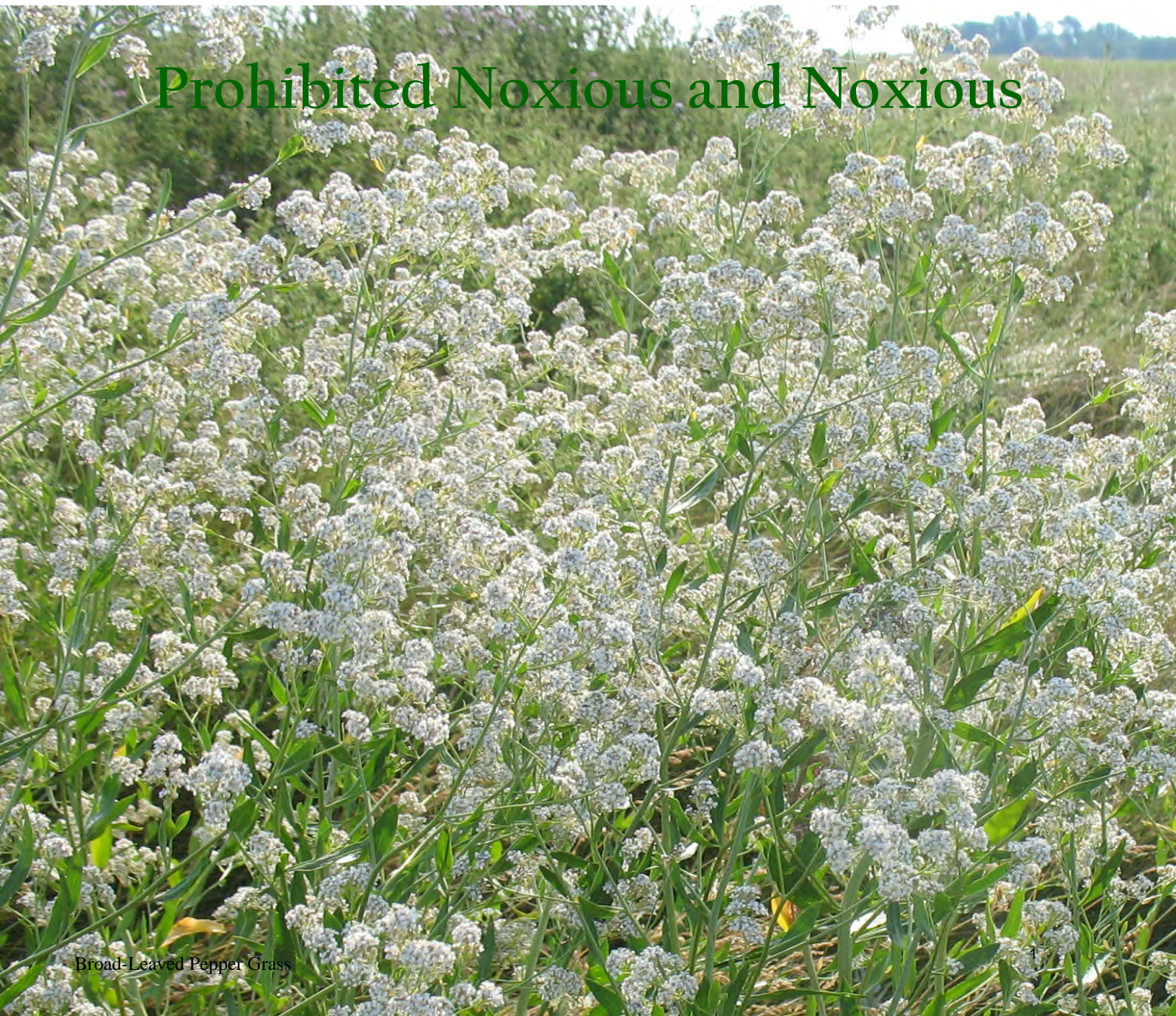


Alberta Invasive Plant Identification **GUIDE**

Prohibited Noxious and Noxious



Broad-Leaved Pepper Grass

Credits

Information Credit:

Montana State University Invasive Plant Identification Guide
Alberta Invasive Plant Council
Weeds of Canada
Weeds of the Prairies
Manitoba Agriculture, Food and Rural Initiatives
Ontario Ministry of Agriculture and Rural Affairs
A field guide to Invasive Plants of Wisconsin

Photo Credits:

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Montana State University
Alberta Invasive Plant Council
Alberta Sustainable Resources
invasive.org (UGA photos)

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Wheatland County
Alberta Agriculture and Rural Development



Alberta Invasive Plant Identification GUIDE



Prohibited Noxious Weeds

- Pg 9. Autumn Olive — *Elaeagnus umbellata*
Pg 10. Balsam, Himalayan — *Impatiens glandulifera*
Pg 11. Barberry, Common — *Berberis vulgaris*
Pg 12. Bartsia, Red — *Odontites vernus*
Pg 13. Buckthorn, Common — *Rhamnus cathartica*
Pg 14. Cinquefoil, Sulphur — *Potentilla recta*
Pg 15. Crupina, Common — *Crupina vulgaris* Persoon
Pg 16. Dyer's Woad — *Isatis tinctoria*
Pg 17. Eurasian Water Milfoil — *Myriophyllum spicatum*
Pg 18. Flowering Rush — *Butomus umbellatus*
Pg 19. Garlic Mustard — *Alliaria petiolata*
Pg 20. Goatgrass, Jointed — *Aegilops cylindrica* Host
Pg 21. Hawkweed, Meadow — *Hieracium caespitosum*
Pg 21. Hawkweed, Mouse-ear — *Hieracium pilosella*
Pg 22. Hawkweed, Orange
Pg 23. Hoary Alyssum — *Berteroa incana*
Pg 24. Hogweed, Giant — *Heracleum mantegazzianum*
Pg 25. Iris, pale yellow — *Iris pseudacorus*
Pg 26. Knapweed, Bighead — *Centaurea macrocephala*
Pg 27. Knapweed, Black — *Centaurea nigra*
Pg 27. Knapweed, Brown — *Centaurea jacea*
Pg 28. Knapweed, Diffuse — *Centaurea diffusa*
Pg 29. Knapweed, Hybrid — *Centaurea × psammogena*
Pg 27. Knapweed, Meadow — *Centaurea × moncktonii*
Pg 30. Knapweed, Russian — *Acroptilon repens*
Pg 31. Knapweed, Spotted — *Centaurea stoebe*
Pg 32. Knapweed, Squarrose — *Centaurea virgata*
Pg 33. Knapweed, Tyrol — *Centaurea nigrescens*
Pg 34. Knotweed, Giant — *Fallopia sachalinensis*
Pg 34. Knotweed, Hybrid Japanese — *Fallopia × bohémica*
Pg 34. Knotweed, Japanese — *Fallopia japonica*
Pg 35. Loosestrife, Purple
Pg 36. Medusahead — *Taeniatherum caput*
Pg 37. Nutsedge, Yellow — *Cyperus esculentus*
Pg 38. Puncturevine — *Tribulus terrestris*
Pg 39. Ragwort, Tansy — *Senecio jacobaea*
Pg 40. Rush Skeletonweed — *Chondrilla juncea*
Pg 41. Saltcedar — *Tamarix ramosissima*
Pg 42. Saltlover — *Halogeton glomeratus*
Pg 43. St John's-wort, common — *Hypericum perforatum*
Pg 44. Starthistle, Yellow
Pg 41. Tamarisk, Chinese — *Tamarix chinensis*
Pg 41. Tamarisk, smallflower — *Tamarix parviflora*
Pg 45. Thistle, Marsh — *Cirsium palustre*
Pg 46. Thistle, Nodding — *Carduus nutans*
Pg 47. Thistle, Plumeless — *Carduus acanthoides*

Noxious Weeds

- Pg 49. Baby's Breath, Common — *Gypsophila paniculata*
- Pg 50. Bellflower, Creeping — *Campanula rapunculoides*
- Pg 51. Bindweed, Field — *Convolvulus arvensis*
- Pg 52. Blueweed
- Pg 53. Brome, Downy — *Bromus tectorum*
- Pg 54. Brome, Japanese — *Bromus japonicus*
- Pg 55. Burdock, Great — *Arctium lappa*
- Pg 56. Burdock, Lesser — *Arctium minus*
- Pg 56. Burdock, Woolly — *Arctium tomentosum*
- Pg 56. Buttercup, Tall — *Ranunculus acris*
- Pg 57. Chamomile, Scentless
- Pg 58. Clematis, Yellow — *Clematis tangutica*
- Pg 59. Cockle, White — *Silene latifolia* Poiret ssp.
- Pg 60. Daisy, Oxeye
- Pg 61. Dame's Rocket — *Hesperis matronalis*
- Pg 62. Henbane, Black — *Hyoscyamus niger*
- Pg 63. Hoary cress, globe-podded — *Lepidium appelianum*
- Pg 63. Hoary cress, heart-podded — *Lepidium draba*
- Pg 63. Hoary cress, lens-podded — *Lepidium chalepense*
- Pg 64. Hound's tongue — *Cynoglossum officinale*
- Pg 65. Mullein, Common — *Verbascum thapsus*
- Pg 66. Pepper-grass, broad-leaved — *Lepidium latifolium*
- Pg 67. Scabious, Field — *Knautia arvensis*
- Pg 68. Sow Thistle, Perennial — *Sonchus arvensis*
- Pg 69. Spurge, Leafy
- Pg 70. Tansy, Common — *Tanacetum vulgare*
- Pg 71. Thistle, Canada — *Cirsium arvense*
- Pg 72. Toadflax, Dalmatian — *Linaria dalmatica*
- Pg 73. Toadflax, Yellow — *Linaria vulgaris*

Legislation:

ALBERTA WEED CONTROL ACT

In 2010 a new Weed Control Act was Proclaimed. The new Weed Control Act regulation includes a new schedule of weed designations. Previously there were three weed categories, *restricted weeds*, *noxious weeds* and *nuisance weeds*. These categories were replaced with the new weed designations of *Prohibited Noxious* and *Noxious*.

Prohibited Noxious Weed: means a plant designated in accordance with the regulations as a prohibited noxious weed and includes the plant's seeds. This weed designation can be seen as regulatory support for an "Early Detection, Rapid Response" stage of invasive plant management. Plants in this category are either not currently found in Alberta or are found in few locations such that eradication could be possible. Under the Weed Control Act a person has a responsibility to destroy a prohibited noxious weed.

Noxious Weed: means a plant designated in accordance with the regulations as a noxious weed and includes the plant's seeds. This weed designation can be seen as regulatory support for a "containment" stage of invasive plant management. Plants listed in this category are considered to widely distributed to eradicate. A local authority may conduct control programs for these weeds if they feel they may have significant ecological or economic impact on lands within their municipality.

