

Marion County Reference Guide: Most Unwanted Noxious Weeds



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King County, Washington: Noxious Weed Information & Services

<http://www.kingcounty.gov/environment/animalsAndPlants/noxiou-s-weeds.aspx>

Oregon Department of Agriculture

<http://oregon.gov/ODA/PLANT/WEEDS/index.shtml>

Washington State Noxious Weed Control Board

<http://www.nwcb.wa.gov>

Oregon Invasives Online Hotline

<http://oregoninvasiveshotline.org/>

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Clackamas Soil and Water Conservation District

<http://www.conservationdistrict.org/>

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Traveler's joy

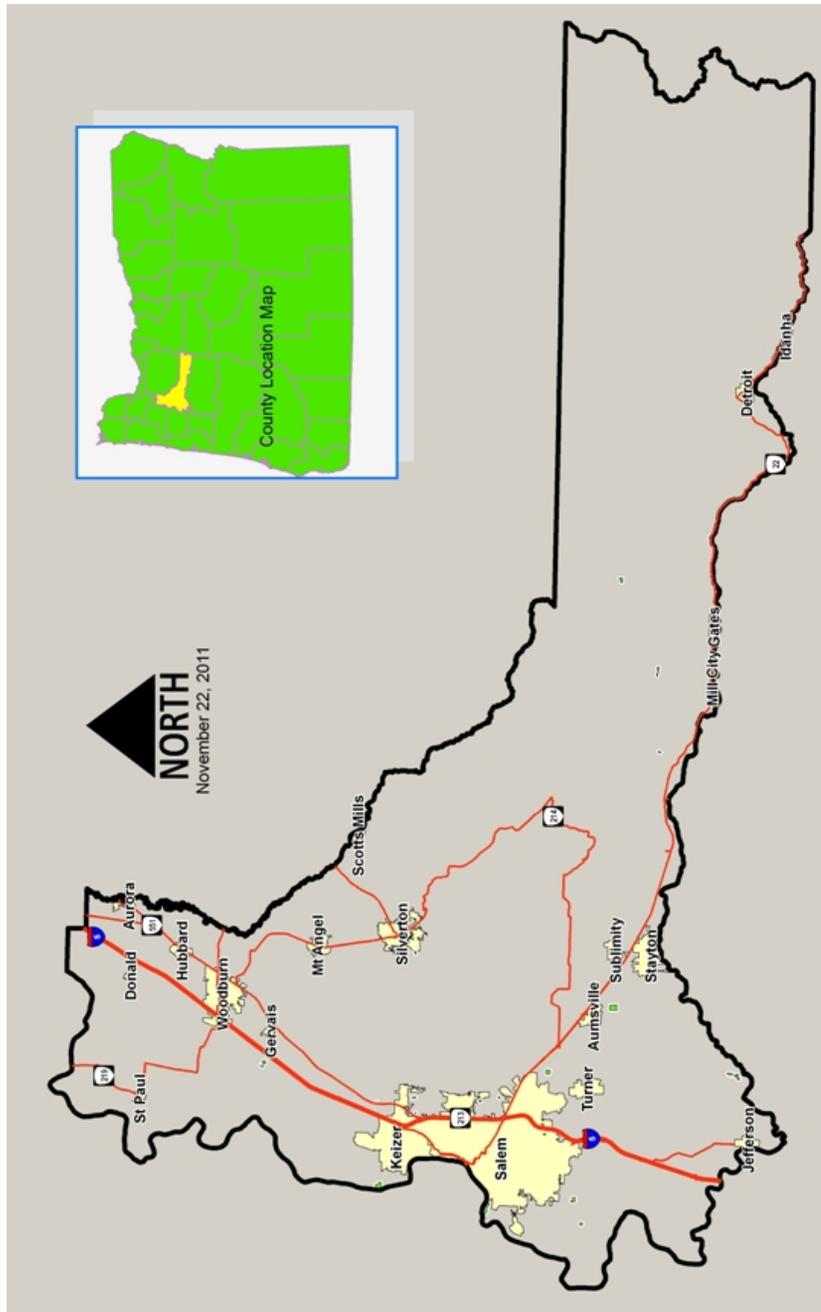
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Yellow starthistle

