# Field Guide to NOXIOUS WEEDS AND OTHER SELECTED INVASIVE PLANTS of British Columbia



ORANGE HAWKWEED



CANADA THISTLE



LEAFY SPURGE



TANSY RAGWORT

#### **TENTH EDITION 2019**

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#### FIELD GUIDE TO NOXIOUS AND OTHER SELECTED INVASIVE PLANTS OF BRITISH COLUMBIA

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#### PREFACE

Invasive plants, also known as weeds, are responsible for reducing crop yield and quality and often lead to environmental degradation, resulting in loss of native plant and animal habitat. Some invasive plants also harbour crop diseases, reduce property values, spoil aesthetics of natural landscapes and many can be harmful to humans, livestock and wildlife. This field guide has been prepared to help farmers, ranchers, resource managers and the public identify British Columbia's legislated noxious weeds and other invasive plants. Proper identification of problem weeds is the first step in gaining knowledge about these troublesome plants and will enable the development of a proper management strategy.

As an aid in separating noxious species, all weeds legislated under the B.C. *Weed Control Act* are organized alphabetically, by common name, at the beginning of the guide. Weeds classified as noxious throughout the entire province are arranged first, followed by weeds classified noxious within regional districts. Following this, other selected invasive plants are arranged alphabetically. For more information on weeds in B.C., refer to:

www.weedsbc.ca www.gov.bc.ca/invasive-species www.for.gov.bc.ca/hra/Plants/index.htm bcinvasives.ca ibis.geog.ubc.ca/biodiversity/eflora

To report an invasive plant or weed of concern:

- SMARTPHONE APP: Use the Report-A-Weed app: www.reportaweedbc.ca
- ONLINE: Report to a provincial Invasive Plant Specialist: www.gov.bc.ca/invasive-species
- CALL 1-888-933-3722

#### **BC Weed Control Act**

#### NOXIOUS WEEDS ARE EVERYONE'S PROBLEM

Non-native, or alien invasive plants have been introduced to British Columbia without the insect predators and plant pathogens that help keep them in check in their native habitats. For this reason and because of their aggressive growth, these alien plants can be highly destructive, competitive and difficult to control. Noxious weeds are those invasive alien plant species that are regulated under law.

The B.C. Weed Control Act imposes a duty on all land occupiers to control designated noxious plants.

The purpose for the Act is to protect the province's economy, natural resources, and society from the negative impacts of foreign weeds.

The Act is administered by the Ministry of Forests, Lands and Natural Resource Operations.

### The following weeds are classified as noxious within all regions of British Columbia:

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# The following weeds are classified as noxious within the boundaries of the corresponding regional districts:

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# PROVINCIALLY REGULATED NOXIOUS WEEDS

COMMON REED (Phragmites australis subsp. australis)

#### REPORTING

Report the following invasive plants or weeds of concern to:

✔ TOLL FREE 1-888-933-3722

✔ Report online / use the Report-A-Weed app:

🕅 www.gov.bc.ca/invasive-species

#### NOTES

#### BUR CHERVIL (Anthriscus caucalis)



- Annual or biennial herb from a taproot;
   40 cm to 90 cm tall; hollow, branched stems that are hairy near the base; basal and stem leaves are fern-like and alternate along stem; leaves are coarse-hairy and reduce towards the top of the stem; small white flowers with 5 petals are borne in umbrella-like clusters at the top of stems
- Found in moist fields, ditches, disturbed sites and waste places
- Reproduce by seed only
- Introduced from Eurasia

#### **CANADA THISTLE** (Cirsium arvense)





Flowerheads with spineless bracts



Seedling



Young rosette

- Creeping rooted perennial growing erect to 1.2 m; stalkless dark green leaves with irregular spiny lobes; flowerheads spineless and small compared to other thistles; flowers variable in colour from rose-purple to pink to white
- Only thistle with male and female flowers on separate plants

#### **COMMON REED** (Phragmites australis subsp. australis)



- Perennial grass; 1 m to 3 m tall; stiff, smooth, round, hollow, un-branched, purplish erect stems; leaves are 20 cm to 40 cm long, alternating up the stems and often twisting at the base so that they appear flag-like on one side; plume-like clusters of purplish flowers arranged densely along the branches
- Very limited distribution in B.C.; found in marshes, ponds, lakeshores and ditches
- Reproduces by rhizomes and seeds
- Introduced from Europe through ballast water

#### CORDGRASS, DENSE-FLOWERED (Spartina densiflora)



- Perennial aquatic grass; up to 1.5 m tall; hollow stems; grayish leaf blades that are narrow (0.6 cm wide), long, tough and in-rolled; dense, compact, colorless flowers that form a spike that is 6 cm to 30 cm long
- Salt tolerant and can establish in ecosystems that range from intertidal marshes to terrestrial ecosystems
- Reproduces by rhizomes and seed
- Introduced from South America

#### **CORDGRASS, ENGLISH** (Spartina anglica)



- Deep rooting perennial salt marsh grass; up to 1.3 m tall; erect reddish brown stem; bright green leaf blades grow at distinctive 45-90 degree angle to the stems; flower heads resemble that of wheat
- Reproduces mainly by rhizomes
- Introduced from England

#### **CORDGRASS, SALTMEADOW** (Spartina patens)



- Perennial grass from rhizomes; 30 cm to 100 cm tall; stem are slender, stiff and numerous; narrow bright green leaves, 10 cm to 50 cm long, with the edges in-rolled and prominent veins on the lower surface; inflorescence emerge at the end of the stem, which is composed of 2 to 10, 5 cm-long spikelet's.
- Typically found in intertidal wetlands
- Reproduces by rhizomes
- Native to the east coast of North America

#### **CORDGRASS, SMOOTH** (Spartina alterniflora)



- Herbaceous perennial grass; 0.6 m to 2 m tall; stems have an unpleasant sulfur aroma when fresh; leaves flat, 10 mm to 25 mm wide, up to 60 cm long, with the tips in-rolled and tapering to a slender point and the uppermost leaves gracefully drooping; flowers are borne in multiple, slender upright racemes, 5 cm to 20 cm long
- Commonly forms dense colonies in intertidal wetlands
- Reproduces by seeds and rhizomes
- Introduced from England for shoreline erosion control

#### **CRUPINA** (Crupina vulgaris)





Stiff dark bristles on seed



Narrow flowerhead with pink to purple flowers

 Annual growing from 0.3 m to 0.9 m tall; short, stiff hairs on leaf margins make the plant prickly feeling; 1 to 5 flowerheads per branch; pink to purple flowers

NOTE: Crupina currently invading rangelands in northern Idaho and Oregon. Not known to B.C.