The full Weed Control Act is available on line at the Alberta Queens Printer Website or on our website at:

www.agriculture.alberta.ca

Questions or Concerns, please contact the Alberta Ag-Info Centre

Phone: 310-FARM or 310-3276

Flower Thumbnails

White Flowers



Scentless Chamomile
Pg 57



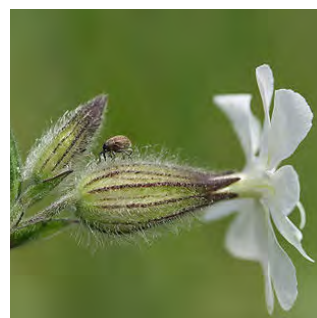
Hoary Alyssum
Pg 23



Knotweed Complex
Pg 34



Common Baby's Breath
Pg 49



White Cockle
Pg 59



Diffuse Knapweed
Pg 28



Flowering Rush
Pg 18



Hoary Cress
Pg 63



Common Buckthorn
Pg 13



Broad-Leaved Pepper Grass
Pg 66



Autumn Olive
Pg 9



Giant Hogweed
Pg 24



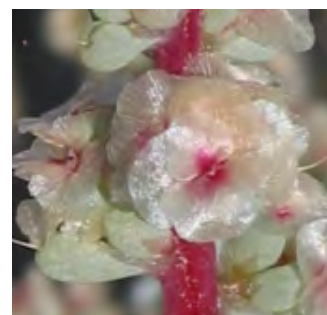
Garlic Mustard
Pg 19



Oxeye Daisy
Pg 60



Field Bindweed
Pg 51



Saltlover
Pg 42



Field Scabious
Pg 67



Squarrose knapweed
Pg 32

Purple Flowers



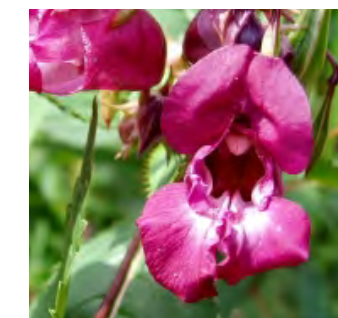
Purple Loosestrife
Pg 35



Common Crupina
Pg 15



Spotted Knapweed
Pg 31



Himalayan Balsam
Pg 10



Plumeless Thistle
Pg 47



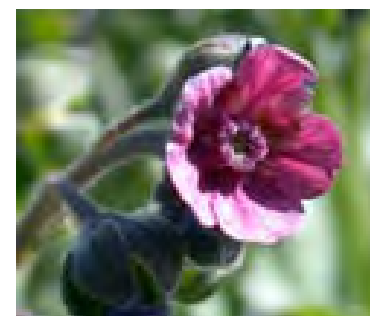
Salt Cedar
Pg 41



Burdock
Pg 55



Canada Thistle
Pg 71



Hounds Tongue
Pg 64



Dame's Rocket
Pg 61



Red Bartsia
Pg 12



Nodding Thistle
Pg 46



Creeping Bellflower
Pg 50



Russian Knapweed
Pg 30



Marsh Thistle
Pg 45



Tyrol Knapweed
Pg 33

Thumbnails

Yellow Flowers



Hawkweed spp.
Pg 21



St. John's Wort
Pg 43



Dyer's Woad
Pg 16



Rush Skeleton
Weed
Pg 40



Tansy Ragwort
Pg 39



Cinquefoil, Sulfur
Pg 14



Leafy Spurge
Pg 69



Common Tansy
Pg 70



Yellow Star Thistle
Pg 44



Iris, Pale Yellow
Pg 25



Yellow Toadflax
Pg 3



Tall Buttercup
Pg 56



Dalmatian
Toadflax
Pg 72



Yellow Clematis
Pg 58



Common
St John's -Wort
Pg 43



Common
Barberry
Pg 11



Puncture Vine
Pg 38



Common
Mullin
Pg 65



Yellow Nutsedge
Pg 37



Perennial Sow Thistle
Pg 68

Blue Flowers



Blueweed
Pg 52

Orange Flowers



Orange Hawkweed
Pg 22

Dark Purple Flowers



Black Henbane
Pg 62



Eurasian Water Milfoil
Pg 17



Downy Brome
Pg 53



Jointed Goat
Grass
Pg 20



Japanese Brome
Pg 54



Medusa Head
Pg 36



Prohibited Noxious Weeds

Prohibited Noxious weeds pose a serious threat and must be eradicated. These weeds spread rapidly and are highly competitive. Weeds in this category are restricted to prevent establishment in Alberta.

Autumn Olive
Elaeagnus umbellata
Elaeagnaceae

Category:

Prohibited Noxious



- . **Information:** Tolerant of a wide range of conditions.
- . **Life Cycle:** Perennial shrub.
- . **Root:** Nitrogen fixing, woody root.
- . **Leaves:** Simple, alternate, silver-grey colour, wavy leaf margins.
- . **Stems:** Multi-stems, up 6m tall.
- . **Flower:** Tube/bell shaped, fragrant, creamy white to yellow flowers.
- . **Seed/Fruits:** Small, fleshy, red, egg shaped with scales.
- . **Toxicity:**
- . **Control:** Manual (hand pull seedlings), mechanical, chemical.

Balsam, Himalayan
Impatiens glandulifera
Balsaminaceae (Impatiens family)

Category:

Prohibited Noxious



- **Information:** Originally from India, introduced as an ornamental, other names include Policeman's Helmet, Impatiens, Touch-me-not. Is a weed of concern because of potential impacts on riparian areas.
- **Life Cycle:** Annual.
- **Root:** Shallow and fibrous.
- **Leaves:** Simple, oblong, large, serrated edge.
- **Stems:** Large, hollow, 4 sided, grows up to 120cm.
- **Flower:** Showy, irregular, pink-purple-white, 5 petals.
- **Seed/Fruits:** Pods are explosive when ripe, seeds can shoot up to 10m, and can float.
- **Toxicity:**
- **Control:** Do not plant, easily pulled by hand.

Barberry, Common

Berberis vulgaris

Berberidaceae (Barberry Family)

Category:

Prohibited Noxious



All: Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

- **Information:** Introduced from Europe and Asia as an ornamental, tolerant of a wide range of conditions.
- **Life Cycle:** Perennial shrub.
- **Root:** Woody.
- **Leaves:** Alternate, spines occurring at the base of each leaf, leaf margins finely toothed, dull green, 2-5cm long.
- **Stems:** 1-3m tall, bushy shrub, yellow-grey, spines in groups of 3.
- **Flower:** Hanging cluster of flowers, yellow, raceme, 10-20 flowers per raceme (inflorescence).
- **Seed/Fruits:** Red clusters of berries, individual berries are 1cm long, 1-3 black seeds per berry.
- **Toxicity:** Alternate host for stem rust fungus.
- **Control:** Manual control, treat stumps in autumn, early control.

Bartsia, Red
Odontites vernus
Scrophulariaceae (Figwort family)

Category:

Prohibited Noxious



- **Information:** Originated from Europe, is a weed of pastureland, hayland and roadside ditches.
- **Life Cycle:** Annual.
- **Root:**
- **Leaves:** Clasping, narrow, and hairy with a toothed edge. oppositely arranged on the stem.
- **Stems:** Upright, branching, 15-30cm tall.
- **Flower:** Snapdragon type flower, reddish purple, hairy.
- **Seed/Fruits:** 1400 seeds per plant, hairy.
- **Toxicity:** May be parasitic to grasses.
- **Control:** Cultivation.

Buckthorn, Common
Rhamnus cathartica
Rhamnaceae

Category:

Prohibited Noxious

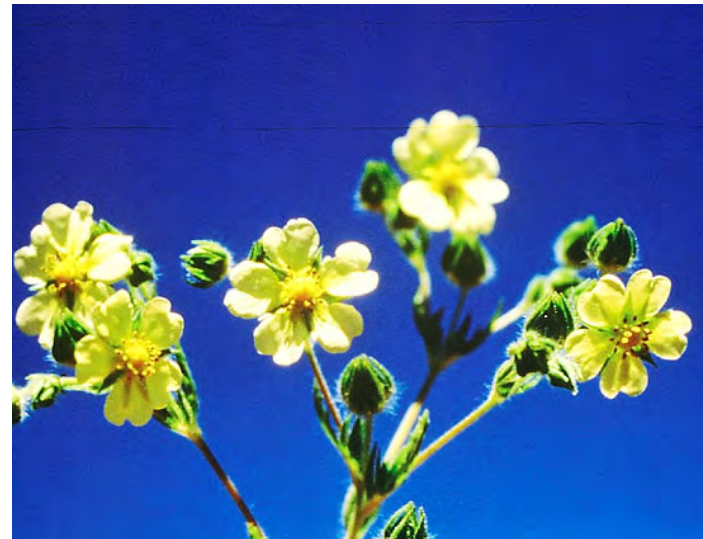


- **Information:** Originated from Eurasia, introduced as an ornamental plant, tolerant of a wide range of conditions.
- **Life Cycle:** Perennial woody shrub.
- **Root:** Woody root.
- **Leaves:** Dark green, glossy, oval shaped, pointed tip, 3-4 veins, slightly jagged edges.
- **Stems:** Shrub or small tree, trunk up to 25cm in diameter, up to 7m tall, grey-brown, rough texture, twigs tipped with a spine.
- **Flower:** Yellow, yellow-green, 4 petals, male and female flowers on separate plants.
- **Seed/Fruits:** Small black fruit, 3-4 seeds.
- **Toxicity:**
- **Control:** Mechanical, basal bark treatment.

Cinquefoil, Sulphur
Potentilla recta
Rosaceae (Rose family)

Category:

Prohibited Noxious



- **Life cycle:** Annual, Biennial or Perennial.
- **Root:** Fibrous spreading roots.
- **Leaves:** Palmately compound with 5-7 toothed leaflets; relatively few basal leaves. Most leaves grow along upright stem. Leaves stalked; leaf stalk length and size decreasing toward apex.
- **Stems:** One to several erect stems 30-60cm tall, may be branched with terminal, multi-flower inflorescence. Stems have hairs perpendicular to stem and leafstalks.
- **Flower:** Five light yellow petals with deeply notched tips and a yellow center.
- **Seed/Fruit:** Comma-shaped, brownish purple, covered with net-like ridges.

Note: These characteristics distinguish sulphur cinquefoil from native cinquefoils. Sulphur Cinquefoil leaves are green, not silvery, on the underside; its seeds are ridged while others usually are not; it has comparatively more stem leaves and fewer basal leaves than other *Potentilla* species, and its hairs are at right angles to the stem while others are usually oppressed.

<http://www.invasiveplants.ab.ca/Downloads/FS-SulfurCinquefoil.pdf>

Crupina, Common
Crupina vulgaris
Asteraceae (Sunflower Family)

Category:

Prohibited Noxious



- **Life cycle:** Winter annual.
- **Root:** Short taproot.
- **Leaves:** Fleshy oval seedling leaves widest near the tip, with distinct purple midrib. Rosette and stem leaves pinnately lobed with short stiff spines, alternate and smaller toward the apex.
- **Stems:** One main stem 30-90cm tall, branch several times.
- **Flower:** One to five, 1.5cm long flower heads at branch tips or in upper leaf axils. Narrow (length three to four times greater than width) rose-purple petals.
- **Seed/Fruit:** A ring of dark, stiff bristles encircle the seed.

Control:

Dyer's Woad

Isatis tinctoria

Brassicaceae (Mustard Family)

Category:

Prohibited Noxious



- **Life cycle:** Winter annual, biennial or short-lived perennial.
- **Root:** Taproot and some lateral roots.
- **Leaves:** All leaves bluish-green with white midrib. Rosette leaves have long slender stalks, are widest near the tip and covered with soft hairs. Stem leaves lack hairs, are alternate, lance shaped, and clasp the stem.
- **Stems:** 30 - 120cm tall, multi-branching.
- **Flower:** Cluster on upper stem in a flat-topped inflorescence. Yellow petals 3mm long and wide.
- **Seed/Fruit:** Purplish brown, tear drop shaped seed pods hang from small stalks.
- **Control:** Chemical.

Eurasian Water Milfoil

Myriophyllum spicatum

Haloragaceae (Water Milfoil Family)

Category:

Prohibited Noxious



- **Life cycle:** Aquatic perennial.
- **Root:** Numerous at base and along stem.
- **Leaves:** Three to four bright-green leaves, 3cm long with 12 to 48 threadlike divisions are whorled around stem at each joint. Leaves rarely extend above water surface and mat when removed from water.
- **Stems:** Slender, hairless, leafless toward base, 3m long or longer and 2mm thick. Grow to water surface then branch forming dense floating mats. Somewhat whitened when dry.
- **Flower:** Rigid, pink flowering spike, 5 to 20cm long, held erect above water surface. Small, yellow, four petaled flowers arranged in clusters. Bracts are not dissected.
- **Seed/Fruit:** Hard, segmented capsule contains four seeds.

