rounded inflorescences. Fruits heart-shaped to ovate with two seeds separated by a constriction. Plants set seed by mid-summer but also propagate by long horizontal roots that produce new shoots.

Where found: Fields, pastures, disturbed sites.

Look-alikes: The invasive hairy whitetop (*Lepidium pubescens*) is similar vegetatively but fruits are spherical to ovate without a constriction.



Joseph M. DiTomaso, UC Davis, Bugwood.org

Invasive lens-podded whitetop (*Lepidium chalapensis*) has disk-shaped fruits, also without a constriction.



Clasping leaves



Heart-shaped fruits



Perennial pepperweed

Lepidium latifolium

Description: Erect herbaceous perennial growing to 6.5 ft (2 m) tall. Green to gray-green leaves are alternate, hairless, and with serrated edges. Lower leaves growing to 12 in (30 cm) long and 3 in (8 cm) wide on stalk. Stem leaves smaller and stalkless with smooth to slightly serrate edges that do not clasp the stem. White, 4-petaled spoon-shaped flowers form in dense clusters and have distinctive odor. Long creeping roots form large colonies of plants.

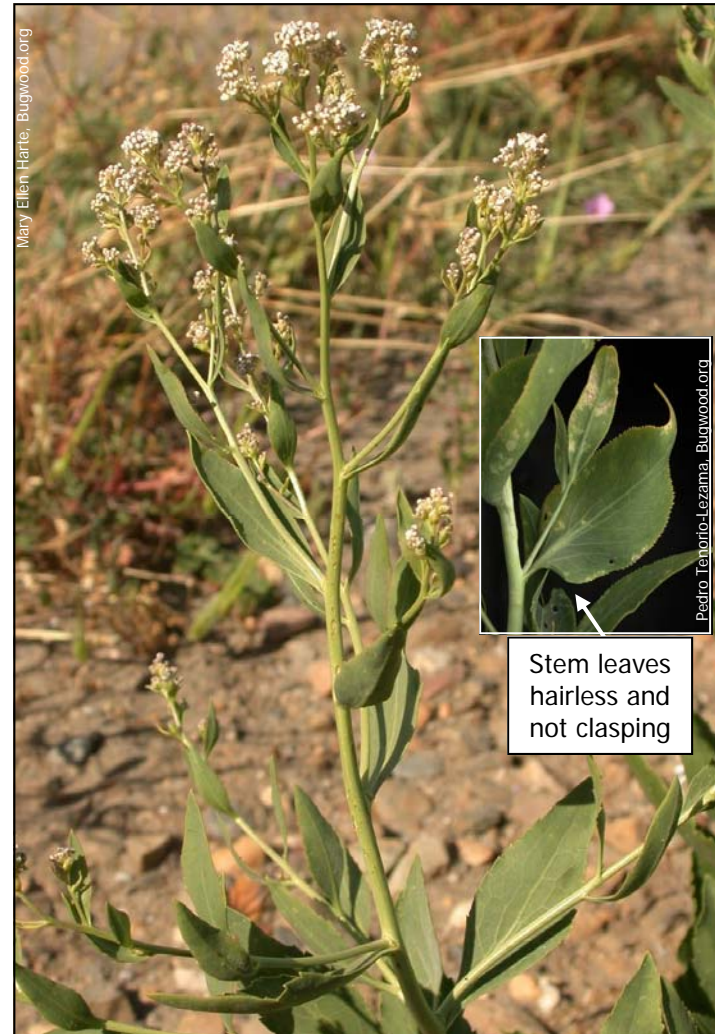
Where found: Rangeland, croplands, and disturbed areas on both moist and dry soils.

Look-alikes: Whitetop (*Lepidium draba*), hairy whitetop (*Lepidium pubescens*), lens-podded whitetop (*Lepidium chalapensis*) are similar but only grow to 1.6 ft (0.5 m) tall. These species have upper leaves that clasp the stem and have short hairs. See previous page for more information.

Stem leaves with hairs and clasp base



Pedro Tenorio-Lezama, Bugwood.org



Mary Ellen Harte, Bugwood.org

Pedro Tenorio-Lezama, Bugwood.org

Stem leaves hairless and not clasp



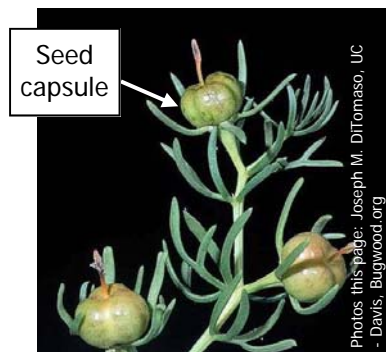
African rue

Peganum harmala

Description: Bushy, perennial herb growing 1.5 ft (45 cm) tall and 3-4 ft (1-1.2m) in diameter. Hairless, succulent leaves are irregularly dissected and alternate on stems. Solitary, white flowers have 5 petals and bloom spring to early fall. The leathery seed capsules each contain 45-60 seeds. Roots produce new shoots when cut.

