Common Teasel

Dipsacus sp.

ID tips

- Spiny flower head with lavender/purple flowers
- Leaves are heavily veined with stiff spines on the underside midrib



Identification

- Lifecycle: Biennial
- Flower: Lavender/purple flowers on a spiny head that has long spiny bracts under head
- Leaves: Leaves are opposite heavily veined with stiff spines on underside midrib
- Roots: Taproot
- Seedling: Basal rosette with wrinkled appearing leaves and spines on underside midrib
- Other: Dried spiny seed head was used to "tease" wool

Management

- Cultural: Cultural management helps but Common teasel can compete with desired vegetation
- Mechanical: Sever root below soil surface and remove plant or cutting/mowing plant when plants are beginning to bloom
- Biological: None available
- Chemical: Milestone (aminopyralid), Transline (clopyralid), Curtail (clopyralid + 2,4-D), Redeem (clopyralid + triclopyr)

Myrtle spurge

Euphorbia myrsinites

ID tips

- Low growing plant with fleshy leaves and stems, containing milky white latex sap
- Leaves are blue green, alternate with inconspicuous flowers


Identification

- Lifecycle: Perennial
- Flower: Yellow-green petal like bracts
- Leaves: Fleshy blue-green, alternate oval shaped with pointed tip
- Roots: Taproot
- Seedling: Seedlings look similar to mature plant
- Other: Latex sap is toxic and may cause skin irritation, nausea or vomiting if ingested

Management

- Cultural: Cultural management helps but Myrtle spurge can compete with desired vegetation
- Mechanical: Hand pulling or digging are effective, be sure to wear gloves and long sleeve shirt and long pants to protect from irritating sap.
- Biological: None available
- Chemical: 2,4-D

Additional Resources:

An integrated system of weed management will produce the best results on your property. Relying solely on one management technique will result in less than desired results and may lead to resistance in the weed. Utilizing cultural, mechanical, biological and chemical techniques will provide the best results.

Rapid identification and management produces the best result.

Colorado Department of Agriculture
https://www.colorado.gov/pacific/agconservation/noxiousweeds

Colorado Weed Management Association
http://www.cwma.org/

Boulder County Parks and Open Space Weeds Division
Steve Sauer, Boulder County Weed Coordinator, ssauer@bouldercounty.org 303-678-6110
http://www.bouldercounty.org/property/weeds/pages/default.aspx

CSU Extension Boulder County
Sharon Bokan, Boulder County Extension Small Acreage Coordinator, sbokan@bouldercounty.org 303-678-6176
http://www.extension.colostate.edu/boulder/acreage.shtml

CSU Extension Fact sheets
http://extension.colostate.edu/topic-areas/natural-resources/?target=publications

CSU Extension Small Acreage website
http://www.ext.colostate.edu/sam/index.html

Boulder County Weed Management Pocket Guide

Plains

Boulder County

Colorado State University Extension

This brochure was designed to increase weed awareness especially noxious weeds, the importance of identification and development of a weed management plan and provide some weed management methods.

How do I manage weeds on my property?

1. Positively identify the weed. Improper identification may lead you to the wrong management methods.
2. Understand the weed's life cycle. Is it a winter or summer annual (1 year growth cycle), biennial (2 year growth cycle) or perennial (multiple year growth cycle)? Does the perennial spread only by seed (simple) or seed and vegetative sprouts (complex). Timing of management methods is an important part of a successful weed management plan.
3. Learn what management techniques are available
    a. Cultural
    b. Mechanical
    c. Biological
    d. Chemical (both "synthetic" and "organic")
4. Develop a weed management plan that includes monitoring of the weeds and property.

Management:

- Cultural: Keeping healthy desired plants
- Mechanical: Hand pulling, light tillage when young, mowing of limited use
- Biological: Livestock may eat young plants
- Chemical: Vista (fluroxypyr), Starane (florasulam + fluroxypyr), dicamba

Russian thistle

Salsola iberica

Identification

- Summer annual, has grass like appearance when young
- Very spiny when mature, may have red stripes on stems
- Becomes a tumbleweed
- Inconspicuous flowers

Management

- Cultural: Maintaining healthy desired vegetation
- Mechanical: Hand pulling, light tillage when young, mowing of limited use
- Biological: None available
- Chemical: 2,4-D

Always read and follow the instructions on the herbicide label!