Flowering Rush

Butomus umbellatus

Butomaceae (Flowering Rush Family)

Category:

Prohibited Noxious



- . **Information:** Thrives in moist areas.
- . **Life cycle:** Perennial.
- . **Root:** Thick creeping rhizomes and bulblets.
- . **Leaves:** Erect or floating leaves, opposite, 90cm long and 1 -1.5cm wide with smooth edges, triangular cross section, and twisted ends.
- . **Stems:** Leafless, green and triangular in cross section.
- . **Flower:** Three purplish brown bracts where flower stalk attaches to stem tip. Umbrella-shaped clusters of pink to white flowers with three petals 2-3cm in diameter.
- . **Seed/Fruit:** Inflated, dark brown beaked fruits 1-1.5cm long.
- . **Control:**

Garlic Mustard
Alliaria petiolata
Brassicaceae (Mustard Family)

Category:

Prohibited Noxious



David Cappaert, Michigan State University, Bugwood.org



Steve Hurst, USDA NRCS PLANTS Database, Bugwood.org



Chris Evans, River to River CWMA, Bugwood.org



Chris Evans, River to River CWMA, Bugwood.org

- . **Information:** Grows in moist, woody areas.
- . **Life Cycle:** Herbaceous biennial, Rosette in the first years growth, flowers in the second.
- . **Root:** White, slender taproot.
- . **Leaves:** Rosette leaves are heart shaped and dark. Mature leaves are spade shaped with a jagged, toothed edge. Leaves are alternately arranged on the stem and have a garlic odor when crushed.
- . **Stems:** Plant can grow from 1-1.5m tall.
- . **Flower:** Small white flowers, 4 petals.
- . **Seed/Fruits:** 150-850 seeds per plant, pods.
- . **Toxicity:** May be allelopathic towards other plants.
- . **Control:** Hand pick before seed set, make sure to get the entire root.

Goatgrass, Jointed
Aegilops cylindrica
Poaceae (Grass Family)

Category:

Prohibited Noxious



- **Information:** Originated in Russia, similar to Winter Wheat, Wheat and Jointed Goatgrass are genetically related and can hybridize.
- **Life Cycle:** Winter annual.
- **Root:** Fibrous root.
- **Leaves:** Hairy on the leaf edge.
- **Stems:** Erect 40-80cm tall, hairy auricles.
- **Flower:** Spike, long awned glumes on upper spikelets, 2-4 flowers per spikelet.
- **Seed/Fruits:** 2 seeds per spikelet.
- **Toxicity:**
- **Control:** Use clean seed, certificate of seed analysis, destroy plants before seed set.

Hawkweed, Meadow - *Hieracium caespitosum*
Hawkweed, Mouse-ear - *Hieracium pilosella*
Asteraceae (Sunflower Family)

Category:

Prohibited Noxious



- **Information:** Introduced from Europe.
- **Life cycle:** Perennial.
- **Root:** Shallow fibrous roots, stolons and rhizomes.
- **Leaves:** Basal rosettes have hairy, narrow, spatula-shaped leaves, dark green above and light green below.
- **Stems:** Rosettes produce 10 to 25 flowering stems up to 90cm tall. Stems have short, stiff hairs and few, if any, leaves. The entire plant contains a milky juice.
- **Flower:** 5 to 30, bright yellow flower heads.
- **Seed/Fruit:** Black, tiny, and plumed.
- **Control:** Chemical.

<http://www.invasiveplants.ab.ca/Downloads/BChawkweeds.pdf>

Orange Hawkweed
Hieracium aurantiacum
Asteraceae (Sunflower Family)

Category:

Prohibited Noxious



- **Information:** Introduced from Europe as an ornamental.
- **Life cycle:** Perennial.
- **Root:** Shallow, fibrous, creeping.
- **Leaves:** Rosette leaves are narrow, spatula-shaped, hairy, 10-15cm long, and darker green on the upper surface.
- **Stems:** 30-90cm tall with bristly hairs and 0-3 small leaves. Entire plant contains a milky juice.
- **Flower:** 5 to 30 flower heads form a compact, umbelliform inflorescence at stem apex. Flower heads have red-orange petals with notched tips.
- **Seed/Fruit:** Dark brown or black with ridges and bristly plumes.

<http://www.invasiveplants.ab.ca/Downloads/FS-OrangeHawkweed.pdf>

Hoary Alyssum

Berteroa incana

Brassicaceae (Mustard Family)

Category:

Prohibited Noxious



- **Information:** common on sand and gravel soils and establishes on roadsides, railway embankments, and heavily grazed pastures.
- **Life cycle:** Biennial.
- **Root:** Taproot.
- **Leaves:** All are greyish-green with star shaped hairs. Basal leaves 2-8cm long with slender stalks. Stem leaves face upward, pressed to stem. Lower leaves with short stalks, upper leaves lack stalks.
- **Stems:** 30-90cm tall, erect, branched, covered with star-shaped hairs.
- **Flower:** White, small, deeply notched petals on slender stalks, sepals hairy.
- **Seed/Fruit:** Flattened oval seed pods, with star-shaped hairs close to stem; styles remain, pod chambers contain 3 to 7 seeds.
- **Toxic:** Horses.
- **Control:** Hand pick.

Hogweed, Giant
Heracleum mantegazzianum
Apiaceae (Carrot Family)

Category:

Prohibited Noxious



- . **Information:** Very tall, grows in moist areas.
- . **Life Cycle:** Herbaceous biennial.
- . **Root:** Large deep taproot.
- . **Leaves:** Compound leaves 10-15cm wide, palmate, underside is covered in coarse white hairs.
- . **Stems:** 2-6m tall, hollow stem, 5-10cm wide, covered in bristles and purple mottles.
- . **Flower:** Umbel, up to 75cm wide, white, 5 petaled.
- . **Seed/Fruits:** 2 wings, flat, each contains 1 seed, up to 20,000 seeds per plan.
- . **Toxicity:** Sap on skin can cause rash and blisters, cover skin when dealing with this weed.
- . **Control:** Manual, mechanical, stump treatment.

Iris, Pale Yellow

Iris pseudacorus

Iridaceae (Iris Family)

Category:

Prohibited Noxious



Steve Hurst, USDA NRCS PLANTS Database, Bugwood.org

- **Information:** Native to Europe.
- **Life cycle:** Perennial.
- **Root:** Bulbs and rhizomes.
- **Leaves:** Long, linear, dark green. Leaves emerge from ground in fanlike arrangement. Smooth edged, mostly basal leaves are flattened, sword-like with a pointed tip and raised midrib, and erect with upper part arching.
- **Stems:** 90 -120cm tall, round to flattened.
- **Flower:** Large pale to deep yellow flowers have three downward- and three upward-pointing petals, some with light-brown to purple veins or flecks.
- **Seed/Fruit:** Three-angled cylindrical capsule 2-10cm long, contains many flat brown seeds.
- **Toxic:** Horses, cattle, sheep, goats.
- **Control:**

Knapweed, Bighead
Centaurea macrocephala
Asteraceae (Sunflower Family)

Category:

Prohibited Noxious



- **Information:** Also known as Armenian Basket Flower, introduced as an ornamental.
- **Life Cycle:** Perennial.
- **Root:** Woody taproot, woody crown.
- **Leaves:** Broad, lance shaped leaves, pointed tips, rough, hairy, large.
- **Stems:** Up to 1.5m tall.
- **Flower:** Large, single, showy yellow flowers, fringed bracts below the flowers.
- **Seed/Fruits:** Reproduces by seed.
- **Toxicity:**
- **Control:** Early control before seed set.

knapweed, black — *Centaurea nigra*
knapweed, brown — *Centaurea jacea*
knapweed, meadow (hybrid) — *Centaurea × moncktonii*
Asteraceae (Sunflower Family)

Category:

Prohibited Noxious



knapweed, brown — *Centaurea jacea*



knapweed, meadow — *Centaurea × moncktonii*



knapweed, black
Centaurea nigra

- **Information:** Introduced from Eurasia, weed of disturbed areas, tolerates a wide range of conditions (brown knapweed prefers cool, moist areas), weed of hayland, Meadow knapweed is a hybrid of black and brown knapweed.
- **Life Cycle:** Herbaceous perennial.
- **Root:** Woody crown, woody taproot.
- **Leaves:** Leaves are not highly divided like many of the other knapweeds.
- **Stems:** 20-80cm, branching mid stem.
- **Flower:** Pink, purple, comb-like bracts below flowers. Brown knapweed has brown bracts and the tips of the bracts of black knapweed are black. Meadow knapweed can be either.
- **Seed/Fruits:** Reproduces by seed.
- **Toxicity:** Allelopathic towards other plants.
- **Control:** Long-term control, hand pick, chemical.

Knapweed, Diffuse
Centaurea diffusa
Asteraceae (Sunflower Family)

Category:

Prohibited Noxious



- . **Information:** Introduced from Eurasia.
- . **Life cycle:** Biennial or short-lived perennial.
- . **Root:** Taproot.
- . **Leaves:** Seedlings have finely divided leaves with small hairs. Mature leaves are divided into linear segments, broadly lance-shaped, grayish-green, covered with woolly hairs, and alternate.
- . **Stems:** Up to 60cm tall and highly branched.
- . **Flower:** White or pink flower head. Bracts form stiff, cream- to brown coloured spines divided into comb-like teeth.
- . **Seed/Fruit:** Brown or grayish, small.
- . **Control:** Long term, hand pick, chemical.

Knapweed, Hybrid
Centaurea × psammogena
Asteraceae (Sunflower Family)

Category:

Prohibited Noxious



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Knapweed, Spotted

Knapweed, Diffuse



- **Information:** Introduced from Eurasia, hybrid of Spotted and Diffuse knapweeds.
- **Life Cycle:** Biennial or short lived perennial.
- **Root:** Woody taproot.
- **Leaves:** Finely divided, covered with fine hairs.
- **Stems:** 20-80cm tall.
- **Flower:** Pink to white.
- **Seed/Fruits:**
- **Toxicity:**
- **Control:** Long term, hand pick, chemical.

Knapweed, Russian
Acroptilon repens
Asteraceae (Sunflower Family)

Category:

Prohibited Noxious



- **Information:** Native to Eurasia, forms dense, long lived stands.
- **Life cycle:** Perennial.
- **Root:** Rhizomatous with black, bark-like Covering.
- **Leaves:** Basal leaves toothed, covered with fine hairs, grayish-green. Lower stem leaves deeply lobed, 5-10cm long; upper stem leaves narrow, toothed, and up to 6cm long.
- **Stems:** One or more stems up to 90cm tall.
- **Flower:** One purple flower head per branch tip. Bracts rounded with papery tips.
- **Seed/Fruit:** Oval, grey or ivory with long white bristles.
- **Toxic:** Horses.
- **Control:** Long term, hand pick, chemical control late in the season.

<http://www.invasiveplants.ab.ca/Downloads/FS-RussianKnapweed.pdf>

Knapweed, Spotted

Centaurea stoebe

Asteraceae (Sunflower Family)

Category:

Prohibited Noxious



- **Information:** Introduced from Europe, covers vast areas of land in Canada and in the USA, found in disturbed areas, is allelopathic.
- **Life cycle:** Biennial or short-lived perennial.
- **Root:** Taproot.
- **Leaves:** Rosette leaves are deeply lobed, grayish green, and up to 15cm long. Stem leaves finely divided into linear segments.
- **Stems:** Up to 120cm tall and highly branched.
- **Flower:** One pinkish-purple flower head on each branch. Bracts have dark spot on tip and fringed edges.
- **Seed/Fruit:** Black seeds 2mm long.
- **Control:** long term, hand pick, chemical.

knapweed, Squarrose
Centaurea virgata
Asteraceae (Sunflower Family)

Category:

Prohibited Noxious



- **Information:** Introduced from Eastern Mediterranean/Asia, looks similar to Diffuse Knapweed in growth form but has pink flowers. Weed of range and pasture, open habitats.
- **Life Cycle:** Perennial.
- **Root:** Taproot.
- **Leaves:** Rosette leaves in first years growth, deeply divide leaves on the lower portion of the plant, bract-like leaves on the top, green-grey in color.
- **Stems:** 30-50cm tall, highly branched.
- **Flower:** Pink flowers, smaller than the other pink knapweeds, bracts below the flowers.
- **Seed/Fruits:** Reproduces by seed, remains viable for many years.
- **Toxicity:**
- **Control:** Early detection, grazing.

Knapweed, Tyrol
Centaurea nigrescens
Asteraceae (Sunflower Family)

Category:

Prohibited Noxious



- **Information:** Native to Europe, larger leaf than the other knapweeds, weed of disturbed areas.
- **Life Cycle:** Perennial.
- **Root:** Taproot.
- **Leaves:** Entire, large.
- **Stems:** 30-150cm, erect, branching.
- **Flower:** Pink-purple, bracts present (dark brown-black).
- **Seed/Fruits:** Reproduces by seed.
- **Toxicity:**
- **Control:** Long term, hand pick, chemical.