PLEASE REPORT SIGHTINGS

#### DODDER (Cuscuta spp.)





Dodder parasitizing alfalfa

- Annual parasitic plant having no leaves or green parts
- Also called strangleweed for the thread-like yellow to orange twining stems that coil around and attach to host plants with wart-like suckers
- A particular concern in vegetable and forage crops and ornamentals
- Can produce over 16,000 seeds per plant that can remain viable for over 60 years

#### FLOWERING RUSH (Butomus umbellatus)



- Perennial aquatic herb; up to 1.5 m tall; green stem that resemble bulrush; thin sword-shaped leaves that extend up to 1 m in length; pink flowers that form umbrella-like clusters
- Can grow as an emergent plant along shorelines and as a submersed plant in lakes and rivers
- Reproduces mainly by rhizomes
- Introduced from Europe as an ornamental plant for water gardens
- Very limited distribution in B.C.

PLEASE REPORT SIGHTINGS

#### GARLIC MUSTARD (Alliaria petiolata)



- Biennial herb with a taproot; 20 cm to 120 cm tall; dark green basal leaves are kidney shaped while stem leaves are heart shaped; white flowers that grow in clusters
- Roots and crushed leaves emit a garlic smell
- Reproduces by seed
- Introduced from Eurasia for cooking and medicinal purposes

#### **GIANT HOGWEED** (Heracleum mantegazzianum)



- Perennial herb; 1.5 m to 5 m tall; stout hollow green stems covered in purple spots; dark green leaves that are coarsely toothed with stiff underside hairs; numerous small white flowers that cluster to form larger umbrellashaped heads
- Reproduces by seed; 50,000 seeds per plant
- Introduced from Asia as an ornamental plant

WARNING: Phototoxic stems and leaves contain a poisonous sap that causes serious burns and painful blisters when handled without protective gear.

#### GIANT MANNAGRASS/ REED SWEETGRASS (Glyceria maxima)



- Perennial grass; 0.6 m to 2.5 m tall; hollow erect stems; bright green leaves with a prominent mid rib; short, stiff hairs along the leaf margin; leaf sheaths are rough in texture and have a reddish-brown band at the junction with the leaf; each spikelet has 4-9 flowers
- Found in brackish tidal marshes, lakeshores and wet meadows
- Reproduces by rhizomes
- Introduced from Eurasia for livestock forage

#### GORSE (Ulex europaeus)



- Spiny, perennial, evergreen shrub in the Pea Family growing to over 2 m; small leaves terminate in rigid spines; bright yellow flowers surrounded by a velvety calyx develop into black seedpods with dark hairs
- Currently limited in distribution in B.C. to coastal areas, primarily southern Vancouver Island and Gulf Islands

#### HOUND'S-TONGUE (Cynoglossum officinale)





Rosette



Each flower produces 4 burred seeds



Seeds easily attach to passing animals

- Biennial taprooted weed growing 0.5 m to 1.2 m tall; soft, hairy rosette leaves (7 cm to 30 cm long) produced in first year resemble the shape of a dog's tongue; stem leaves are shorter and stalkless; dull reddish-purple flowers bear 4 rounded triangular nutlets (seeds) that are covered with hooked prickles
- Easily spread by seeds that cling to clothes/animals
- Contains toxic alkaloids that can cause liver damage in grazing animals
- Well adapted to forested areas, roadsides and meadows

#### JOINTED GOATGRASS (Aegilops cylindrica)





Hairy auricles and evenly spaced hairs on leaf edges



- Winter annual grass with erect stems growing 0.4 m to 0.8 m tall
- Seeds are produced in joint-like structures on the cylindrical flowering spike
- Not known to B.C.

PLEASE REPORT SIGHTINGS

#### KNAPWEED, DIFFUSE (Centaurea diffusa)





Rigid spines on tips of flower bracts



Bolting plant

- Biennial to short-lived taprooted, perennial, heavily branched, growing growing from 0.6 m to 1 m in height; divided leaves grayish-green in colour, hairy; very bitter to the taste
- White, occasionally purple flowers; bracts of the flowerheads with small, sharp, rigid spines
- One of 13 "knapweed" species in B.C.

#### KNAPWEED, SPOTTED (Centaurea stoebe)



- Biennial to short-lived taprooted perennial with branched stems growing to 1.5 m in height; deeply cut hairy leaves; very bitter to taste; purple, occasionally white flowers; flowerhead bracts with black-tipped fringe giving head the "spotted" appearance
- One of 13 "knapweed" species in B.C.