Purple loosestrife

Lythrum salicaria

ID tips

- Attractive purple flowering head
- Leaves are opposite or whorled, lance shaped with sharply pointed tip

Identification

- Lifecycle: Perennial
- Flower: Rose purple flower with 5-7 petals, long vertical flower, flower is tube shaped
- Leaves: Leaves are opposite or whorled, lance shaped with sharply pointed tip
- Roots: Extensive creeping rhizomes, short tap root
- Seedling: Seedlings look similar to mature plant
- Other: Plant of riparian areas, may be confused with native fireweed (only 4 petals on flower)

Management

- Cultural: Cultural management helps but Purple loosestrife can compete with desired vegetation
- Mechanical: Hand removal prior to seed set, removal of entire root system by digging
- Biological: None available
- Chemical: Rodeo (glyphosate), Garlon A (triclopyr), Habitat (imazapyr), Requires an herbicide labelled for use in and around water

Scentless Chamomile

Matricaria perforata

ID tips

- Flowers ¾" diameter, daisy like, yellow center disc
- Leaves are fern like and odor less

Identification

- Lifecycle: Annual, biennial or short-lived perennial
- Flower: Daisy like, yellow center disc, ¾" in diameter
- Leaves: Leaves alternate, fern like finely divided
- Roots: Tap and fibrous roots
- Seedling: Seedlings fern like
- Other: Only reproduces by seed so managing seed production is vital

Management

- Cultural: Maintaining healthy desired vegetation
- Mechanical: Hand pulling or tillage to disrupt plant growth and limit seed production, mowing of limited use due to low growth
- Biological: None available
- Chemical: Escort (metsulfuron methyl), Telar (chlorsulfuron)

Leafy spurge

Euphorbia esula

ID tips

- Flowers are indistinct yellow-green with a pair of heart shaped bracts below each flower
- Plant contains a milky white latex

Identification

- Lifecycle: Perennial
- Flower: Flowers indistinct, yellow-green with heart shaped bracts under the flower
- Leaves: Leaves are alternate narrow and 1 – 2.5" long, pale green
- Roots: Extensive creeping rhizomes
- Seedling: Seedlings look similar to mature plant
- Other: Plant contains a white milky latex that may cause skin irritation

Management

- Cultural: Cultural management helps but Leafy spurge can compete with desired vegetation
- Mechanical: Mowing can be effective if done every 2 weeks and at a low height
- Biological: *Apthona sp.* flea beetle
- Chemical: Perspective (aminocyclopyrachlor), Plateau (imazapic), dicamba

Canada thistle

Cirsium arvense

ID tips

- White to light lavender ½" diameter flowers born in clusters
- Leaves spiny



Identification

- Lifecycle: Perennial
- Flower: Flowers are small (1/2"), white to pink to lavender and born in clusters of up to 5 flowers
- Leaves: Leaves are spiny, alternate on the stem, oblong shaped with serrated edges.
- Stems: Plants range from 2 – 4' tall, stems are prickly
- Roots: Roots are extensive and include both vertical roots for water and nutrient storage and lateral roots that produce new shoots.
- Seedling: Seedlings look similar to mature plant
- Other: Canada thistle spreads by both seed and root system. Tillage can spread infestation by producing viable root segments

Management

- Cultural: Cultural management helps but Canada thistle can compete with desired vegetation
- Mechanical: Mowing can be effective if done every 2 weeks and at a low height
- Biological: Livestock will graze young plants and flowers
- Chemical: Milestone (aminopyralid), Transline (clopyralid), Curtail (clopyralid + 2,4-D), Redeem (clopyralid + triclopyr), Telar (chlorsulfuron)

Nuisance Weeds

Nuisance weeds are not defined by state law but are weeds commonly found in the county.