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Marion County Vicinity Map



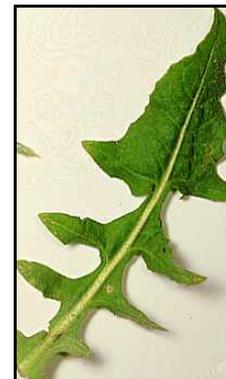
Yellow Starthistle



Habitat: Grows from dry to semi-moist areas in all types of soil.

Control: Re-vegetation after treatment is recommended as competition can limit new growth.

- **Mechanical** - Hand pulling followed by herbicide pellet application has been effective in areas with few plants.
- **Chemical** - Picloram kills the rosette stage and can be effective on seeds. Effects may carry over into next growing season. Resistance to picloram has been noted in some cases.



**Basal
leaf**



Flower and spines

Yellow Starthistle



Yellow starthistle (*Centaurea diffusa*)

- Bush-like plant
- Can reach up to 6' tall
- Bright “dandelion-like” yellow flowers in mid-July through August
- Grayish-green stems
- Flowers have long, tough spines
- Seeds have plumes for wind dispersal
- Begins growth in winter, matures and releases seeds late summer - fall



Young sprout



Early spring/late winter growth

The Issue of Invasives

- Wetland area invasives alone cost the United States over \$100 million each year.
- In Oregon as of 2009, 21 species of noxious land plants cost the state more than \$125 million per year.
- Plants from other parts of the world have come to dominate millions of acres of U.S. forests, deserts, prairies, and wetlands.
- These invaders threaten local and national agriculture, ecology, and even public health.
- Investing early in the process of prevention is money and time well-spent.
- The estimated cost benefit is \$1 of prevention = \$34 of control costs saved.

False Brome



False brome (*Brachypodium sylvaticum*)

A bunchgrass growing in short clumps 1 ½' to 2 ½' tall

- Leaves are broad, open, and flat with hairs along the edges, and bright green in color
- Spiked flower heads noticeably taller than the grass, drooping significantly
- Seeds are attached directly to the stem (not stalked)



Seeds not stalked



Drooping seed heads

Traveler's Joy



Habitat: Found along streams, fence lines, forest edges, hillsides, and wastelands. Grows aggressively to 100 feet, and can completely cover trees and other plants.

Control: A mix of control methods is best with this species to achieve greatest success.

- **Mechanical/Manual** – Climbing vines can be cut around waist high any time. Lower vines and ground growth can be dug up.
- **Chemical** – Recommended herbicides are 2% glyphosate for new spring growth, and metsulfuron methyl, triclopyr amine, or glyphosate can be applied during active growth periods.

Traveler's Joy



Traveler's joy (*Clematis vitalba*)

- A woody climbing vine with a long taproot
- Leaves with five leaflets
- Flowers with white sepals (native is usually pink or purple)
- Seeds with feathery attachments



Seeds



Five leaflets

False Brome



Habitat: Found in forests, riparian areas, along roadsides, open pastures, and prairies.

Control: Treat before plant goes to seed and always check your clothing and gear for seeds before leaving an infested area.

- **Mechanical** – Mow or pull between April and June before plant goes to seed. Follow up with mulching and any additional pulls.
- **Chemical** – Apply grass-specific herbicides heavily in early summer before plant goes to seed and spot spray in fall. Requires follow-up treatments for a few years.



**Leaf
hairs**

Knapweeds

Meadow & Spotted



Meadow & Spotted knapweeds (*Centaurea pratensis*, *C. maculosa*)

- Stout plant 1' to 5' tall growing from a deep taproot
- Basal leaves up to 6" long and narrow, tapering off towards the top; meadow knapweed leaves are coarsely lobed or toothed.
- Produces 1 to 3 pink to purple flowers ¼" to ½" wide at branch ends
- Bracts around the flower heads; spotted knapweed has black triangular spots on its bracts.