Knotweed Complex

Fallopia spp./ *Polygonum*

Polygonaceae (Knotweed Family)

Category:

Prohibited Noxious

Knotweed, Giant — *Fallopia sachalinensis*
knotweed, hybrid Japanese — *Fallopia x bohemica*
knotweed, Japanese — *Fallopia japonica*



- **Life cycle:** Herbaceous perennial.
- **Root:** Rhizomatous.
- **Leaves:** Alternate, stalked, broadly oval to triangular and pointed at the tip. Giant knotweed leaves are 30cm or longer and 2/3 as wide. Japanese knotweed leaves are 15cm long by 7-10cm wide. Himalayan knotweed leaves are 10-20cm long with tapered and elongated tips, basal leaves slightly heart-shaped, and often with soft hairs on veins, margins and lower surfaces.
- **Stems:** Hollow, smooth, weakly woody, jointed, swollen at nodes, 3.5m or taller, base surrounded by membranous sheath.
- **Flower:** Small greenish white flowers in sprays at branch tip. Japanese knotweed inflorescence is larger than that of giant knotweed; the flowers are prominently winged, and their size increases significantly with age.
- **Seed/Fruit:** Black with ribs.
- **Toxic:** Horses, cattle, goats.

Lythrum salicaria
Lythraceae (Loosestrife Family)

Category:

Prohibited Noxious



- **Information:** Native to Europe, Aisia and Africa, introduced as an ornamental, poses huge threats to riparian habitat.
- **Life cycle:** Perennial.
- **Root:** Short rhizomes and taproot.
- **Leaves:** Claspings, lance-shaped leaves with a notched base and smooth margins are opposite or whorled on stem.
- **Stems:** 1.5-3m tall, square or octagonal.
- **Flower:** Clustered on vertical terminal spike extending 5cm to 90cm down stem, one or more flowering branches; rose to purple with four to eight petals.
- **Seed/Fruit:** Small brown capsules with many seeds, can produce up to 2.5 million seeds/plant, remains viable up to 20 years.
- **Control:** Handpick, chemical.

<http://www.invasiveplants.ab.ca/Downloads/FS-PurpleLoosestrife.pdf>

Medusahead

Taeniatherum caput-medusae
Poaceae (Grass Family)

Category:

Prohibited Noxious



- **Information:** Introduced from the Mediterranean, weed of forage.
- **Life Cycle:** Annual.
- **Root:** Fibrous.
- **Leaves:** Produces tillers but very few leaves, narrow.
- **Stems:** Hairy.
- **Flower:** Awns 2-7cm long, stiff, finely barbed.
- **Seed/Fruits:** Seed twists as fruit matures, reproduces by seed, doesn't shatter, 7 seeds per spike.
- **Toxicity:** Barbed awns can cause injury to grazing animals.
- **Control:** Mowing, early grazing and cultivation.

Nutsedge, Yellow
Cyperus esculentus
Cyperaceae (Sedge Family)

Category:

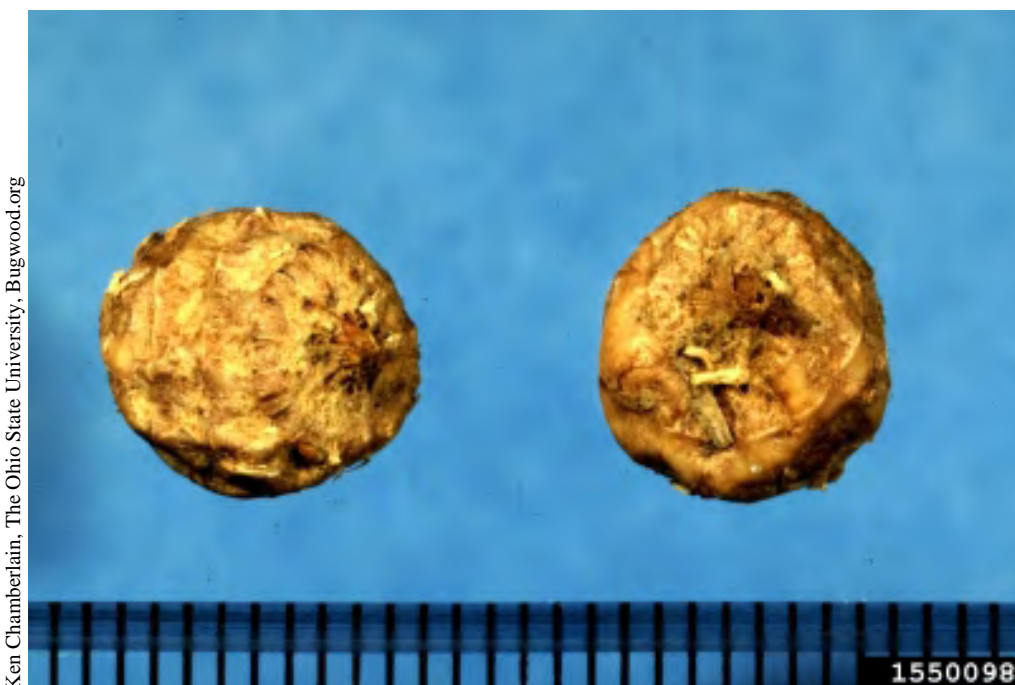
Prohibited Noxious



John Cardina, The Ohio State University, Bugwood.org



Steve Dewey, Utah State University, Bugwood.org



Ken Chamberlain, The Ohio State University, Bugwood.org



Ken Chamberlain, The Ohio State University, Bugwood.org

- **Information:** Native to North America, not hardy in cold climates.
- **Life Cycle:** Perennial.
- **Root:** Creeping, fibrous roots, reproductive tubers.
- **Leaves:** Alternate, grass-like, waxy.
- **Stems:** Triangular stem (3 sided).
- **Flower:** Umbrella shaped cluster, male and female flowers.
- **Seed/Fruits:** Many new plants arise from underground roots, viable seed 50%.
- **Toxicity:**
- **Control:** Do not cultivate.

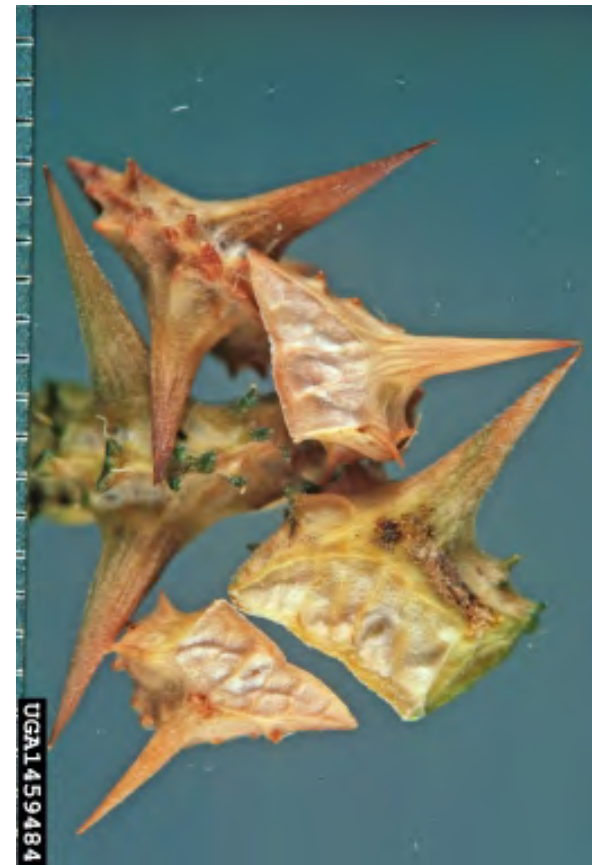
Puncturevine

Tribulus terrestris

Zygophyllaceae (Caltrop Family)

Category:

Prohibited Noxious



- **Information:** Introduced from the Mediterranean and Africa, spread in sheep wool.
- **Life Cycle:** Perennial, summer annual in colder climates.
- **Root:** Woody taproot.
- **Leaves:** Opposite, 8-16 leaflets, hairy, pinnately compound, leaflets less than 1cm wide.
- **Stems:** Branched, hairy stems radiate from the crown, prostrate (on the ground) from 10cm to over 1m long.
- **Flower:** Yellow, 5 petals, 4-10mm wide.
- **Seed/Fruits:** Pod, 2-3 sharp spines (10mmlong) 4-5 single seeded nutlets, hard.
- **Toxicity:** Poisonous to livestock.
- **Control:** Hand pick, chemical.

Ragwort, Tansy

Senecio jacobaea

Asteraceae (Sunflower Family)

Category:

Prohibited Noxious



- **Information:** Native to Eurasia, prefers dry open areas.
- **Life cycle:** Biennial or short-lived perennial.
- **Root:** Taproot.
- **Leaves:** Rosette has 10 - 20 leaves with web-like hairs. Basal leaves 5cm-25cm long, lobed into leaflets and leaflets lobed again. Stem leaves alternate, evenly distributed, lower leaves larger, strong odour when crushed.
- **Stems:** Commonly 30-90cm tall but up to 1.8m. Several or solitary stems may branch near the terminal inflorescence. Stems and leaf stalks often purplish and have cobwebby hairs.
- **Flower:** Daisy-like flower heads, yellow petals, yellow center, less than 2.5cm diameter, clustered on terminal stem.
- **Seed/Fruit:** Tiny and tipped by hair-like plumes.
- **Toxic:** Horses, cattle, sheep, goats, humans.

Rush Skeletonweed

Chondrilla juncea

Asteraceae (Sunflower Family)

Category:

Prohibited Noxious



- **Information:** Native to Europe, Asia, Africa, other names include Gum Succory, Devils Grass and Nakedweed.
- **Life cycle:** Perennial.
- **Root:** Taproot.
- **Leaves:** Sharp, deeply toothed rosette leaves wither as the stem grows. Occasional narrow leaves on stem.
- **Stems:** Downward bent, reddish, coarse hairs on the lower 10-15cm of green stems.
- **Flower:** Yellow flower heads 5mm in diameter are scattered on the stems and branch tips. Flowers single or clusters of two to five.
- **Seed/Fruit:** Light brown to black, ribbed, and with white bristles.
- **Control:** Cultivation is not recommended because of the root's ability to re grow from small sections.

Saltcedar

Tamarix ramosissima

Tamaricaceae (Tamarisk Family)

Category:

Prohibited Noxious



- **Information:** Introduced as an ornamental.
 - **Life cycle:** Perennial deciduous or ever-green shrub or small tree, weed of waterways.
 - **Root:** Deep taproot and adventitious roots of stems and branches.
 - **Leaves:** Small leaves on green stems are alternate, overlapping, and appear scale-like. Foliage salty to taste.
 - **Stems:** 1.5-6m tall, highly branched, smooth, dark brown to reddish brown bark.
 - **Flower:** Small pink to white with five petaled flowers borne in finger like clusters on terminal and lateral branches.
 - **Seed Fruit:** Extremely small seeds with a tuft of hairs on tip are contained in capsules.
- Control:** Do not plant.