#### **KNOTWEED, BOHEMIAN** (Fallopia x bohemica)



- Rhizomatous perennial herb; up to 1.5 m to 3.5 m tall; erect, profusely branched stems; large pointed leaves that have a squared off to heart-shape base; flower clusters located at stem and branch tips; sepals are white to pinkish white in color
- A hybrid of the Japanese and Giant knotweeds and is reliably distinguished from these by the soft, short hairs along the veins on the lower surface of new leaf growth in the spring
- Reproduces primarily by spreading rhizomes, root and stem fragments
- Introduced from Asia

#### **KNOTWEED, GIANT** (Fallopia sachalinensis)



- Perennial herb; 2 m to 6 m tall; erect reddish hollow stems that are bamboo-like; stem leaves are 20 cm to 40 cm long, alternate and widely egg-shaped with the base heart-shaped; hairs on the underside of the leaves along the mid vein; basal leaves are absent; pale green or greenish-white flowers form in clusters along the stem
- It is closely related to Japanese Knotweed (Fallopia japonica), and can be distinguished from it by its larger size; leaves have a heartshaped (not straight) base
- Reproduces mainly by rhizomes
- Introduced from Asia as an ornamental plant

#### KNOTWEED, HIMALAYAN (Polygonum polystachyum)



- Perennial herb; 1 m to 5 m tall; bamboo-like stems with reddish-brown speckles; alternating leaves with the base rounded to somewhat heart-shaped, often with 2 small lobes; leaves have dense, grey-green soft hairs on the undersides; small white-green flowers grow in plume-like clusters along the stem and leaf axis
- Found in moist sites such as riparian areas
- Reproduces by rhizomes
- Introduced from Asia as an ornamental plant

#### KNOTWEED, JAPANESE (Fallopia japonica)



- Rhizomatous, semi-woody, herbaceous perennial in the Buckwheat Family that grows to 3 m in height; "bamboo-like" stems are green to reddish-brown and spotted; leaves are eggshaped, stalked, 10 cm to 15 cm long, flattened or rounded at the base with a pointed tip and are dark green above and lighter green below; greenish to creamy-white flowers are produced in clusters from the leaf axils
- An escaped ornamental originating from eastern Asia, Japanese knotweed forms aggressive, dense thickets maintained by extensive and deep, creeping rhizomes. New shoots are known to penetrate thick asphalt

#### LEAFY SPURGE (Euphorbia esula)





Greenish-yellow flower clusters and bracts



Creeping rootstocks

- Perennial with persistent vertical and horizontal creeping roots; grows to 0.8 m tall; leaves spirally arranged on the stem; inconspicuous greenish-yellow flowers inserted above 2 leaf-like yellow-green bracts
- All parts of the plant contain a white milky latex that can irritate skin of livestock and humans

#### MILK THISTLE (Silybum marianum)



- Annual or biennial herb; 0.5 m to 1.5 m tall; stems are grooved, sometimes with white cottony hairs especially toward the base; alternate shiny pale green leaves with milkwhite veins; flower heads are large and rounded, occurring at stem tips; flowers are red to purple thistles armed with 3 cm long spinetipped bracts
- Found on nutrient rich sites, such as river flats and stock yards
- Reproduces by seed
- Introduced from Eurasia for medicinal use

# NORTH AFRICA GRASS (Ventenata dubia)



- Annual grass; 30 cm to 70 cm tall; stems are smooth to short-hairy, basally branched; sheaths usually minutely rough but sometimes soft-hairy; leaves fine, 2 cm to 7 cm long, flattened at first, becoming in-rolled, with a rounded, jagged-edged; spikelet's are near the branch tips and are stalked; lemmas have bent awns arising from their backs, much like those of wild oats
- Limited distribution in B.C.; found along dry roadsides or cultivated fields
- Reproduces by seed
- Introduced from the Mediterranean region

# NUTSEDGE, PURPLE (Cyperus rotundus)





Leaf-like flower bracts are shorter than inflorescence



Tubers are produced in chains on rhizomes

- Aggressive perennial in the growing from 0.3 m to 0.6 m tall; triangular 3-sided unbranched flower stems; grass-like leaves; purple to brown flowers; leaf-like bracts under flower clusters are shorter than the flowers; rough, oblong, irregularly shaped tubers are formed in chains; tubers have a bitter flavour
- Native to Eurasia but not currently established in B.C.

PLEASE REPORT SIGHTINGS

### NUTSEDGE, YELLOW (Cyperus esculentus)





Flower cluster above long leaf-like bracts



Tubers

- Aggressive rhizomatous perennial in the Sedge Family; grows from 0.3 m to 0.8 m tall with triangular 3-sided unbranched smooth stems; grasslike leaves; yellowish-brown flowers with long leaf-like bracts under umbrella-like flower clusters; smooth, round, whitish almondflavoured tubers produced at ends of many rhizomes
- Increasing in berry fields in the Fraser Valley

# PURPLE LOOSESTRIFE (Lythrum salicaria)



Fireweed

Seed-bearing spikes

- Wetland perennial with a woody taproot and branching fibrous root system; 1m to 3 m in height; stiff, four-sided stem with opposite or sometimes whorled stalkless leaves; purple flowers in a dense terminal spike
- Can produce over 2.5 million seeds annually
- Sometimes confused with fireweed (Epilobium angustifolium); many infestations have resulted from escape of ornamental varieties

# RUSH SKELETONWEED (Chondrilla juncea)





Dandelion-like basal leaves with downward pointing stiff hairs at base of stem



Parachute-like seeds easily spread by wind

- Taprooted perennial growing to 1.3 m in height; much branched wiry stems covered with stiff, reddish-brown downward pointing hairs at the base; stems have a milky juice; very small leaves give plant a "skeletonlike" appearance; small yellow flowers
- Taproot can penetrate 2.5 m in the soil; new plants arise from lateral root buds in upper 0.6 m of soil
- Can produce up to 15,000 seeds annually

# SCENTLESS CHAMOMILE (Matricaria maritima)



Fern-like finely divided leaves

- Annual to short-lived perennial; white daisylike flowers 2 cm to 3 cm across; grows from 15 cm to over 1 m in height; fern-like, very finely divided leaves
- Whole plant is virtually odourless (scentless) when crushed
- Can produce 10,000 to 200,000 seeds per plant
- Often confused with stinking mayweed (Anthemis cotula), oxeye daisy (Leucanthemum vulgare) and pineappleweed (Matricaria matricariodes). Stinking mayweed has a very offensive odour when crushed as well stem hairs below the flower heads. Oxeye daisy has flowers to 5 cm across, rhizomatous roots and entire, notched leaves. Pineappleweed grows to 16 cm high, has no white ray flowers and has a distinct pineapple odour when crushed.