Meadow knapweed



Rosette



Bract



Pre-bud stage

Rush Skeletonweed



Habitat: Prefers shallow soils over bedrock and sandy to gravelly well-drained soils, such as soil found on roadsides.

Control: Can re-grow from plant fragments so care must be taken to clean all equipment and clothing before leaving an infested area.

- **Mechanical** – Any mowing of this plant should be avoided since new plants can grow from all fragments. If hand pulling, must get all parts of plant, bag and remove.
- **Chemical** – Control with Group 4 herbicides. Requires aggressive follow-up and consideration of site-specifics.



Rosette with last year's growth



Flower with Seeds

Rush Skeletonweed

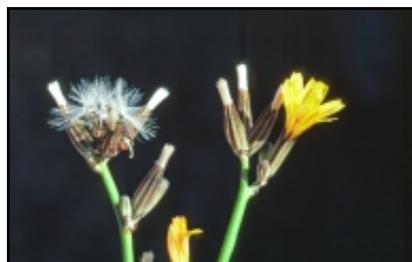


Rush skeletonweed (*Chondrilla juncea*)

- Up to 4' tall
- Has small yellow flowers
- Broken leaves and stems produce a milky sap
- Has a long single taproot that can grow as deep as a 7'
- Mature plant is nearly leafless
- Seeds have plumes for wind distribution



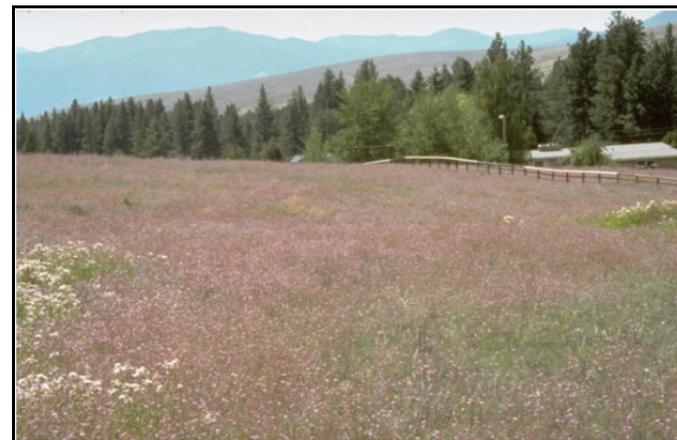
Spring rosette



Flowers in various stages

Knapweeds

Meadow & Spotted



Habitat: Found in disturbed areas, roadsides, waste areas, pastures, and rangelands.

Control: Remove as much root as possible and bag flower heads.

- **Mechanical** – Hand pull small infestations or till/plow the soil. Mowing is ineffective.
- **Chemical** – Apply selective broadleaf herbicide in the spring before flowers bud.

Spotted knapweed



Rosette



Bract



Pre-bud stage

Knotweeds

Giant, Japanese, Himalayan & Bohemian



Giant knotweed



Japanese knotweed

Knotweeds: Giant, Japanese, Himalayan, & Bohemian
(*Polygonum* sp. or *Fallopia* sp.)

- Heights: Himalayan 6', Japanese 8', Bohemian 10', Giant 16'
- Leaves are oval/heart-shaped. Leaf size ranges from Japanese 4" to 6" long (smallest) to Giant 10" to 12" long (largest). Himalayan leaves are lance-shaped 4" to 8" long
- Giant, Japanese, and Bohemian knotweeds produce small white-green flowers in clusters that droop from the leaf axis. Himalayan knotweed produces small white to pink flowers in loose-branched clusters, blooms July – October.
- Stems are red-brown, stout, hollow, and swollen at the nodes like bamboo.



Stem

Paterson's Curse



Habitat: On roadsides, often near over-grazed pastures, as animals will avoid it when grazing.

Control: Follow-up treatments every year until eradicated. Replant treated areas, as competition will decrease re-growth.

- **Mechanical** – Hoeing, hand pulling, and cutting works well on small groups of plants.
- **Chemical** - 2,4-D or bromoxynil once in early spring before there are more than six leaves per plant and once in fall for any summer germination.