Where found: Fields, rangelands, and roadsides in dry areas.

African rue is toxic to humans and livestock when sufficient quantities are ingested. The plant has a bitter taste that is usually unpalatable to livestock. The highest levels of toxin are in the seed coat.



Photos this page: Joseph M. DiTomaso, UC
- Davis Bugwood.org



Photos this page: Bonnie Rasmussen ODA



Mediterranean sage

Salvia aethiopsis

Description: Herbaceous biennial growing to 2-3 ft (0.6-1 m) tall. Stems and leaves covered with woolly white hairs, very dense on lower leaf surface. Lobed leaves are 2-12 in (5-30 cm) long and aromatic when crushed. Yellow to white flowers are whorled on stems with a pair of bracts beneath each whorl. Flowers are 2-lipped. Each flower produces four nutlets.

Where found: Rangelands, fields, meadows, disturbed sites.

Look-alikes: Native purple sage (*Salvia dorrii*) is a short shrub and has blue-violet flowers. It occurs in sagebrush habitat.



53



54



Black henbane

Hyoscyamus niger

Description: Annual or biennial that grows to 3 ft (1 m) tall. In spring, or first year, plant is a rosette of leaves. Leaves grow up to 8 in (20 cm) long, have lobed or toothed margins, and foul odor. Plants are covered in greasy hairs. Greenish-yellow 2 in (5 cm) wide flowers, with purple center and purple veins, form on stalks in upper leaf axils. The 1 in (2.5 cm) pineapple-shaped fruits are produced in two rows, and each fruit can produce hundreds of tiny black seeds.

Where found: Roadsides, pastures, rangeland, disturbed sites.

Black henbane is toxic to humans if ingested. It is usually not grazed by livestock unless no other forage is available.



Flowers with purple center and veins





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. 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). The flower heads are yellow 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.

Look-alike: Maltese starthistle looks very similar to the non-native and invasive yellow starthistle (page 59). The spines on yellow starthistle are longer than on Maltese starthistle.





Yellow starthistle

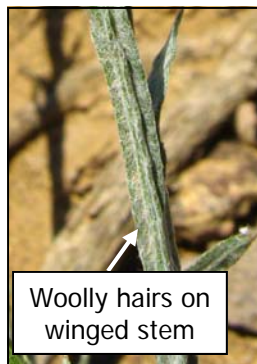
Centaurea solstitialis

Description: Herbaceous winter annual growing 1.5-3 ft (4.5 dm–1 m) 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 are yellow with 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 (page 57). The spines on yellow starthistle are longer than on Maltese starthistle.



59



60



Rush skeletonweed

Chondrilla juncea

Description: Herbaceous perennial growing to 4 ft (1.2 m) tall. Plant begins as rosette of smooth leaves and then develops wiry flowering stems with few leaves. Lower stems have bristly, downward pointing hairs. Stems and leaves have milky sap. Yellow flowers are held in terminal or axillary flower heads, and bloom spring to fall or winter.

Where found: Disturbed areas, roadsides and rangelands.

Look alike: Non-native dandelion (*Taraxacum officinale*) has similar rosette of hairless leaves and yellow flowers but lacks persistent stems with downward pointing hairs and old flower heads. It mainly occurs in lawns and gardens.



Chichory (*Cichorium intybus*), another non-native, looks similar vegetatively but has blue flowers.



Arnie Grammon, Baker County



Greg Winans, Tri-County GWMMA



Eric Coombs, ODA



Leafy spurge

Euphorbia esula

Description: Herbaceous perennial that grows to 3 ft (1 m) tall. Forms colonies from deep root system. Pink buds form along brown roots to produce shoots or new roots. Leaves alternate, narrow, 1-4 in (2.5-10 cm) long with smooth margins. Yellow-green flowers in clusters (umbels) surrounded by similarly colored heart-shaped bracts.

Myrtle spurge

Euphorbia myrsinites

Description: Herbaceous perennial that grows 4-6 in (10-15 cm) tall. Forms colonies from a deep root system that grows from central taproot. Leaves (1 in/2.5 cm) arranged in spirals around fleshy blue-green stems.