# PERENNIAL SOW-THISTLE (Sonchus arvensis)

# ANNUAL SOW-THISTLE (Sonchus oleraceus)





Perennial sow-thistle with milky latex and clasping stem



Spiny annual sow-thistle

- Creeping rooted perennial growing 0.4 m to 1.5 m tall; stems branch near the top; leaves with weak marginal prickles clasp the stem; plants contain a bitter milky juice; upper stalks and flower bracts usually covered in glandtipped hairs; yellow flowers up to 3.8 cm broad
- Often confused with annual sow-thistle (Sonchus oleraceus) which is taprooted and has much smaller flowers (less than 2.5 cm across) or spiny annual sow-thistle (Sonchus asper) which has sharp, spiny leaves and smaller flowers

# TANSY RAGWORT (Senecio jacobaea)





Deeply divided rosette leaves



Ray flowers distinguish this plant from common tansy (Tanacetum vulgare)

- Biennial to short-lived perennial growing 0.3 m to 1.2 m tall; leaves deeply cut into irregular segments give plant a "ragged" appearance; yellow flowers in a flat-topped cluster
- Contains a toxic alkaloid which reacts with enzymes in livestock that creates cumulative liver damage

# TOADFLAX, COMMON / YELLOW (Linaria vulgaris)



Yellow snapdragon-like flowers

- Creeping rooted perennial to 0.6 metres tall; the stalkless leaves are narrow and pointed at both ends; bright yellow "snapdragon-like" flowers with an orange spot on the lower lip are 2 to 3.5 cm long
- Flowers similar to but smaller than Dalmatian toadflax (*Linaria dalmatica*); likely introduced as an ornamental.

# TOADFLAX, DALMATIAN (Linaria genistifolia subsp. dalmatica)



- Creeping rooted perennial to 1.2 m tall; pale green waxy leaves clasp the stem and are heart-shaped with a pointed tip; bright yellow "snapdragon-like" flowers with orange spot on the lower lip (2.5 cm to 4 cm long)
- Likely introduced to North America as an ornamental

#### VELVETLEAF (Abutilon theophrasti)





Seedling



Showy yellow flowers and distinctive circular seedpods

- Annual taprooted weed in the Mallow Family growing from 0.3 to over 2.4 m in height; entire plant covered with short, soft, velvety hairs; large heart-shaped leaves are 7.5 cm to 20 cm wide; yellow to yellow-orange flowers; distinctive circular cluster of 12 to 15 seedpods
- First discovered in B.C. in the Fraser Valley in 1990; seeds can remain viable in soil for over 50 years

#### **PROVINCIAL NOXIOUS**







Heavily bearded flowers. Awns are twisted and bent at right angles when mature



Base of leaf blades are slightly hairy

- Annual grass with hollow erect stems from 0.3 m to 1 m tall; leaves of seedlings twist counter-clockwise when viewed from above; yellow to black seeds with a bent, twisted bristle (awn); seeds with a circular scar (sucker mouth) at the base
- Seeds can remain viable in soil for over 10 years
- Cultivated oats lack the circular scar on the seed and either lack an awn or the awn is straight

# YELLOW FLAG IRIS (Iris pseudacorus)



- Perennial herb; 1 m to 1.5 m tall; leaves are erect, flattened and sword-like and extend 0.5 m to 1 m in length; showy yellow flowers with three sepals
- Found in ditches, shallow ponds, marshes and along still and slow-moving water courses.
- Reproduces by rhizomes and seeds
- Introduced from the Mediterranean region as an ornamental plant

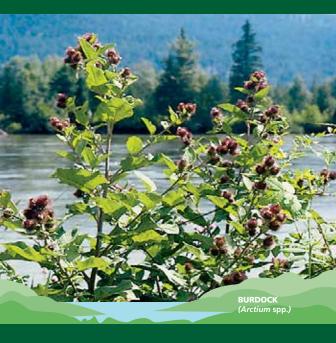
# YELLOW STARTHISTLE (Centaurea solstitialis)



- Annual taprooted heavily branched weed growing from 0.6 m to 1 m tall; stems are winged and covered with fine hair; yellow flowers are borne on ends of branches and armed with sharp thorns up to 2 cm long
- Not currently known in B.C. but close to our borders with Washington and Idaho

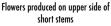
PLEASE REPORT SIGHTINGS

# REGIONALLY REGULATED NOXIOUS WEEDS



# BLUEWEED (Echium vulgare)







First year rosette

- Biennial to short-lived perennial, taprooted, growing to 1 m high; stems covered in stiff hairs with swollen reddish to black bases where attached to stem
- Invades rangelands, pastures, roadsides and idle areas particularly on coarse, sandy to gravelly soils
- Produces 500 to 2,000 seeds per plant

# BURDOCK (Arctium spp.)





Flowerhead bracts with hooked spines

- Biennial weeds common in farmyards, fencelines, roadsides, streambanks and idle areas; well known for their rounded flower heads with hooked spines that easily attach to clothing and animals
- Common burdock (Arctium minus) grows 1 m to 3 m in height; lower leaf stalks are hollow; flower heads are less than 2.5 cm across and scattered along the stems
- Great burdock, sometimes called giant burdock (Arctium lappa) is similar in appearance but lower leaf stalks are solid and flower heads are over 2.5 cm across and are arranged in a flattopped cluster rather than along the stem

# **CLEAVERS** (Galium aparine)





Leaves in whorl around square stem



Seed-cases produced in pairs are covered with hooked hairs

- Native annual with square stems and short, bristly downward pointing hooks on stem corners; rough, hairy leaves grow in whorls of 6 to 8; burrlike seeds produced in pairs
- Commonly known as bedstraw, cleavers is particularly damaging in cereals and canola where it clings to and trails around these crops