Similar Species:

Tamarisk, Chinese - *Tamarix chinensis*

Tamarisk, Smallflower - *Tamarix parviflora*

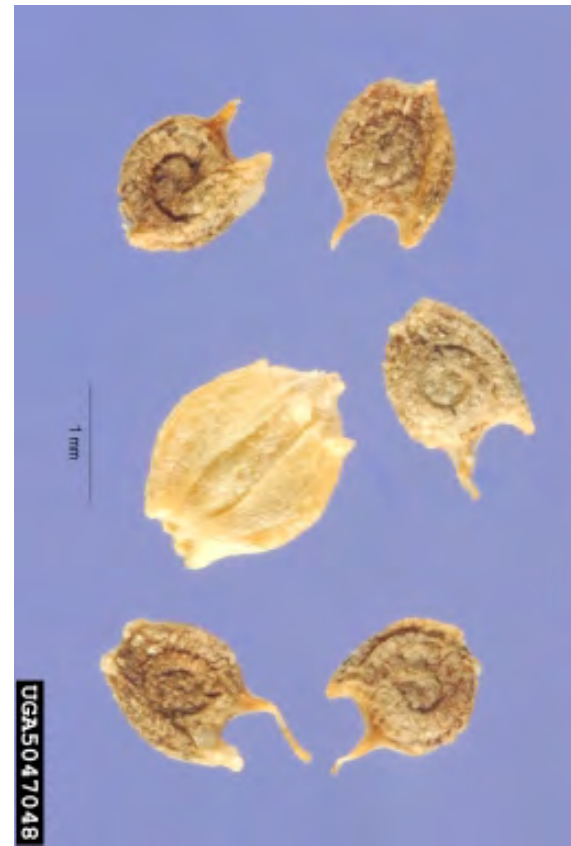
Saltlover

Halogeton glomeratus

Chenopodiaceae (Goosefoot Family)

Category:

Prohibited Noxious



- **Information:** Other names include halogeton, tolerant of saline and alkaline soils, tumblers.
- **Life Cycle:** Summer annual.
- **Root:** Taproot, up to 5m deep.
- **Leaves:** Small hair at the end of each leaf, alternate, simple, fleshy, tubular, blue-green.
- **Stems:** 8-30cm tall, red when young, yellow-white at maturity, branched.
- **Flower:** Small, inconspicuous, in leaf axil.
- **Seed/Fruits:** Early germination, reproduced from 2 types of seeds, viable for up to 10 years.
- **Toxicity:** Poisonous to sheep, possible effect on larger livestock.
- **Control:** Competition.

St John's-wort, Common
Hypericum perforatum
Clusiaceae

Category:

Prohibited Noxious

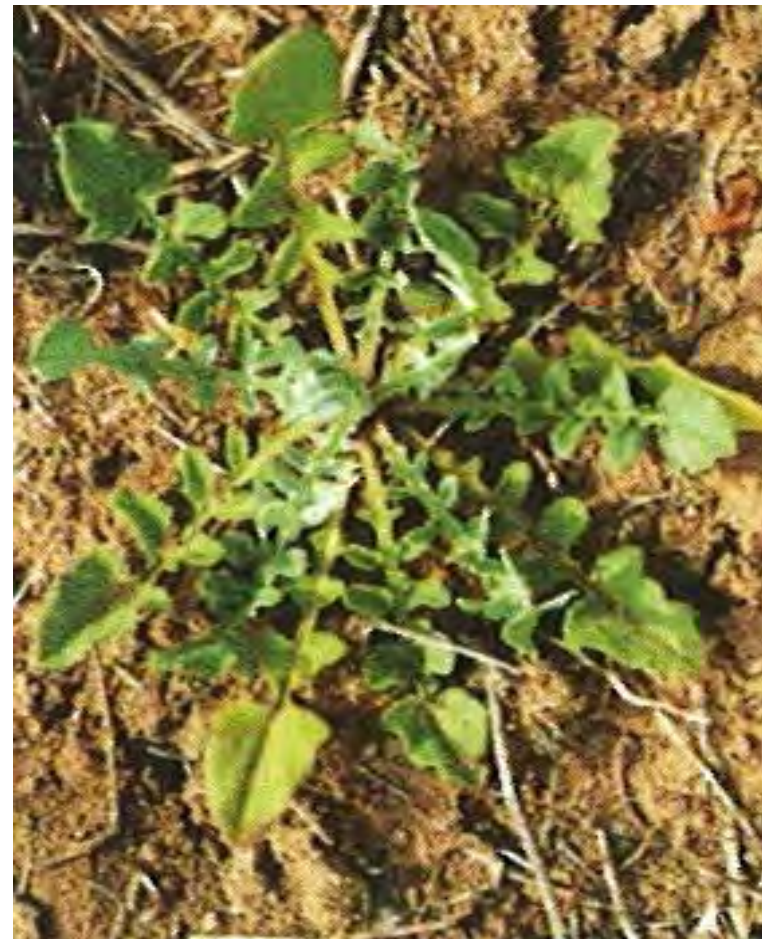
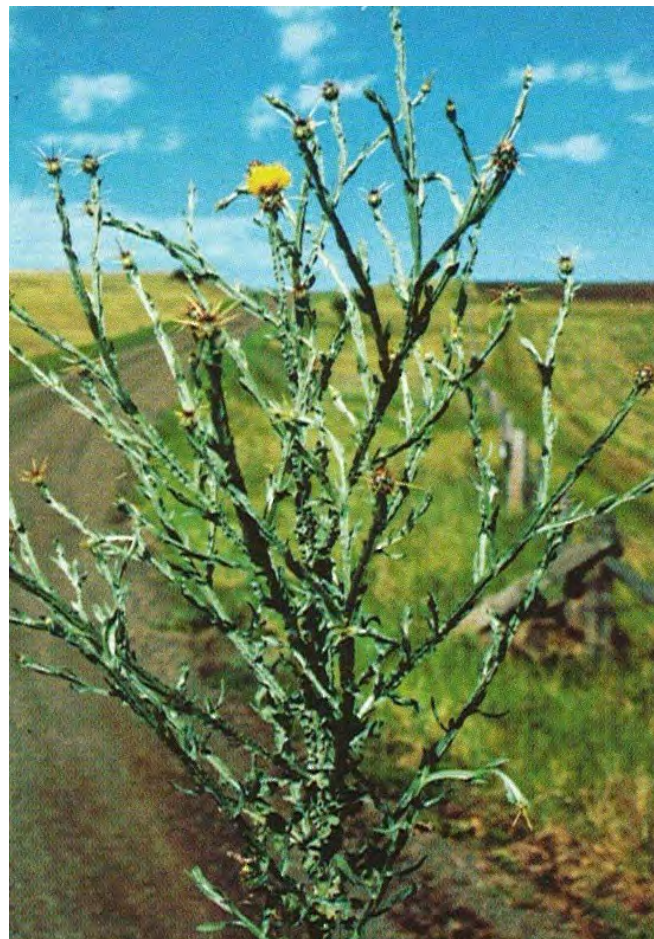


- **Life cycle:** Perennial.
- **Root:** Taproot and lateral roots.
- **Leaves:** Oval-shaped leaves up to 2.5cm long, opposite, lack stalks and teeth, are darker green above, and have in-rolled edges and tiny transparent dots on the surface.
- **Stems:** 30-90cm tall, reddish with black glands, erect, with two opposite longitudinal ridges; may branch many times near the top.
- **Flower:** Numerous five-petaled yellow flowers form flat-topped clusters on terminal branches. Flowers are up to 2.5cm in diameter and bloom from the center out. Black glands along the petal margins.
- **Seed/Fruit:** Rust colored seeds pods are 5mm long and contain numerous seeds in three-pointed capsules.
- **Toxic:** Horses, cattle, sheep.

Starthistle, Yellow
Centaurea solstitialis
Asteraceae (Sunflower Family)

Category:

Prohibited Noxious



- **Life cycle:** Annual.
- **Root:** Taproot.
- **Leaves:** Rosette leaves are deeply lobed with pointed tip. Stem leaves are vertical, flat extensions along the stem and covered with cottony hairs.
- **Stems:** Up to 1.5m tall, rigid.
- **Flower:** One yellow flower head per branch. Sharp, straw-colored spines up to 5mm long radiate from the bracts. Meter seed dispersal, a cottony tuft remains on stem.
- **Seed/Fruit:** Light to dark-coloured with or without bristles.
- **Toxic:** Horses.
- **Control:** long term, hand pick, chemical before seed set.

Thistle, Marsh
Cirsium palustre
Asteraceae (Sunflower Family)

Category:

Prohibited Noxious



- **Information:** May hybridize with Canada Thistle and native marsh thistles.
- **Life Cycle:** Biennial, rosette in the first year, flowers in the second.
- **Root:** Fibrous root system.
- **Leaves:** Leaves covered with long sticky hairs, lobed, 15-20cm long.
- **Stems:** 1-1.5m tall, branched at top, thick, reddish in color, covered in long sticky hairs.
- **Flower:** Many flowers per plant, purple, bracts spineless.
- **Seed/Fruits:** Small, hard, elongated, tuft of bristles (pappus) for seed dispersal.
- **Toxicity:**
- **Control:** Control in first year or before seed set.

Thistle, Nodding
Carduus nutans
Asteraceae (Sunflower Family)

Category:

Prohibited Noxious



- **Information:** Native to Europe, also known as Musk Thistle, weed of rangeland.
- **Life Cycle:** Biennial, rosette in the first years growth, flowers in the second.
- **Root:** Fleshy taproot.
- **Leaves:** Clasping, alternately arranged on the stem, spines along edge, hairy, sometimes pinkish, wavy edge.
- **Stems:** Spines along stem, 20cm - 2.5m tall, hairy.
- **Flower:** Large, nodding, purple, thorny bract below the flower.
- **Seed/Fruits:** Pappus present, each flower head may produce up to 1200 seeds.
- **Toxicity:**
- **Control:** hand pick, chemical control before seed set.

<http://www.invasiveplants.ab.ca/Downloads/FS-NoddingThistle.pdf>

Thistle, Plumeless
Carduus acanthoides
Asteraceae (Sunflower Family)

Category:

Prohibited Noxious



- **Information:** May also be called Bristly Thistle, may be confused with native thistles.
- **Life Cycle:** Herbaceous biennial, or winter annual. Rosette leaves in the first years growth, flowers in the second.
- **Root:** Taproot, large and fleshy.
- **Leaves:** Clasping, alternately arranged on the stem, spines along edge and at leaf tip, hairy, lobed. Rosette leaves are very large.
- **Stems:** Spines along stem, up to 2m tall.
- **Flower:** Purple, small, erect, spine tipped bracts, smaller than nodding thistle.
- **Seed/Fruits:** Spread by seed, pappus attached to seed, wind dispersal.
- **Toxicity:**
- **Control:** Hand pull, chemical control before seed set.



Noxious Weeds

Noxious Weeds have the ability to spread rapidly, cause severe crop losses and economic hardship. These weeds must be controlled to prevent further establishment and spread.

Baby's-breath, Common
Gypsophila paniculata
Caryophyllaceae (Pink Family)

Category:

Noxious



- . **Information:** Introduced from Europe as an ornamental, other names include glposphila and maiden's-breath.
- . **Life Cycle:** Perennial.
- . **Root:** Woody root.
- . **Leaves:** Opposite and lance shaped, not noticeable when in bloom.
- . **Stems:** Numerous branches.
- . **Flower:** Numerous small white flowers, 5 petals.
- . **Seed/Fruits:** This plant is highly productive. The seed is black, kidney shaped, and bumpy.
- . **Toxicity:**
- . **Control:** Chemical, hand pick.

www.invasiveplants.ab.ca/Downloads/FS-BabysBreath.pdf

Bellflower, Creeping
Campanula rapunculoides
Boraginaceae (Borage Family)

Category:

Noxious



- **Information:** Introduced as an ornamental from Europe, other names include Creeping Bellflower, Creeping Bluebell.
- **Life Cycle:** Creeping perennial, reproduces by creeping root and seeds.
- **Root:** Thick creeping rhizomes make this plant difficult to control.
- **Leaves:** Leaves are alternately arranged on the stem, heart shaped, jagged edges.
- **Stems:** No branching, 20-60cm tall.
- **Flower:** Purple, bell shaped, spike.
- **Seed/Fruits:** One plant can produce thousands of seeds per year, seeds are small and light brown
- **Toxicity:**
- **Control:** Long term, hand pull before seed set, difficult to get the entire root, resistant to some chemicals, mowing will not kill this plant, but will prevent flowering.

<http://www.invasiveplants.ab.ca/Downloads/FS-CreepingBellflower.pdf>

Bindweed, Field

Convolvulus arvensis

Convolvulaceae (Morning Glory Family)

Category:

Noxious



- **Life cycle:** Perennial.
- **Root:** Taproot with lateral roots.
- **Leaves:** Dark green, arrow head shaped with sharp pointed lobes are alternate and grow on one side of the stem.
- **Stems:** Up to 1.5m long, growing horizontally or climbing.
- **Flower:** 2.5cm in diameter, tubular or bell-shaped, and white to pinkish. Two bracts on stem below flower.
- **Seed/Fruit:** Four seeds per small round fruit.
- **Toxic:** Horses.
- **Control:** chemical, hand pick.