Where found: Roadsides, rangeland, disturbed areas.

Leaves and stems produce milky sap that can cause skin irritation in humans and animals.

Leafy spurge



Myrtle spurge





Orange hawkweed **R**

Hieracium aurantiacum

Description: Herbaceous perennial 8 in-2.3 ft (2-7 dm) tall. Flowering stems are leafless or with few bract-like leaves. Orange-red flower heads cluster at the top of stem. The basal leaves are hairy, lance shaped, and up to 5 in (13 cm) long. Black, glandular hairs cover the flower stalks and all parts of the plant ooze a milky juice when cut.

Meadow hawkweed **R**

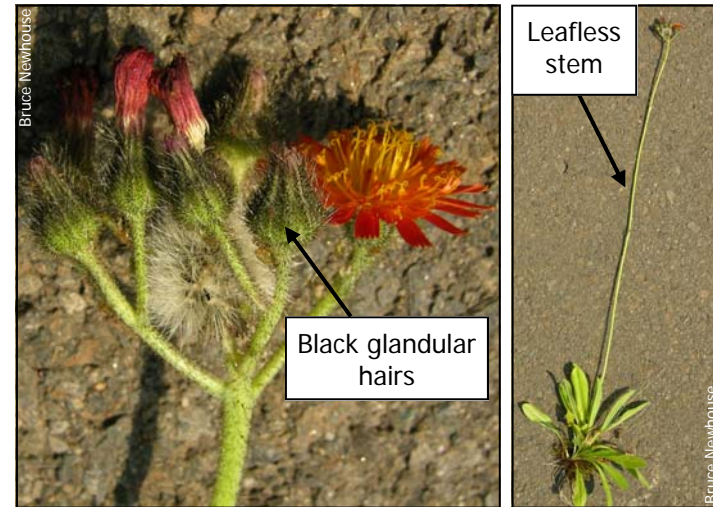
Hieracium caespitosum

Description: Herbaceous perennial growing 1-3 ft (3-9 dm) tall. Flowering stem leafless or with few bract-like leaves. 5-30 yellow flower heads cluster at top of each stem. Rosette leaves grow to 6 in (15 cm) long. Stems and leaves with milky juice.

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

Orange and meadow hawkweed form long runners that create dense mats of plants. Fragments of runners can form new plants.

Orange hawkweed



Meadow hawkweed





St. Johnswort

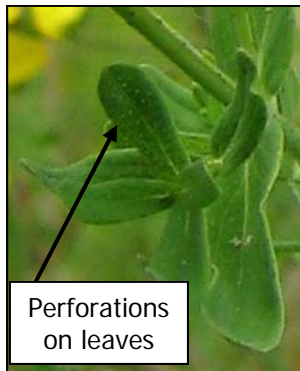
Hypericum perforatum

Also known as Klamath weed

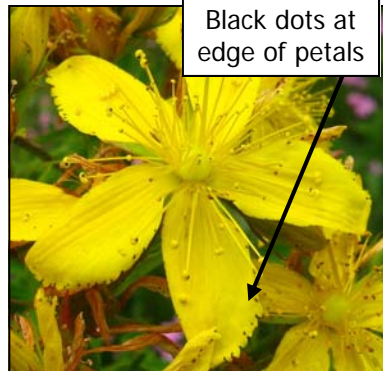
Description: Herbaceous perennial that grows 1-3 ft (3-9 dm) tall. Stems are erect, many-branched, somewhat 2-ridged, rust-colored and woody at the base. Leaves are oppositely arranged on the stem, oblong, less than 1 in (2.5 cm) long and covered in transparent dots (perforations) that are especially visible at 10x with backlighting. 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.



Perforations on leaves



Black dots at edge of petals



Chrysolina leaf beetles used for biocontrol



Yellow flag

Iris pseudacorus

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, 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.



69



70



Dyer's woad

Isatis tinctoria

Description: Erect, multi-stemmed biennial or perennial growing to 3 ft (1 m) tall. The taproot on this plant can reach 5 ft (1.5 m) into the soil. Lance-shaped leaves are blue-green with white bloom and 1-7 in (3-18 cm) long. The small yellow flowers have 4 spoon-shaped petals. Pendant, black to purple fruits are 0.3-0.7 in (8-18 mm) long and each have one seed. The dried plant and fruits can persist into winter.

Where found: Roadsides, rangelands, pastures, orchards, cultivated areas, and disturbed sites with dry or sandy soils.