# **COMMON BUGLOSS** (Anchusa officinalis)





"Fiddleneck" flower stem uncoils as each bud opens

- Deep taprooted perennial in the Borage Family with hairy, angular stems growing to 0.6 m tall; lance-shaped fleshy leaves are covered with stiff hairs; deep purple to blue flowers with white centres; flower stems, initially coiled like a fiddleneck, straighten out as each bud opens; four nut-like seeds produced per flower
- Prefers dry, sandy to gravelly soils. Average seed production is in excess of 900 seeds per plant
- Is sometimes confused with blueweed (Echium vulgare)

#### **COMMON TANSY** (Tanacetum vulgare)





Button-like yellow flowers



Seedling leaves with serrated leaflet margins

- Aromatic perennial growing to 1.8 m tall; deeply divided dark green leaves; yellow "button" flowers in cluster at top of plant; no ray flowers
- Often confused with tansy ragwort (Senecio jacobaea) that has ray flowers

#### FIELD SCABIOUS (Knautia arvensis)





Violet flowers



Roadside infestation

- Taprooted perennial in the Teasel Family growing to 1.3 m in height; violet-blue flowers; stems and leaves with short, stiff hairs
- Produces up to 2,000 seeds per plant

# **GREEN FOXTAIL** (Setaria viridis)





Seeds produced in a "bottle-brush" inflorescence

- Annual grass growing in tufts from 0.5 m to 1 m in height; young leaves with upward pointing hairs; upper leaves are hairless and rough; seeds clustered in a dense club; 1 to 3 bristles from the base of each flower give the head a "bottle-brush" appearance
- Can produce over 34,000 seeds per plant
- Yellow foxtail (Setaria glauca) is similar but with long twisted hairs near the base of leaf blades

# HAWKWEED, ORANGE (Hieracium aurantiacum)



- Fibrous-rooted perennial with milky juice and above ground runners grows 30 cm to 60 cm tall; leaves mostly basal; leafless flowering stalk covered with stiff, black, glandular hairs; vibrant orange-red flowers
- Reproduces rapidly by seed, stolons, and rhizomes and forms dense mats
- Over 15 hawkweed species occur in B.C.

# HOARY ALYSSUM (Berteroa incana)



Flattened seedpods held close to the stem

 Annual to short-lived perennial in the Mustard Family growing erect to 0.7 m tall; the whole plant covered with star-shaped hairs; upper leaves are elliptic and clasp the stem; white flowers with deeply notched petals; oval seedpods are 5 mm to 8 mm long, somewhat flattened and held close to the stem

**WARNING:** Toxic to horses. Consumption may cause fever, limb edema, and laminitis.

# HOARY CRESS (Cardaria spp.)





Heart-shaped seedpods



"White-top" infestation

- Creeping rooted perennial in the Mustard Family growing from 0.1 m to 0.6 m tall; lower leaves are stalked and hairy while upper leaves clasp the stem and are usually hairless; numerous white flowers produced at the top of the plant give rise to its other common name of "white-top"
- Heart-shaped seedpods distinguish this hoary cress from lens-podded and globe-podded hoary cress (Cardaria chalepensis and Cardaria pubescens)

# KNAPWEED, MEADOW (Centaurea pratensis)





Margins of flowerhead bracts either thin and papery or comb-like

- Perennial from a woody root crown to 0.5 m to 1 m tall; basal leaves are up to 15 cm long; lance-shaped stem leaves are entire or shallowly lobed and stalkless; upper leaves are small and not lobed; globe-shaped flower heads are solitary at branch ends; flower bracts consist of either a thin, torn, papery margin or a comb-like fringe, particularly on the outer bracts; flowers are rose-purple, sometimes white
- Likely a hybrid between black and brown knapweed

# KNAPWEED, RUSSIAN (Acroptilon repens)





Purple flower with papery margined bracts



Creeping roots produce dense infestations

 Creeping rooted perennial with erect stems to 1 m tall; young stems covered in soft, gray hairs; rounded flower heads produced singly at the ends of branches; flowers light pink to purple; small pearly bracts with papery margins that are slightly hairy at the tip

#### **REGIONAL NOXIOUS**

# KOCHIA (Kochia scoparia)



Flower clusters

Seedling

- Much branched erect annual growing from 0.3 m to 2 m in height; main stem often tinged with red; stalkless narrow leaves with entire margins often turn purple in autumn; inconspicuous flowers usually surrounded by cluster of long hairs
- An ornamental form called "burning bush" for its reddish-purple colour sometimes escapes cultivation

# MARSH PLUME THISTLE (Cirsium palustre)





Flowers grouped at end of branches



Spine-tipped leaves with woody veins

- Biennial growing erect to about 1.5 m; slender stems are strongly spiny-winged and are usually unbranched except the upper portion which terminates in clusters of purple flower heads; deep segmented, spinetipped leaves are somewhat hairy on the underside and have prominent woody veins
- This native of Europe prefers moist woodlands, riparian areas, roadsides and pastures on both disturbed and undisturbed sites. It is increasing in central B.C.

# NIGHT-FLOWERING CATCHFLY (Silene noctiflora)





Flower of night-flowering catchfly



White cockle

- Annual to winter annual growing to 1 m tall; entire plant covered with soft, sticky hairs; calyx with 10 prominent branching green veins; white flowers open near dusk
- Often mistaken for white cockle (Lychnis alba) (REGIONAL NOXIOUS), a biennial plant. Hairs of white cockle are not glandular and the plant is not sticky when squeezed; calyx with 20 unbranched veins

#### **OXEYE DAISY** (Leucanthemum vulgare)





Solitary flowers at the end of branches



Infestations not readily grazed due to disagreeable taste

- Rhizomatous perennial growing erect to 1 m in height; lower leaves spoon-shaped, coarsely dissected and stalked; upper leaves narrower and stalkless or clasp the stem; daisy-like flowers borne at ends of stems; central yellow disk flowers 10 mm to 20 mm wide; white ray flowers are 1 cm to 2 cm long
- Often confused with the ornamental Shasta daisy (Chrysanthemum maximum) which is a more robust plant with larger flowers; central yellow disk flowers 2 to 3 cm wide; white ray flowers 2 to 3 cm long