<http://www.invasiveplants.ab.ca/Downloads/FS-FieldBindweed.pdf>

Blueweed
Echium vulgare
Boraginaceae (Borage Family)

Category:

Noxious



Linda Harrison

Linda Harrison



Alberta Sustainable Resource Development

- **Information:** Introduced from Africa as an ornamental, also known as Viper's Bugloss, increases in over-grazed pastures.
- **Life cycle:** Biennial.
- **Root:** Black taproot/fibrous lateral roots.
- **Leaves:** Basal leaves narrow, 1-15cm long, stalked; stem leaves alternate, smaller and stalkless near apex, all leaves covered with stiff hairs.
- **Stems:** Up to 90cm tall, covered with short hairs and scattered long, stiff hairs which often have swollen dark bases that form flecks.
- **Flower:** Numerous flowers 1-2cm long arranged on upper side of short stems that elongate after flowering. Buds reddish purple, becoming bright blue upon flowering. Petals fused at base into a short tube that flares.
- **Seed/Fruit:** Nutlets clustered in groups of four, greyish brown, angular, roughened, and wrinkled.
- **Toxic:** Horses, sheep.
- **Control:** Hand pick, control in rosette stage.

<http://www.invasiveplants.ab.ca/Downloads/FS-Blueweed.pdf>

Brome, Downy (Cheat Grass)

Bromus tectorum

Poaceae (Grass Family)

Category:

Noxious

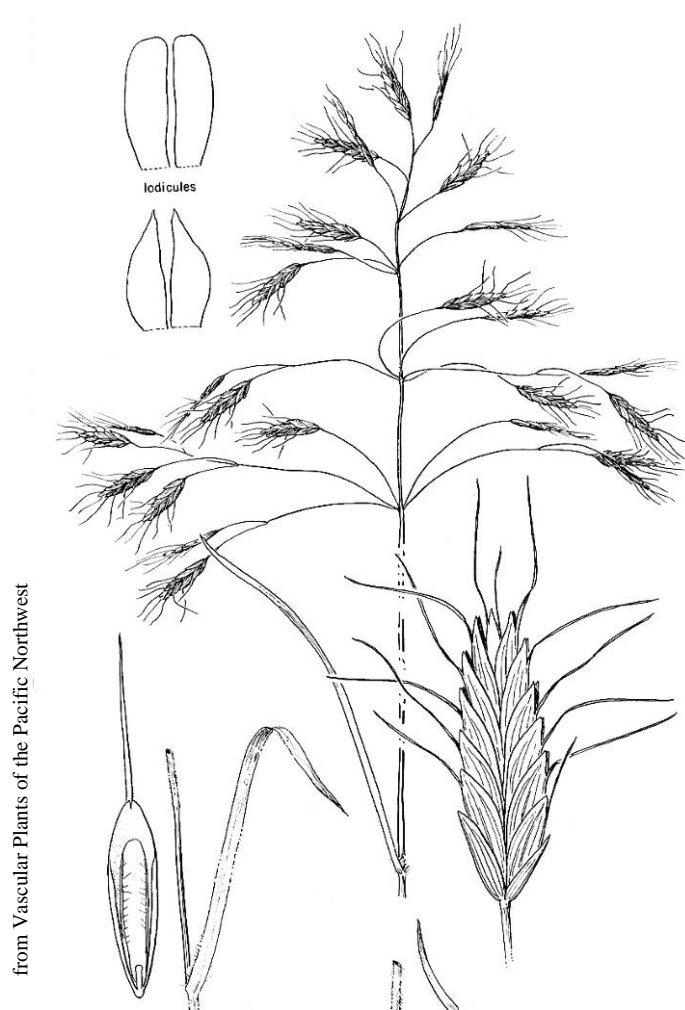


- **Information:** Other names include downy chess, and cheatgrass, can reduce agricultural production and is a fire hazard in roadside ditches.
- **Life Cycle:** Annual or winter annual.
- **Root:** Fibrous roots.
- **Leaves:** Leaf blades are 2-4 mm wide, 5-12 cm long covered with soft hairs, ligule present; toothed, 1-3 mm long.
- **Stems:** Covered with soft hairs, 5-60cm tall.
- **Flower:** Nodding Panicle, often reddish-purple when mature, covered with soft hairs, long awns.
- **Seed/Fruits:** Aggressive seed producer.
- **Toxicity:** Awns can irritate livestock mouths.
- **Control:** early spring, chemical, hand pick.

Brome, Japanese
Bromus japonicus
Poaceae (Grass Family)

Category:

Noxious



- **Information:** Similar to Downy Brome, also known as Japanese Chess.
- **Life Cycle:** Annual or winter annual.
- **Root:** Fibrous roots.
- **Leaves:** Leaf blades are 2-4 mm wide, covered with soft white hairs, ligule present.
- **Stems:** Covered with soft hairs, 30-60cm tall.
- **Flower:** Panicles droop to one side, spikelet flattened, shorter awns than downy brome and not as drooping.
- **Seed/Fruits:** Aggressive seed producer.
- **Toxicity:**
- **Control:** Graze early before seed set, chemical, hand pick.

Burdock, great — *Arctium lappa*
Burdock, lesser — *Arctium minus*
Burdock, woolly — *Arctium tomentosum*
Asteraceae (Sunflower Family)

Category:

Noxious



- **Information:** Introduced from Europe, can be found in disturbed areas.
- **Life Cycle:** Biennial; basal leaves in the first year of growth, flowers in the second.
- **Root:** Taproot.
- **Leaves:** Large leaves, heart shaped, woolly underneath, larger leaves are closer to the ground, alternately arranged on the stem.
- **Stems:** Plant can be as large as 3m tall, stems are thick and hollow.
- **Flower:** Clusters of purple-pink flowers, flowers have hooked bracts.
- **Seed/Fruits:** Large seed pods with hooks attach themselves to clothing and fur, a mature plant can produce from 6,000 to 16,000 seeds.
- **Control:** Control in the rosette stage (first years growth).

<http://www.invasiveplants.ab.ca/Downloads/FS-CommonBurdock.pdf>

Buttercup, Tall
Ranunculus acris
Ranunculaceae (Buttercup Family)

Category:

Noxious

www.invasiveplants.ab.ca/



- **Information:** Introduced from Europe, weed of moist pastures.
- **Life cycle:** Perennial.
- **Root:** Hairy, fibrous, occasionally rhizomatous.
- **Leaves:** Hairy leaves deeply lobed (nearly to the base) into three to five segments with each segment lobed again; leaves decrease in size toward stem apex; uppermost leaves have three to four narrow segments.
- **Stems:** Up to 100cm tall, branched and hairy.
- **Flower:** Glossy yellow flowers in clusters, up to 3cm in diameter with greenish center.
- **Seed/Fruit:** Disc-shaped, reddish brown with short hook.
- **Toxic:** Horses, cattle, sheep, goats
- **Control:** Chemical.

<http://www.invasiveplants.ab.ca/Downloads/FS-TallButtercup.pdf>

Chamomile, Scentless
Tripleurospermum perforatum
Asteraceae (Sunflower Family)

Category:

Noxious



- . **Information:** Introduced from Eurasia, also known as Mayweed, False Chamomile.
- . **Life Cycle:** Annual, biennial, or short lived perennial.
- . **Root:** Fibrous roots.
- . **Leaves:** Fern-like leaves are highly branched, glossy and scentless.
- . **Stems:** Stems are branched, and can be up to 1m tall.
- . **Flower:** Terminal flowers, yellow centre (disk florets), and white petals (ray florets).
- . **Seed/Fruits:** Prolific seed production.
- . **Toxicity:**
- . **Control:** Hand pick, chemical control before seed set.

<http://www.invasiveplants.ab.ca/Downloads/FS-ScentlessChamomile.pdf>

Clematis, Yellow
Clematis tangutica
Ranunculaceae (Buttercup Family)

Category:

Noxious



www.invasiveplants.ab.ca/



www.invasiveplants.ab.ca/

- **Information:** Native to Asia, introduced and sold as an ornamental.
- **Life Cycle:** Perennial vine.
- **Root:** Creeping root.
- **Leaves:** Leaf tips are pointed and edges are coarsely toothed. Leaves may be slightly hairy on the underside and are deciduous.
- **Stems:** Branched, 3-4 m long, leaves will grow on new and old woody stems.
- **Flower:** Flowers are yellow, 4 petals, bell shaped.
- **Seed/Fruits:** Numerous seeds, long silky tail.
- **Toxicity:**
- **Control:** Hand pull, chemical.

<http://www.invasiveplants.ab.ca/Downloads/FS-YellowClematis.pdf>

Cockle, White
Silene latifolia Poiret ssp.
Caryophyllaceae (Pink Family)

Category:

Noxious



http://www.commanster.eu/commanster/Plants/Flowers/Silene/Silene_latifolia.jpg



[http://images.google.ca/imgres?imgurl=http://upload.wikimedia.org/wikipedia/commons/thumb/b/b2/Silene_latifolia_2\(oz\).JPG](http://images.google.ca/imgres?imgurl=http://upload.wikimedia.org/wikipedia/commons/thumb/b/b2/Silene_latifolia_2(oz).JPG)

- . **Information:** Introduced from Europe, other names include White Champion, Champion.
- . **Life Cycle:** Annual, biennial, short lived perennial.
- . **Root:** Deep tap root.
- . **Leaves:** Leaves are opposite, covered with slightly sticky hairs, prominent centre line.
- . **Stems:** Hairy, slightly sticky, 20-80cm tall.
- . **Flower:** White petaled flowers, male flowers have a 5 veined calyx, female flowers have 20 veins, hairy and slightly sticky.
- . **Seed/Fruits:** Aggressive seed producer, seeds are kidney shaped, grey and bumpy.
- . **Toxicity:**
- . **Control:** hand pick, bale hay before seed set.

<http://www.invasiveplants.ab.ca/Downloads/FS-WhiteCockle.pdf>

Oxeye Daisy

Leucanthemum vulgare

Asteraceae (Sunflower Flower)

Category:

Noxious



- . **Information:** Introduced from Europe as an ornamental .
- . **Life cycle:** Short-lived perennial.
- . **Root:** Shallow, branched rhizomes.
- . **Leaves:** Variable. Basal and lower stem leaves have long narrow stalks and have rounded teeth, upper stem leaves are smaller toward apex, have no stalk, and are toothed.
- . **Stems:** 20-80cm tall, simple or once branched, smooth.
- . **Flower:** One, 2 - 5cm diameter flower head per stem with white outer petals (ray florets) and a yellow center (disk florets).
- . **Seed/Fruit:** Black with ribs, small.
- . **Control:** Chemical, deadhead, replace with Shasta Daisy.

<http://www.invasiveplants.ab.ca/Downloads/FS-OxeyeDaisy.pdf>

Dame's Rocket
Hesperis matronalis
Brassicaceae (Mustard Family)

Category:

Noxious



<http://web.umbc.ca/~fsy201/wildflower/WIK-Hesperis%20matronalis>



www.dnr.wi.gov/.../images/600jps/hespmatr2.jpg



Photo by
Richard Old
www.kidservices.com

http://www.anpc.ab.ca/wiki/images/3/35/Hespmatr_XID_Hesperis_matronalis3.jpg

- **Information:** Introduced from Europe as an ornamental, also known as Dames violet.
- **Life Cycle:** Perennial.
- **Root:** Shallow root.
- **Leaves:** Stalkless, alternately arranged on the stem, small hairs on both sides, fine toothed edges .
- **Stems:** Branched, medium height.
- **Flower:** Showy purple flowers with 4 petals.
- **Seed/Fruits:** Reproduces by seed, each plant can produce up to 20,000 seeds.
- **Toxicity:**
- **Control:** Hand pick, chemical.