Dyer's woad has low palatability to livestock and forms dense patches that displace native plants.

It releases allelopathic substances that inhibit surrounding plants.



71



72



Dalmatian toadflax

Linaria dalmatica

Description: Herbaceous perennial growing 2-3 ft (6 dm-1 m) 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. Dalmatian toadflax out-competes desirable forage plants for moisture and nutrients.

Butter and eggs

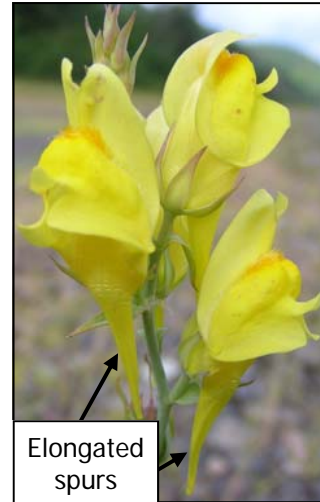
Linaria vulgaris

Also known as yellow toadflax

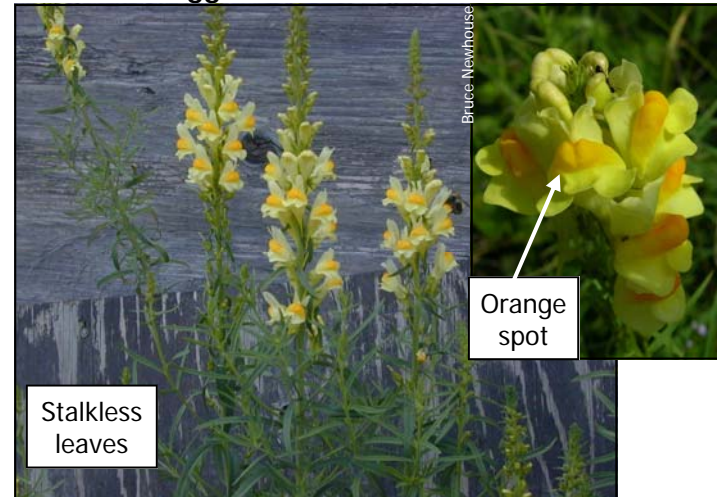
Description: Herbaceous perennial growing 1-2 ft (3-6 dm) tall. Plants have multiple stems arising in clumps with simple, alternate, stalkless-leaves attached directly to the stem. The leaves are 1-2.5 in (2.5-6.5 cm) long, smooth, and pointed at both ends. The flowers are pale to bright yellow and "snapdragon-like"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

Where found: Pastures, fields, meadows, roadsides, disturbed areas.

Dalmatian toadflax



Butter and eggs





Sulphur cinquefoil

Potentilla recta

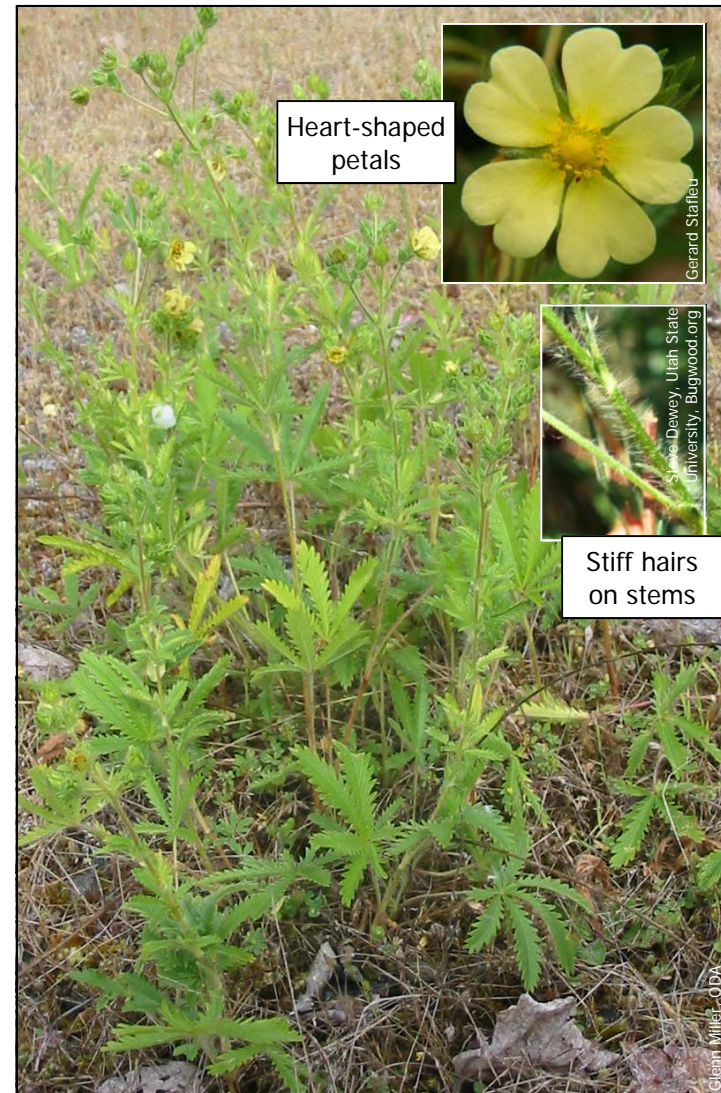
Description: Herbaceous perennial that grows 1-3 ft (3 dm-1 m) tall with one or more stems. The stems and leaves are covered with stiff hairs. Leaves are palmately compound with five to seven toothed leaflets. Flowers consist of five light yellow heart-shaped petals.