Flower



Flowering Top

Paterson's curse



Paterson's curse (*Echium plantagineum*)

- 1' to 4' tall
- Has attractive purple flowers
- End of flowering branch tips are often curled or in a spiral
- Leaves and stems are covered with fine hairs
- Toxic to pigs and horses
- Prolific seed producer



Group of flowers



End of flowering branch

Knotweeds

Giant, Japanese, Himalayan & Bohemian



Habitat: Common along roadsides, trails, rivers, and sometimes along forest and cropland edges. Thrives in partial shade and rich, moist soils.

Control: Can spread by root and stem fragments, so be sure to remove and dispose of all plant parts properly.

- **Mechanical** – Cut close to the ground twice a month or more from April through first frost. Can be removed by digging the entire root mass and follow-up treatments.
- **Chemical** – Use a mix of glyphosate and imazapyr for broadcast

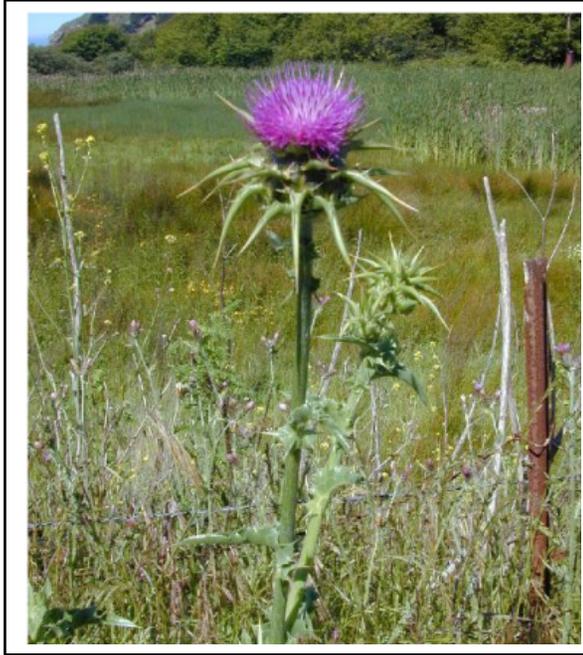


Flower



Leaf (Giant & Japanese)

Milk Thistle



Milk thistle (*Silybum marianum*)

- A broadleaf branching plant
- 1 ½' to 8' tall
- Leaves have white marbling along veins and spiny margins.
- Produces one large pink flower up to 2" wide, blooms April - October
- Flower head surrounded by leathery spines



Young rosette



Seeds

Oblong Spurge



Habitat: Found in moist grasslands, drainages, roadsides, and riparian areas.

Control: Wear gloves and protective clothing when handling this plant to prevent skin irritation from the sap. Plant can reproduce by root fragments, ALWAYS clean your equipment.

- **Mechanical** – Mowing every 2 to 4 weeks can control seed production but will stimulate new growth.
- **Chemical** – Requires multiple applications. Use dicamba or 2,4-D and apply in early summer when plants are in flower.



Seed pods



Milky sap

Oblong Spurge



Oblong spurge (*Euphorbia oblongata*)

- Also known as Egg-leaf spurge
- A small bush-like plant growing up to 3' high
- Produces up to 20 stems per plant
- Leaves are alternate, 1 ½" to 2 ½" long, egg-shaped, with smooth, hairless edges and toothed margins.
- Leaves and stems exude a milky sap that can cause eye or skin irritation.
- Produces numerous small yellow-green flowers at the stem ends, blooms spring - summer



Pre-flower



Flowers

Milk Thistle



Habitat: Can be found along roadsides, ditches, fences, grazed lands, and disturbed areas.

Control: Most susceptible to control during their seedling stage.

- **Mechanical** - Mowing may produce more plants the following year. Dig up plant in the spring, bag, and remove. Follow-up with additional removal in the fall.
- **Chemical** – Apply a selective broadleaf herbicide in the spring and again in the fall. Monitor for new seedlings requiring additional spraying in following years.