Henbane, Black
Hyoscyamus niger
Solanaceae (Nightshade Family)

Category:

Noxious



www.invasiveplants.ab.ca/

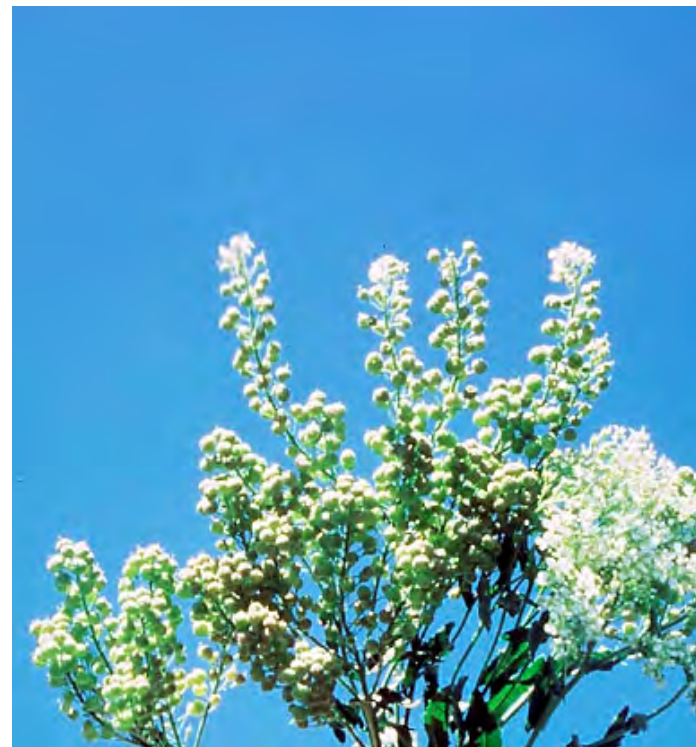
- **Information:** Weed of disturbed areas.
- **Life Cycle:** Biennial, basal rosette leaves in the first year of growth, flowers in the second.
- **Root:** Taproot.
- **Leaves:** Bell shaped flowers, slightly sticky, offensive odor, large, toothed margin, 15cm wide, 20 cm long.
- **Stems:** Tall plant, up to 1m, sometimes branched.
- **Flower:** Interesting flowers, large, many purple veins, purple centre.
- **Seed/Fruits:** Capsule, hairy, poisonous.
- **Toxicity:** Poisonous to livestock and humans
- **Control:** Chemical control in the first year, basal stage, cut stem at flowering.

<http://www.invasiveplants.ab.ca/Downloads/FS-BlackHenbane.pdf>

Hoary Cress, globe-podded — *Lepidium appelianum*
Hoary Cress, heart-podded — *Lepidium draba*
Hoary Cress, lens-podded — *Lepidium chalepense*
Brassicaceae (Mustard Family)

Category:

Noxious



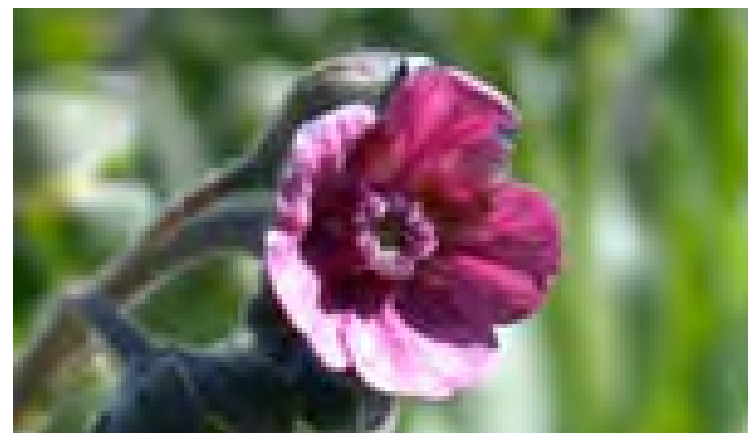
- . **Life cycle:** Creeping Perennial.
- . **Root:** Aggressive, rhizomatous, deep.
- . **Leaves:** Blue green to gray green leaves are alternate, covered with soft white hairs, and lance- to arrow head shaped. Lower leaves stalked; upper leaves clasp stem.
- . **Stems:** Up to 60cm tall.
- . **Flower:** Numerous white flowers with four petals borne on 1cm long stalk. Dense clusters create white, flat-top appearance.
- . **Seed/Fruit:** Seed capsules heart shaped with two reddish brown seeds.
- . **Toxic:** May be toxic to cattle.
- . **Control:** Chemical, cultivation or mowing may increase populations.

<http://www.invasiveplants.ab.ca/Downloads/FS-HoaryCress.pdf>

Hound's-Tongue
Cynoglossum officinale
Boraginaceae (Borage Family)

Category:

Noxious



Mary Ellen (Ma) Harte, Bugwood.org



www.invasiveplants.ab.ca/
Alberta Sustainable Resource Development

- **Life cycle:** Biennial.
- **Root:** Taproot.
- **Leaves:** Rosette leaves are up to 30cm long, velvety, lack teeth or lobes. Stem leaves alternate and smaller toward the apex.
- **Stems:** 60cm to 1.2m tall with branches near the apex.
- **Flower:** The terminal, scorpion-tail shaped portion of the branch unrolls and displays the five-petaled, reddish purple flowers.
- **Seed/Fruit:** Four bur-like, adhesive nutlets.
- **Toxic:** Horses, cattle, sheep, goats.
- **Control:** Spray rosette, mow before seed set.

<http://www.invasiveplants.ab.ca/Downloads/FS-HoundsTongue.pdf>

Mullein, Common

Verbascum thapsus

Scrophulariaceae (Figwort/Snapdragon Family)

Category:

Noxious



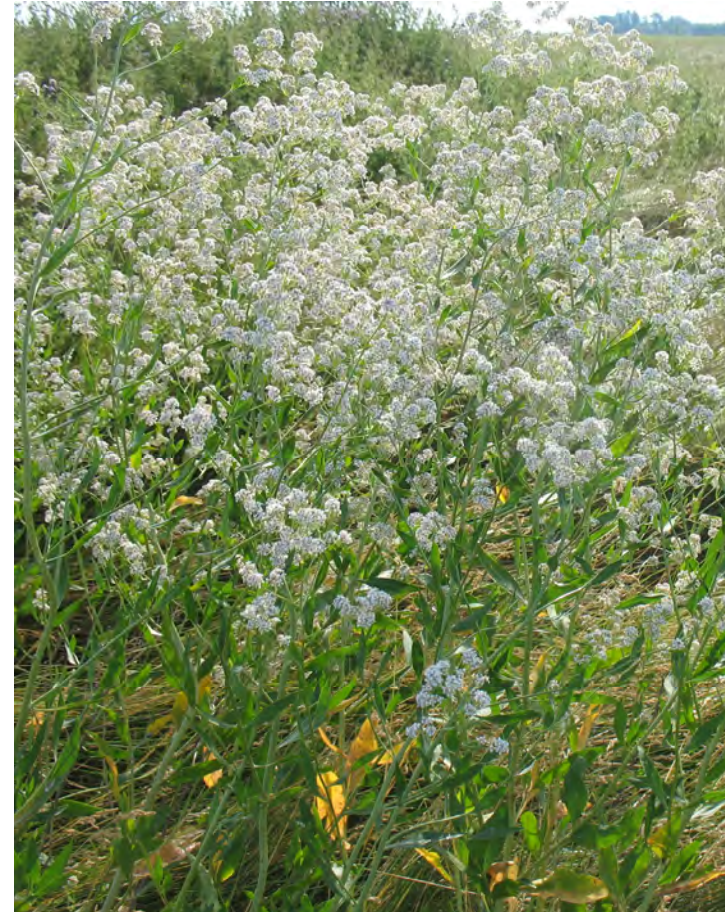
<http://www.greenspiritualherbs.com/images/10%20july%20mullein%20flower.jpg>

- **Information:** Introduced from Europe as a medicinal plant. Also known as Candlestick, Velvet Dock. Is a weed of disturbed areas.
- **Life Cycle:** Biennial, rosette in the first year of growth, flowers in the second.
- **Root:** Deep taproot.
- **Leaves:** Large leaves, very woolly, oppositely arranged on the stem, larger leaves at the base of the plant, smaller towards the top.
- **Stems:** Up to 2.5 m tall, woolly.
- **Flower:** Dense spike, yellow flowers, 5 petals.
- **Seed/Fruits:** Each plant can produce over 180,000 - 300,000 small seeds, capsule, hairy, long term viability (100 years).
- **Toxicity:** Has been used as a piscicide (control of fish)
- **Control:** Hand pick, chemical.

Pepper-grass, broad-leaved
Lepidium latifolium
Brassicaceae (Mustard Family)

Category:

Noxious



- . **Life cycle:** Perennial.
- . **Root:** Deep spreading roots.
- . **Leaves:** Bright green to gray green, broadest at base and tapering to pointed tip, with prominent whitish mid-vein. Basal leaves are up to 40cm long and 10cm wide with long stalks, covered with a waxy layer. Stem leaves smaller with smaller stalks, alternate, and do not clasp stem.
- . **Stems:** 30-90cm tall but can be up to 1.5m tall.
- . **Flower:** Small, less than 1cm wide with four white petals, and are borne in dense, rounded clusters on terminal branches.
- . **Seed/Fruit:** Flat, rounded, slightly hairy, 2-3mm long, reddish brown capsule contains two tiny seeds.

Scabious, field
Knautia arvensis
Dipsacaceae (Teasel Family)

Category:

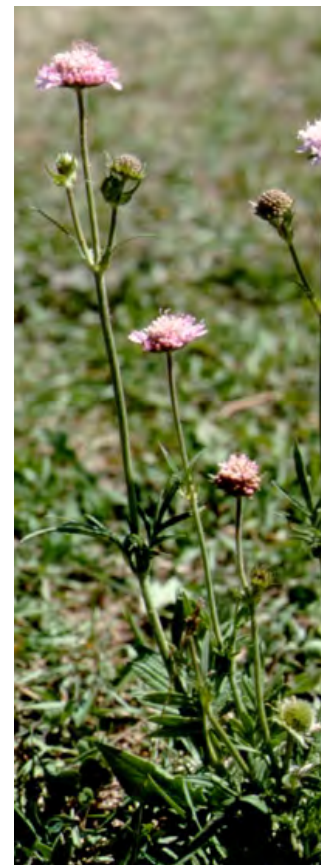
Noxious



Sustainable Resource Development



Photo by
Ian Morrison



www.anpc.ab.ca/wiki/index.php/Knautia_arvensis

- **Information:** Introduced from Europe, weed of pasture/forage.
- **Life Cycle:** Perennial.
- **Root:** Taproot.
- **Leaves:** Large, opposite, deeply divided, hairy.
- **Stems:** Covered by coarse stiff hairs, tall plant up to 1.3m.
- **Flower:** Pink terminal flower head.
- **Seed/Fruits:** Hairy, pappus, small.
- **Toxicity:**
- **Control:** Chemical.

<http://www.invasiveplants.ab.ca/Downloads/FS-FieldScabious.pdf>

Sow thistle, Perennial
Sonchus arvensis
Asteraceae (Sunflower Family)

Category:

Noxious



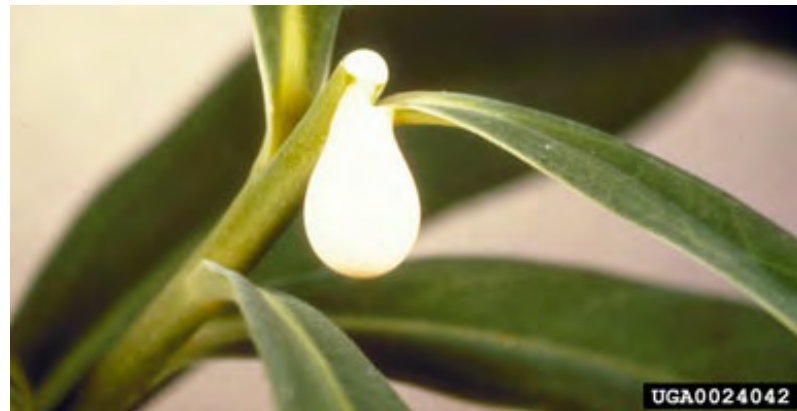
- **Information:** Introduced from Europe and Asia. Other names include; Creeping Sow Thistle, and Field Milk Thistle
- **Life Cycle:** Creeping perennial.
- **Root:** Creeping rhizomatous root.
- **Leaves:** Alternate, prickles on the edges, usually on the lower portion of the plant, milky juice.
- **Stems:** Hollow stems, branched at the top portion of the plant, milky juice.
- **Flower:** Yellow flowers.
- **Seed/Fruits:** Small seed, wings (pappus).
- **Toxicity:**
- **Control:** Chemical.