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 woolly hairs on the undersurface of leaves. The lower leaf-surfaces of sulphur cinquefoil are not covered in white woolly hairs and appear greenish.



75



76



Tansy ragwort

Senecio jacobaea

Description: Herbaceous biennial or short-lived perennial reaching 1.5–6 ft (0.5-1 m) 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

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 flat-topped 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



Common tansy





Puncturevine

Tribulus terrestris

Also known as goathead

Description: Mat forming, tap-rooted annual with trailing stems up to 5 ft (1.5 m) long. Stems can grow erect if shaded. Leaves opposite, with up to 8 pairs of 1/2 inch (12 mm) leaflets. Yellow, five petaled flowers form in leaf axils. Five-sided fruits break into sections containing 2 to 3 seeds. Each fruit section (bur) has a pair of sharp spines resembling goat or steers head.

Where found: Pastures, agricultural fields, roads, railways, and other disturbed areas.

Large quantities of leaves can be toxic to livestock.

Puncturevine burs are spread by vehicles, pedestrians, and animals. The sharp spines pierce bicycle tires and can injure bare feet.



79



80

Latin name index

Trees and shrubs

<i>Ailanthus altissima</i>	1
<i>Cytisus scoparius/C. striatus</i>	3
<i>Fallopia japonica/F. sachalinensis</i>	5
<i>Rubus armeniacus</i>	7
<i>Tamarix ramosissima</i>	9

Grasses

<i>Brachypodium sylvaticum</i>	11
<i>Bromus tectorum</i>	15
<i>Taeniatherum caput-medusae</i>	13
<i>Ventenata dubia</i>	15

Forbs

<i>Acroptilon repens</i>	23
<i>Alliaria petiolata</i>	41
<i>Carduus acanthoides/C. nutans</i>	17
<i>Centaurea calcitrapa</i>	25
<i>Centaurea diffusa</i>	27
<i>Centaurea melitensis</i>	57
<i>Centaurea xmoncktonii</i>	29
<i>Centaurea solstitialis</i>	59
<i>Centaurea stoebe ssp. micranthos</i>	27
<i>Centaurea virgata</i>	31
<i>Chondrilla juncea</i>	61

Latin name index

Forbs continued

<i>Cirsium arvense/C. vulgare</i>	21
<i>Conium maculatum</i>	43
<i>Convolvulus arvensis</i>	45
<i>Crupina vulgaris</i>	33
<i>Cynoglossum officinale</i>	35
<i>Dipsacus laciniatus/D. fullonum</i>	39
<i>Euphorbia esula/E. myrsinites</i>	63
<i>Hieracium aurantiacum/H. caespitosum</i>	65
<i>Hyoscyamus niger</i>	55
<i>Hypericum perforatum</i>	67
<i>Iris pseudacorus</i>	69
<i>Isatis tinctoria</i>	71
<i>Lepidium draba</i>	47
<i>Lepidium latifolium</i>	49
<i>Linaria dalmatica/L. vulgaris</i>	73
<i>Lythrum salicaria</i>	37
<i>Onopordum acanthium</i>	19
<i>Peganum harmala</i>	51
<i>Potentilla recta</i>	75
<i>Salvia aethiopsis</i>	53
<i>Senecio jacobaea</i>	77
<i>Tanacetum vulgare</i>	77
<i>Tribulus terrestris</i>	79

How to get copies

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

© Institute for Applied Ecology, 2011.

Printing March 2011



Printed on recycled paper