# PERENNIAL PEPPERWEED (Lepidium latifolium)





Waxy leaves with distinctive white



Seedling

- Rhizomatous perennial in the Mustard Family growing from 0.3 m to 1 m tall (2 or more m in wet areas); lance-shaped leaves are waxy with distinctive white mid-veins: lower leaves are stalked; upper leaves are either short stalked or stalkless but do not clasp the stem; white flowers are borne in dense, rounded clusters at branch tips
- 2 reddish-brown seeds are contained in each tiny, rounded and somewhat hairy fruit (silicle)
- Very competitive weed that can form dense colonies in riparian areas and on rangeland/ pastures
- Can produce over 6 billion seeds per acre

#### PUNCTUREVINE (Tribulus terrestris)



Spiny seeds break into sections when mature

- Annual, branching from the base and spreading along ground to form dense mats; leaves are hairy and grow in pairs on opposite sides of stem; leaf divided into 4 to 8 pairs of oval leaflets; yellow flowers originate in leaf axils; fruit with 5 sections that form tough, sharp sometimes curving spines
- Sharp spines easily penetrate leather, and skin and can flatten rubber tires

# **QUACKGRASS** (Agropyron repens)





Sharp-pointed creeping rhizomes



Auricles clasp the stem

- Aggressive perennial grass with long slender white rhizomes; rhizome tips are yellowish and sharp-pointed; base of leaf blade with claw-like appendage that clasps the stem; spikelets, up to 15 cm long, are in 2 long rows borne flatwise to the stem
- Easily regenerates from very small broken rhizome fragments making mechanical control difficult

# SULPHUR CINQUEFOIL (Potentilla recta)





Sulphur coloured flowers



Palmate leaf with 5 to 7 leaflets

- Introduced long-lived taprooted perennial in the Rose Family with hairy stems growing from 0.3 m to 0.8 m tall; leaves divided into 5 to 7 hairy leaflets in palmate fashion; pale yellow flowers have 5 heart-shaped petals around a bright yellow centre
- One of over 20 cinquefoils in B.C., most of which are native
- Can produce over 1600 seeds per plant
- Often confused with the native graceful cinquefoil (*Potentilla gracilis*) which is shorter and has white wooly hair on the undersurface of leaves

# THISTLE, PLUMELESS (Carduus acanthoides)





Spiny winged stems



- Biennial taprooted thistle growing to 1.2 m tall; stems with spiny wings extending right to the flowerheads; purple flowers; flowerheads small, less than 2.5 cm broad
- Can hybridize with nodding thistle (Carduus nutans) when growing together





Spine-tipped leaves

Seedling

- Rounded, bushy, much branched annual growing to 1.2 m in height; stem usually red or purple striped; flowers inconspicuous, green with 2 spiny-tipped stiff bracts; leaves tipped by a sharp point
- Can produce over 200,000 seeds per plant
- Nicknamed "tumbleweed" when mature plants blow on the wind

#### **THISTLE, SCOTCH** (Onopordum acanthium)





Purple flowers with spine-tipped bracts



Stem with spiny-margined wings

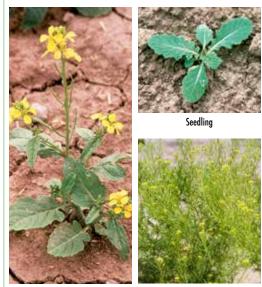
 Tall, coarse, spiny biennial thistle with large solitary flowerheads growing to 2 m or more in height; woody, branched stems with spinymargined wings; very large elliptic-shaped lower leaves grow to 60 cm long by 30 cm wide; upper leaves are smaller with irregularly toothed margins; very white hairy on undersurface; purple flowers are borne singly on 3 cm to 5 cm long branches

#### WILD CHERVIL (Anthriscus sylvestris)



- Tuberous-rooted biennial to perennial in the Parsley Family; grows from 0.3 m to over 1.8 m tall; stems are furrowed and hollow with fringe of hairs at stem nodes; fern-like nearly hairless leaves; white flowers produce 2 joined seeds with antenna-like structures at tip
- Taproot can extend over 1.8 m into the soil
- Wild chervil is not aromatic like the domestic herb, salad chervil

#### WILD MUSTARD (Sinapsis arvensis)



 Annual 0.3 m to 1 m tall with stiff hairs at least near base of stem; undersurface of leaves hairy on veins; bright yellow flowers; seedpods produced on thick stalks less than 7 mm long; ribbed lengthwise, up to 3.5 cm long with a constricted beak to 13 mm

## ADDITIONAL INVASIVE PLANTS OF CONCERN

HIMALAYAN BALSAM (Impatiens glandulifera)

#### BABY'S-BREATH (Gypsophila paniculata)





Baby's-breath invading grassland

- Much branched perennial herb with a thick, deep, woody rooting system; smooth stems grow to 1 m; opposite, hairlesss, linear leaves with a prominent mid-vein grow 2 cm to 10 cm long; small white flowers are produced in diffusely branched clusters
- An escaped ornamental originating from Eurasia and now used extensively in flower arrangements
- Can produce over 13,000 seeds per plant

#### BLADDER CAMPION (Silene cucubalus)





Bladder-like calyx

- Perennial growing to 0.6 m; white taproot and numerous deep penetrating woody branching roots; stems and leaves light green to whitish with a waxy bloom (fine powdery coating); bladder-like calyx has green to purplish veins and 5 short triangular teeth
- Sometimes confused with night-flowering catchfly (Silene noctiflora) or white cockle (Lychnis alba) but has no hairs and is virtually waxy throughout





Stiff spines at leaf tips

- Taprooted biennial with spiny winged stems growing 0.3 m to 1.5 m tall; leaves end in long, sharp spines; upper surface with short prickles, undersurface cottony; flowerhead bracts tipped with prickles; purple flowers 4 cm to 7.5 cm across
- Often confused with Canada thistle (*Cirsium* arvense) which has creeping roots, much smaller flowers and weak prickles, not spines on the leaves