Leaf



Flower

Puncturevine



Puncturevine (*Tribulus terrestris*)

- Vine-like plant growing mats 2' to 5' wide
- Leaves are opposite, hairy, and oval shaped ¼" to ½" long
- Plant roots from a central stem with many hairy branches
- Produces yellow flowers in leaf axils up to ½" wide with 5 petals
- Seeds are flat spiny burrs

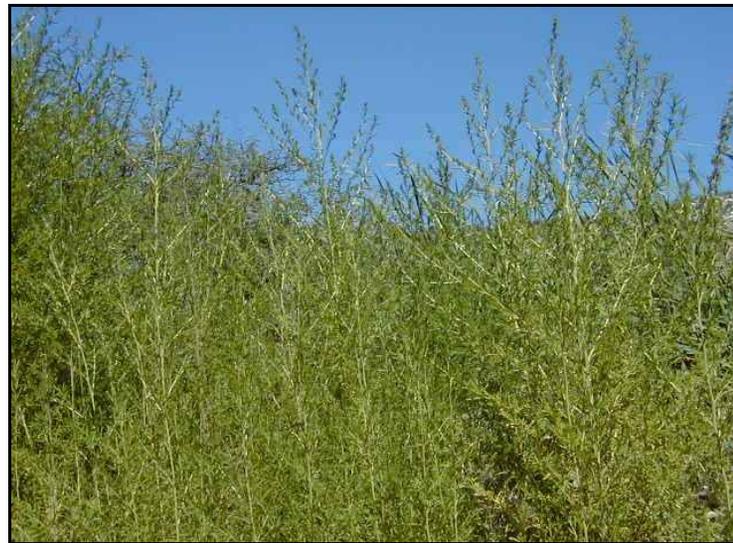


Flowers



Seed burr

Kochia



Habitat: Adapted to drought and found in pastures, rangelands, roadsides, ditch banks, wastelands, and cultivated fields.

Control: Difficult to control due to high production of seeds. Follow-up plan is needed.

- **Mechanical** – Early tilling and mowing can help reduce seed production.
- **Chemical** - Some plants have developed tolerance to triazine in some states. 2,4-D ester is more successful. However, there is some resistance to this herbicide as well. It is advisable to rotate herbicides.

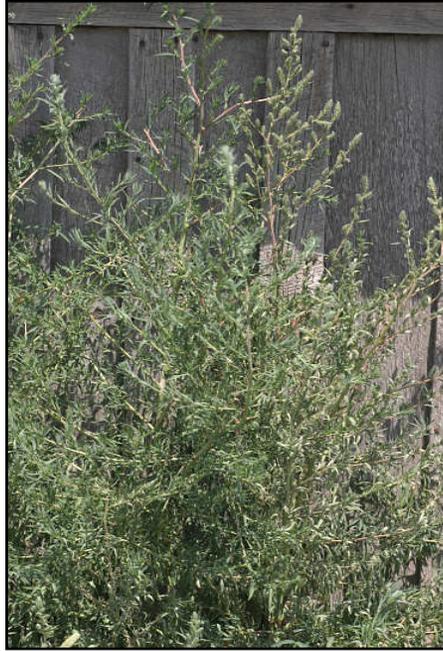


Flowers



**Flowers
on
branch**

Kochia



Kochia (*Kochia scoparia*)

- Grows and dies in one season, becoming tumble weed in the fall
- Is a prolific seed producer
- Up to 7' tall
- Flowers are very small and green with no petals
- Has very long branches
- A single deep root



Early spring growth



Branch

Puncturevine



Habitat: Found in pastures, roadsides, ditches, and other disturbed areas.

Control: Remove before plant goes to seed and collect previously-dropped seeds before germination.

- **Mechanical** – Removal by hand and hoeing works best. Use a piece of old carpet to pick up seed burs.
- **Chemical** – Herbicides containing glyphosate and dicamba are effective, especially on younger plants.