<http://www.invasiveplants.ab.ca/Downloads/FS-PerennSowthistle.pdf>

Leafy Spurge
Euphorbia esula
Euphorbiaceae (Spurge Family)

Category:

Noxious



- **Information:** Introduced from Eurasia.
- **Life cycle:** Perennial.
- **Root:** Brownish rhizomes with pink buds.
- **Leaves:** Alternate, narrow, 2-10cm long. Stems and leaves contain a white milky sap.
- **Stems:** Up to 90cm tall.
- **Flower:** Seven to 10 yellowish green flowers in small clusters. The inconspicuous flower is subtended by showy, heart-shaped yellow bracts.
- **Seed/Fruit:** Oblong, grayish to purple, and borne in a three-celled fruit.
- **Toxic:** Horses, cattle, humans.
- **Control:** Chemical, do not cultivate.

<http://www.invasiveplants.ab.ca/Downloads/FS-LeafySpurge.pdf>

Tansy, Common
Tanacetum vulgare
Asteraceae (Sunflower Family)

Category:

Noxious



- **Information:** Introduced as an ornamental, leaves have a strong odour when crushed.
- **Life cycle:** Perennial.
- **Root:** Rhizomatous, woody.
- **Leaves:** Leaves alternate, consistent in size, and deeply divided into leaflets with toothed margins.
- **Stems:** 30cm -1.8m tall, often purplish red
- **Flower:** Numerous (20 to 100) yellow- orange, button-like flower heads appear in flat-topped, dense clusters on the terminal stem. Flowers lack long (ray) petals.
- **Seed/Fruit:** Yellowish brown seeds have five-toothed ridges.
- **Toxic:** Horses, cattle, humans.
- **Control:** Chemical.

<http://www.invasiveplants.ab.ca/Downloads/FS-CommonTansy.pdf>

Thistle, Canada
Cirsium arvense
Asteraceae (Sunflower Family)

Category:

Noxious



Steve Dewey, Utah State University, Bugwood.org



- **Information:** Introduced from Europe.
- **Life cycle:** Perennial.
- **Root:** Horizontal and vertical.
- **Leaves:** Alternate, wavy, lance shaped, lobed, spine-tipped and lack stalks; Upper leaves smaller than lower leaves.
- **Stems:** 30-120cm tall, lack spines, erect, ridged, branched, and slightly hairy.
- **Flower:** Purple fading to white with diameter of 1.5-2cm form clusters at branch ends. Bracts have weak prickles (no spines).
- **Seed/Fruit:** Long, flattened seeds with tufts of white hairs.
- **Control:** Chemical, late fall application.

<http://www.invasiveplants.ab.ca/Downloads/FS-CanadaThistle.pdf>

Toadflax, Dalmatian

Linaria dalmatica

Scrophulariaceae (Figwort/Snapdragon Family)

Category:

Noxious



- **Information:** Similar to Yellow Toadflax.
- **Life cycle:** Perennial.
- **Root:** Taproot and horizontal roots with adventitious buds, woody.
- **Leaves:** Leaves and stems waxy, pale green to bluish green. Heart-shaped leaves alternate with smooth edges, and clasp stem.
- **Stems:** Up to 90cm tall, robust.
- **Flower:** Develop at base of the upper leaves, snapdragon-like, bright yellow with an orange throat and a long spur.
- **Seed/Fruit:** Irregular angled seeds in two-celled capsule.
- **Toxicity:**
- **Control:** chemical

<http://www.invasiveplants.ab.ca/Downloads/FS-DalmatianToadflax.pdf>

Toadflax, Yellow

Linaria vulgaris

Scrophulariaceae (Figwort/Snapdragon Family)

Category:

Noxious



- **Information:** Introduced from Europe as an ornamental.
- **Life cycle:** Perennial.
- **Root:** Creeping rhizomes.
- **Leaves:** Numerous, alternate, pale green to gray-green, individually connected to the stem, long (2 1/2 inches long or longer) and narrow, pointed at both ends, with smooth edges.
- **Stems:** 20-60cm inches tall, usually not branched.
- **Flower:** Yellow, snapdragon-like flowers with orange throat, 2.5-3cm long with downward spur (1 inch long), on short stalks in dense clusters at top of stems.
- **Seed/Fruit:** Capsule brown, round to oval with two compartments. Seeds dark brown to black, less than 4cm in diameter, flattened, with papery circular wing.
- **Control:** Chemical mid august.

<http://www.invasiveplants.ab.ca/Downloads/FS-CommonToadflax.pdf>

Weed Websites

Alberta Invasive Plant Council

<http://www.invasiveplants.ab.ca/index.html>

Weed Wise gardening in Alberta

<http://www.invasiveplants.ab.ca/Downloads/27x9%20WWbrochure.pdf>

Alberta Weed Act

<http://www.qp.alberta.ca/574.cfm?>

[page=W05P1.cfm&leg_type=Acts&isbncln=9780779737420](http://www.qp.alberta.ca/574.cfm?page=W05P1.cfm&leg_type=Acts&isbncln=9780779737420)

B.C. Weeds

<http://www.agf.gov.bc.ca/cropprot/weedguid/weedguid.htm>

Ontario Weeds

<http://www.omafra.gov.on.ca/english/crops/facts/ontweeds/weedgal.htm>

Manitoba Weeds

<http://www.gov.mb.ca/agriculture/crops/weeds/index.html>

Centre for invasive species and ecosystem health

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

XID Services; Weed Identification

<http://xidservices.com/>

Weed References

Weeds of Canada and the Northern United States

This impressive, richly illustrated field guide identifies more than 150 noxious weeds and another 100 related species. Colour photographs show the weeds at five critical stages. Information on weed legislation by province and state is also listed. A first of its kind, this book is an extraordinary resource for a multitude of users, whether farmer, landscaper, weed specialist or gardener.

Authors: Royer and Richard Dickinson

Published by: Lone Pine Publishing

*Can be purchased at many book stores in Alberta

This book is a comprehensive field guide to the common weeds across the Canadian prairie provinces. With 112 weeds detailed, this book gives you full-color photos of the weeds at different growth stages. Weeds are color-coded by flower color for easy reference, and the full index lets you find the species you want by common, scientific or family name. Charts on life cycle and habitat provide valuable information while the maps help you see how widespread these weeds are. An opening section on weed identification gives tips on what to look for. And the handy coil binding lets you open the book out flat, so you can work with it in the field. 266 pages.

Agdex 640-4 \$25.00

Copies of this book may be purchased by:

Calling 1-800-292-5697 (toll-free in Canada) or (780) 427-0391

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Early identification of grass and broad-leaved weeds saves time and money! This convenient pocket size booklet helps farmers and others correctly identify weed seedlings. Proper identification allows you to take appropriate measures to deal with weeds. This publication features over 60 coil-bound pages of information on 40 broad-leaved weeds and 10 grasses; a table of contents organized by cotyledon (seed-leaf) shape to make identification easier; 49 drawings of cotyledon (seed-leaf) shapes; 50 large full-color photos of weed seedlings and a helpful glossary of terms. 65 pages.

Agdex 640-9

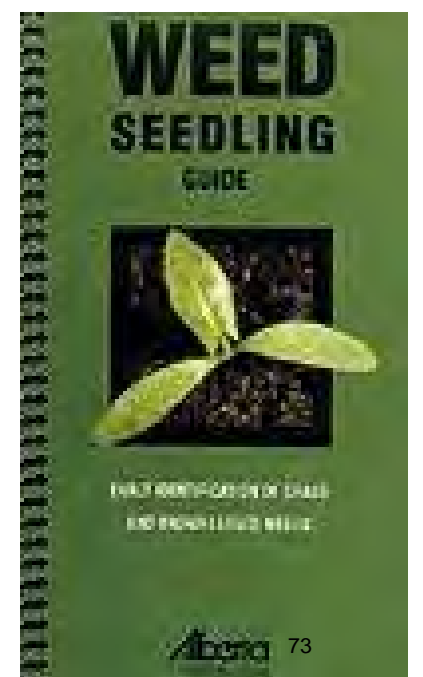
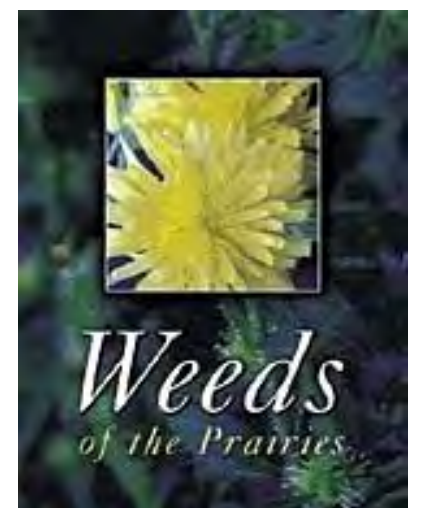
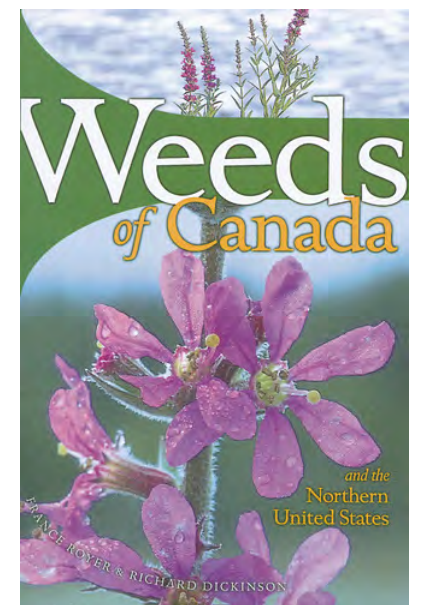
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Glossary

adventitious roots Roots appearing in an unusual or unexpected place on a plant.

alternate Referring to a leaf or bud arrangement in which there is one bud or one leaf at a node.

annual A plant that lives one year or less. A winter annual germinates late one growing season and produces seed and dies during the next growing season.

basal Refers to the base of the plant.

biennial A plant that lives for two growing seasons, normally producing a basal rosette the first year and the flower and fruit the second year.

bract A small leaf-like structure surrounding or enclosing the flower, usually below the petals.

capsule Dry fruit with more than one seed.

clasp Partly surrounding the stem.

fibrous roots Root system with many, fine, diffuse roots.

flower head A cluster of individual flowers in one compact unit, usually referring to compound flower of the Sunflower Family members.

inflorescence One or more flowers which comprise the flowering part of the plant.

lobed Divided less than one-half the distance to the base or mid-vein, usually rounded or obtuse.

midrib The central axis or vein of the leaf blade or leaflet.

noxious weeds Invasive plant which a landowner has a legal responsibility to control, based on the Alberta Weed Laws

nutlet Hard, small, one-seeded fruit, usually referring to fruits of the Boraginaceae members.

opposite Term applied to leaves or buds occurring in pairs at a node.

palmate Leaflets, lobes, or veins which arise from the same point at the tip of the stalk.

perennial Plants which live two or more years.

pinnate Leaflets or lobes developing from several different points on the main leaf axis.

plume A hair-like or featherlike structure, often on a seed.

rhizomatous Having rhizomes.

rhizome A horizontal stem growing beneath the ground which can develop roots or sprouts at the joints.

rosette A cluster of leaves radiating out from the base of the plant.

sepal One of the outermost flower structures, usually enclosing the other flower parts in the bud.

spur Any long, narrow (sometimes tubular) extension of a petal.

stolon A horizontal stem growing above the ground, which can develop roots or sprouts at the joints.

taproot The primary descending root along the vertical axis of the plant which is larger than the branching roots.

terminal Borne at or belonging to the extremity or summit.

umbelliform inflorescence A many flowered inflorescence in which the flowers' stems arise from a common point, ascend in all directions, and form a relatively level topped flower cluster.