#### CHICORY (Cichorium intybus)





Distinctive blue flowers



- Taprooted perennial with milky juice growing to 1.5 m in height; low growing rosette leaves resemble dandelion but are hairy; blue flowers (occasionally pink or white) usually close by midday
- Leaves are used as a salad and roots when dried are used as a coffee substitute

#### **CLUSTER TARWEED** (Madia glomerata)





Flowerheads showing glandular hairs



- Heavy-scented (like tar) annual that grows to 0.8 m tall; leaves are narrow with both leaves and stems covered in sticky, glandular hairs; inconspicuous yellow flowers in heads produced in 1 to many compact clusters
- This native plant prefers dry, open habitats and roadsides at low to mid-elevations

#### COMMON MALLOW (Malva neglecta)



White to pale lilac flowers

12 to 15 nutlets in button-like disk

- Annual to short-lived perennial with prostrate to semi-erect stems, 10 cm to 60 cm long; long-stalked rounded leaves with heart-shaped base and 5 to 7 broad shallow-toothed lobes; white to pale lilac flowers; seeds in round, flat button-like disk of 12 to 15 smooth nutlets
- Similar to round-leaved mallow (*Malva pusilla*) which has roughened ridges on nutlets

#### **CREEPING BUTTERCUP** (Ranunculus repens)





Deeply cut leaves of tall buttercup



- Perennial with slender, fibrous roots; dark green leaves, often with white spots, are divided into 3 leaflets and are hairy and deeply lobed; hairy stems root at the nodes; bright yellow waxy flowers divided into 5 petals; seeds are smooth with a hooked apical beak
- As with most buttercup species, contains a toxin that can result in pain and inflammation in grazing animals; not a problem when cured in hay
- Sometimes confused with tall buttercup (*Ranunculus acris*) which has a more upright growth habit and more deeply cut leaf lobes







Mature plant



Wavy, crisp-margined leaves



Broadleaved dock rosette

- Perennial in the Buckwheat Family growing 0.8 m to 1.5 m tall; deep penetrating yellow taproot; dark green leaves waved and crisp along the margins; plant turns a rusty-red colour when mature
- Produces 3,000 to 4,000 seeds per plant
- A similar plant, broadleaved dock (Rumex obtusifolius) is distinguished by its large leaves which are rounded or heart-shaped at the base

#### FIELD BINDWEED (Convolvulus arvensis)







Hedge bindweed with larger leaves and flowers

- Creeping-rooted perennial from Europe often called morning-glory; vinelike stems trail on the ground or twine counter-clockwise around supports; arrow-shaped leaves with sharppointed or rounded basal lobes; funnelshaped white to light pink flowers 2.5 cm across; two small bracts 2.5 cm below flower
- Roots can penetrate to over 5 m in soil; seeds can remain viable for up to 50 years
- Often confused with hedge bindweed (*Convolvulus sepium*) which has larger leaves and flowers (up to 5 cm across)

#### FOXTAIL BARLEY (Hordeum jubatum)



- Perennial growing in tufts to 0.6 m tall; flowerheads, 5 cm to 13 cm long, break into 7-bristled clusters with 3 spikelets at each joint; green or reddish bristles (awns), 7.5 cm long, are cream-coloured when mature
- Upward pointing barbs on the bristles can cause mechanical injury to grazing animals
- Often found on the edges of alkaline sloughs and salt marshes

## GOATSBEARD (WESTERN) (Tragopogon dubius)





Bracts are longer than the yellow flowers

- Also called salsify this taprooted biennial to short-lived perennial grows from 0.3 m to 1 m in height and is most common in the Kootenay, Okanagan and Thompson-Nicola region; long grass-like leaves with crisp margins; stems swollen below the flower head; contains a milky juice
- Stems of meadow goatsbeard (Tragopogon pratensis), most common in the Cariboo-Chilcotin region, are not swollen below the flower head
- Oysterplant (*Tragopogon porrifolius*) is similar but has purple flowers

## HIMALAYAN BALSAM (A.K.A. POLICEMAN'S HELMET) (Impatiens glandulifera)



- Annual succulent herb with upright, hollow, much-branched purple-tinged stems growing 0.6 m to 2.0 m tall. Opposite to whorled oblong to eggshaped stalked leaves are saw-toothed on the margins. Flowers vary from white to pink to reddish and are shaped much like an English policeman's helmet.
- Seed capsules "explode" at maturity to release hundreds of tiny seeds

## KNAPWEED, BROWN (Centaurea jacea)



- Perennial herb from a taproot; 0.1 m to

   2 m tall; erect stems that are branched and
   somewhat woolly or cobweb- like; leaves are
   15 cm long and 3 cm wide with stem leaves
   becoming reduced and un-stalked towards the
   top of the stem; single rose to purple flower
   heads form at the ends of the branches; flower
   head has bracts with enlarged, papery, tattered
   tan to dark brown appendages at the tips
- Reproduces by seed
- Introduced from Europe

#### **NIGHTSHADE** (Solanum spp.)



Hairy nightshade with calyx cupping the berry



Hairy nightshade



Climbing nightshade; berries



Black nightshade. Note short calyx

- Climbing nightshade (Solanum dulcamara), also known as bittersweet: perennial with long branches trailing or climbing on other plants; lanceshaped leaves lobed at the base; bluishpurple flowers; immature green berries turning bright red
- Hairy nightshade (Solanum sarrachoides): annual to 0.6 m tall; white flowers; dense covering of short hairs on leaves and stems; yellowish-brown berries at maturity; calyx cupped 2/3 around berry
- Black nightshade (Solanum nigrum): annual to 0.9 m tall; white flowers; smooth leaves; black to dark purple berries at maturity; short calyx does not cup the berry

**CAUTION:** Young plants and immature berries are particularly poisonous.

## NODDING THISTLE (A.K.A. MUSK THISTLE) (Carduus nutans)





Large flowers with spine-tipped bracts "nod" at maturity

- Biennial taprooted thistle growing to 2.5 m tall; stems are spiny and winged except below the flower head; leaves are deeply lobed and spiny margined; large purple flowers (2.5 cm to 5 cm across) droop down or "nod" at maturity; flowerhead bracts end in a strong, sharp spiny tip
- Sometimes confused with plumeless thistle (*Carduus acanthoides*) which has smaller flowers (less than 2.5 cm broad) with flower stalks spinymargined right to the base of the flowerhead

#### SCOTCH BROOM (Cytisus scoparius)





Flowers mature to form flattened, brown to black hairy seedpods.