Leaves w/ hairs

Purple Loosestrife



Purple loosestrife (*Lythrum salicaria*)

- An upright, bushy plant up to 10' tall
- Multiple stems
- Leaves 1 ½" to 4" long, lance-shaped, and opposite with smooth edges
- Produces flower spikes with showy 5 to 7 petaled pink to purple flowers
- Blooms July – October

Flower



Flower head

Italian Thistle



Habitat: Grows in dry open areas such as roadsides, rights-of-way, pastures, rangelands, and open areas.

Control: Competition will make plant grow spindly and weak. Re-visit twice a year.

- **Mechanical** – Tilling and digging are effective. Will grow back if mowed. When hand-pulling, root must be severed at least 4" below the soil to prevent re-growth.
- **Chemical** – Clopyralid can be used before flowering, and 2,4-D ester and MCPA before plant is 10" high.



Leaf



Flowers

Italian Thistle



Italian thistle (*Carduus pycnocephalus*)

- Starts growing in late fall or winter
- 8" to 6' tall
- Stems and leaves are edged with spines
- Leaves have hairy undersides
- Flowers are pink to purple
- Flowers are on tips of stalks in groups of 2-5

**Early spring-
late winter
rosette**



Flower cluster

Purple Loosestrife



Habitat: Found in fresh and brackish water wetlands, moist or marshy areas, and cultivated in gardens.

Control: A mature plant can produce 2.7 million seeds, so treat before plant goes to seed and always brush off clothing and gear before leaving an infested area.

- **Mechanical** – Hand pull young plants, dig mature and well-established plants, and bag and remove all plant parts.
- **Chemical** – Use a selective broadleaf herbicide on seedlings and plants in mid to full bloom. Use extra care and follow guidelines when applying around aquatic areas.



Leaves



**Square
stem**

Tansy Ragwort



Tansy ragwort (*Senecio jacobea*)

- Stout and erect plant 1 ½' to 6' tall
- Leaves are dark green on top, light green on the bottom, and deeply lobed with a ruffled appearance
- Produces multiple yellow flowers on branch ends typically with 16 petals. Blooms June – October
- Flowers produce seeds with cottony plumes for easy wind dispersal.



Flower

Giant Hogweed



Habitat: Found in moist disturbed soils, along roadsides, ditches, and vacant lots or unmanaged yards.

Control: Sap from the plant can cause blistering of the skin, scarring, and sensitivity to light. **DO NOT TOUCH!**

- **Mechanical** – Use gloves and wear protective clothing when handling this plant. Young plants can be pulled; mature plants should be dug.
- **Chemical** – Apply glyphosate or imazapic in the spring to large infestations. Individual stem injections are also very effective.



Leaf



Stem w/ hairs

Giant Hogweed



Giant hogweed (*Heracleum mantegazzianum*)

- An herbaceous forb 10' to 15' tall
- Leaves 3' to 5' wide, compound, and deeply cut
- Produces a large, umbrella-like flower head up to 2 ½' wide containing small white flowers. Blooms mid-May – July
- Stems are hollow with raised purple blister spots with coarse hairs



Juvenile



Flower head

Tansy Ragwort



Habitat: Found in pastures, clear-cuts, roadsides, and other disturbed areas.

Control: Be sure to treat before the plant goes to seed and bag and remove the flower heads.

- **Mechanical** – Mowing is ineffective. Be sure to remove all the roots if hand pulled.
- **Chemical** – Use a selective broadleaf herbicide to protect pasture grasses.



Young rosette



Leaves

Yellow Flag Iris



Yellow flag iris (*Iris pseudacorus*)

- 3' to 4' tall
- Grows with roots in water
- Leaves are long, flat and sword-like
- Flowers range from creamy to bright yellow
- Blooms in late spring - early summer
- Seeds are in 4" long triangular capsules



Seed pod



Inside of flower

Garlic Mustard



Habitat: Most likely found at woodland edges in shaded, moist areas

Control: Must control every year until seeds from previous years are exhausted. Most practical when plants are in bloom.