- Upright, taprooted evergreen shrub in the Legume Family growing from 1 m to 3 m in height; stems are ridged, woody, green to brownish-green and prominently 5-angled; upper leaves are simple and unstalked, lower leaves are stalked and comprised of 3 oval leaflets; pea-like flowers are bright yellow (sometimes with red markings in the middle); seedpods are flat, brown to black in colour with fine hairs on the margins
- Escaped garden ornamental now naturalized throughout south coastal B.C. and introduced at a few Interior locales

# **ST. JOHN'S-WORT** (Hypericum perforatum)





Showy yellow flowers produce many stamens



Transparent dots on leaves contain a photosensitizing pigment

- Perennial from underground runners, growing 0.3 m to 1 m in height; transparent dots are visible over the surface of the oblong leaves when held to light; bright yellow flowers with 5 petals; plants turn a rusty red colour at maturity
- Contains a toxin that causes grazing animals to become sensitive to sunlight resulting in intense skin irritation

#### **TEASEL** (Dipsacus fullonum)



- Biennial herb from a taproot; 0.5 m to 2.0 m tall; erect stems with few branches that get increasingly prickly upwards; stem leaves are lanceolate, simple, prickly and opposite; flowers form in cone-shaped, spiny clusters; individual flowers consist of white petals united into a tube with 4 purple lobes; below each cluster are several long, slender, stiff, bracts that curve upward
- Reproduces by seed
- Introduced from Europe for wool production

#### WATER HEMLOCK (Cicuta douglasii)





Hollow chambered root contains an extremely poisonous toxin (cicutoxin)

- Highly toxic native plant in the Parsley Family
- Hollow, jointed stems grow 1 m to 2 m tall; oval leaflets with sawtoothed margins; leaflet veins tend to end at the base of the notch on leaf edge; enlarged taproot with horizontal hollow chambers.
- Found throughout B.C. in sloughs, wet meadows, streambanks and other wet areas

CAUTION: Contains an extremely poisonous oil (cicutoxin). Clean knife blades well if used for cross-sectioning roots.

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Ranunculus acris	79	Thistle
Ranunculus repens	79	Thistle
Rumex crispus	80	Thistle
Rumex obtusifolius	80	Thistle
Rush skeletonweed	36	Thistle
Russian knapweed	58	Thistle
Russian thistle	68	Thistle
Salsola kali	68	Thistle
Scabious, field	52	Thistle
Scentless chamomile	37	Thistle
Scotch broom	88	Toadfla
Scotch thistle	69	Toadfla
Senecio jacobaea		Toadfla
Setaria glauca	53	Tragop
Setaria viridis	53	Tragop
Shasta daisy	62	Tragop
Silene cucubalus	74	Tribulu
Silene noctiflora 61,	74	Ulex et
Silybum marianum	31	Velvetl
Sinapis arvensis	71	Venter
Skeletonweed, rush	36	Water
Solanum dulcamara	86	Weed
Solanum nigrum	86	
Solanum nigrum	86	Wester White
Sonchus arvensis	80 38	Wild c
	38 38	
Sonchus asper	38 38	Wild n
Sonchus oleraceus	38	Wild o
Sow-thistle, annual	38 38	Yellow
Sow-thistle, perennial		Yellow
Spartina anglica	12	Yellow
Spartina alterniflora	14	Yellow
Spartina densiflora	11	Yellow
Spartina patens	13	Yellow
Spotted knapweed	25	
Spurge, leafy	30	
St. John's-wort	89	
Starthistle, yellow	45	

4	Stinking mayweed	37
3	Sulphur cinquefoil	66
5	Tall buttercup	79
5	Tanacetum vulgare	51
4	Tansy ragwort 39,	51
5	Tansy, common	51
3	Tarweed, cluster	77
	Teasel	90
1	Thistle, annual sow	38
9	Thistle, bull	75
Э	Thistle, Canada9,	75
C	Thistle, marsh plume	60
C	Thistle, milk	31
5	Thistle, musk 67	
З	Thistle, nodding 67,	
З	Thistle, perennial sow	38
3	Thistle, plumeless 67,	87
2	Thistle, Russian	68
7	Thistle, Scotch	69
З	Toadflax, common	40
9	Toadflax, Dalmatian 40	, 41
1	Toadflax, yellow	40
3	Tragopogon dubius	83
3	Tragopogon porrifolius	83
2	Tragopogon pratensis	83
4	Tribulus terrestris	64
1	Ulex europaeus	21
1	Velvetleaf	42
1	Ventenata dubia	32
5	Water hemlock	91
5	Weed Control Act	1
5	Western goatsbeard	83
5	White cockle 61,	74
3	Wild chervil	70
3	Wild mustard	71
3	Wild oats	43
В	Yellow flag iris	44
8	Yellow foxtail	53
2	Yellow hawkweed	54
4	Yellow nutsedge	34
1	Yellow starthistle	45
3	Yellow toadflax	40
5		

## **TAKE ACTION!**

#### PROTECT OUR COMMUNITIES FROM INVASIVE SPECIES:

#### ✓ BE PLANTWISE

Choose non-invasive plants for your garden

#### ✓ PLAY CLEAN GO

Pack out what you pack into the outdoors; Clean all clothes and gear before and after



✓ REPORT INVASIVE SPECIES

Call 1-888-933-3722 Report Online at<u>reportinvasives.ca</u>