- **Mechanical** - Remove all roots, bag, and remove whole plant. Plants will come back after mowing.
- **Chemical** – Use products containing glyphosate or triclopyr, but it will not destroy seeds.



Flowers



Late stage seeding

Garlic Mustard



Garlic mustard (*Alliaria petiolata*)

- 1' to 3 ½' tall
- Leaves 4" to 6" long and 1" to 3" wide
- White flowers with 4 petals in the shape of a cross, blooms spring - summer
- Seeds are found in thin, round 4-sided pods 1" to 3" long at the top of the plants



Young rosette



Leaves

Yellow Flag Iris



Habitat: Found in wetlands, edges of lakes, and slow moving waterways such as ditches. It prefers partial shade to full sun.

Control: Care must be used when handling as resin in the leaves and rhizomes can irritate the skin.

- **Mechanical** - When hand pulling or digging, care must be taken to remove all parts of the plant as they can sprout from any vegetation that is left. Bag and remove whole plant.
- **Chemical** – Use an aquatic labeled herbicide that contains glyphosate.



Flower



Infestation of a wetland

Yellow Toadflax



Yellow toadflax (*Linaria vulgaris*)

- Multiple stem plant 1' to 4' tall
- Forms dense colonies of plants
- Leaves are alternate, 1" to 2 ½" long, with smooth edges, pointed at both ends, and NOT stalked at the stems
- Produces 15 – 20 snapdragon-like pale to bright yellow flowers per stem, blooms June - September

Leaves



Diffuse Knapweed



Habitat: Usually found in gravel pits, along roadsides, railroad tracks, vacant lots, airports, trails, heavily grazed pastures, and other dry rocky or sandy soils.

Control:

- **Mechanical** – Mowing and cutting may cause more stalks and therefore more seeds. Hand-pull small infestations. Can be eradicated by cultivation.
- **Chemical** – Use dichlobenil and pronamide for soil application, and glyphosate, fluzifop and sethoxydim when seeds have sprouted.



Flowering plant



Flower

Diffuse Knapweed



Diffuse knapweed (*Centaurea diffusa*)

- 4" to 2' tall
- Flowers are white to pink with urn-shaped heads
- Early spring growth starts with low growing leaves in the shape of a rosette
- Can live up to 2 years



Young rosette



Flower

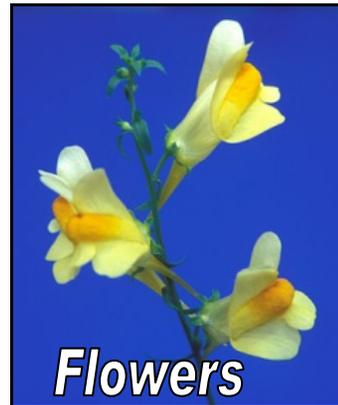
Yellow Toadflax



Habitat: Found along roads, trails, in open fields, meadows, and waste areas.

Control: Timing is everything for control of yellow toadflax.

- **Mechanical** – Intensely till infested area every 2 to 3 weeks from spring until first freeze.
- **Chemical** – Treat with Group 2 herbicides when plant is most active and growing. Best to apply between bud and early bloom stages.



Flowers



Flower head

Common Gorse



Common gorse (*Ulex europaeus*)

- Woody annual plant
- 3' to 6' tall
- Yellow flowers throughout the year but mainly in early spring
- Seeds are in a dark brown to purple pod about 1" long
- Seeds are released when heated by fire
- Leaves turn into spines as plant matures



Flower on stem



Seedling

Common Gorse



Habitat: Can be found in open woodland edges, roadsides, wetland areas, and open fields.

Control: Long-term management is needed as seeds can remain viable up to 30 years.

- **Mechanical** - Burning will encourage old seeds to sprout. Hoeing and hand pulling before 3' tall, bag, and remove whole plant. Mowing and cutting before flower will decrease seed dispersal but new plants may sprout from cuttings and stumps.
- **Chemical** - Recommended herbicides are glyphosate, Crossbow, Tordon, Escort and Banvil. These have best results when used after bloom drop.



Group of flowers



Leaves that will turn into spines