Curly dock

Rumex crispus

Identification

- Simple perennial only spreads by seed
- Long dark green basal leaves
- Large taproot
- Flower/seed head turns rust colored in the fall



Management

- Cultural: Maintaining healthy desired vegetation
- Mechanical: Digging entire root system, keep from going to seed, only spreads by seed
- Biological: None available
- Chemical: 2,4-D

Kochia

Kochia scoparia

Identification

- Summer annual
- Gray green hairy foliage
- Seedlings may form a grey green "fuzzy" mat in the spring
- Becomes a tumbleweed


What is a Noxious Weed?

Noxious weeds are defined by State and Federal law and are non-native plants that have no natural controls and are able to adapt to varied conditions. The Colorado Weed Act places these weeds onto three separate lists (weed names are color-coded to correspond to the list they are on).

List A weeds: Elimination required

List B weeds: Management required

List C weeds: Management recommended

Weed management is an ongoing process that will continue until you sell your property. Check along fence lines, ditches and roads as these are usually the first areas to be infested. Any time you disturb the soil, you open the door for a weed infestation to start.

Boulder County Weed Management Plan
http://www.bouldercounty.org/doc/parks/weedmplan.pdf

This brochure is not meant to be all inclusive but is a guideline for those weeds commonly found in the county. Photographs for this brochure are from the following sources.

CO Dept. of Ag. - Noxious Weed Management Program
http://www.colorado.gov/ag/weeds
CO Weed Management Association - Noxious Weed Info.
http://www.cwma.org/
USDA Plants Database - Plants information
http://plants.usda.gov/java/

Weed Management Methods

Cultural: Cultural methods involve getting and keeping desired vegetation established and healthy. Developing and following a grazing management plan, reseeding disturbed areas, using clean weed free seed and maintaining proper stubble height are all cultural methods.

Mechanical: Mechanical methods include but are not limited to hand pulling, mowing, hoeing, tillage and burning.

Biological: Biological methods include the use of natural predators for specific weed species. This may include insects, fungi, bacteria and livestock. Biological methods are not 100% effective and can take 5 to 10 years to establish sufficient populations. Insects can be obtained from the Colorado Department of Agriculture's Insectary. https://www.colorado.gov/pacific/agconservation/request-bug

Chemical: Chemical methods include both "organic" and "synthetic" herbicides. Always positively identify the weed and determine the best herbicide to use and application timing. **Read, understand and follow the label prior to application.** Mixing at a higher rate or using an herbicide where it is not labelled for use is illegal and may cause harm to desirable plants, humans, livestock and wildlife. For more information on the herbicides listed, please contact Steve Sauer, Boulder County or Sharon Bokan, Boulder County Extension. Contact information on last page.

Sprayer calibration:
http://www.ext.colostate.edu/pubs/farmmgt/05003.html

Cheatgrass

Bromus sp.

ID tips

- Winter annual grass, hairy leaves, may have reddish cast in winter
- Mature by June with drooping seed heads and seeds that get caught in clothing

Identification

- Lifecycle: Annual
- Flower: Open, many branched drooping panicle
- Leaves: Leaves are hairy and may have reddish tinge in winter
- Roots: Fibrous roots
- Seedling: Seedlings look similar to mature plant, germinate from August through winter
- Other: Three related grasses Cheatgrass (*Bromus secalinus*), Downy Brome (*Bromus tectorum*) and Japanese Brome (*Bromus japonicus)*

Management

- Cultural: Maintaining healthy desired vegetation
- Mechanical: Mowing and grazing can be effective if timed properly
- Biological: None available
- Chemical: Plateau (imazapic), Roundup (glyphosate)

Musk thistle

Carduus nutans

ID tips

- Flowers have spine tipped bracts underneath that curve away from flower
- Leaves have a white midrib and margin
- Flowers are solitary, 1 – 2" in diameter and purple

Identification

- Lifecycle: Biennial
- Flower: Flowers are solitary, purple, 1 – 2" in diameter, and usually nodding, spine tipped bracts under flower
- Leaves: Alternate on the stem, dark green with white mid rib and white leaf margin, deeply lobed, forms a rosette when the plant first emerges
- Stems: Plants can be 6' tall with multiple stems, spiny
- Roots: Taproot
- Seedling: Seedling forms a rosette
- Other: Only spreads by seed

Management

- Cultural: Maintaining healthy desired vegetation
- Mechanical: sever root below soil surface and remove plant or cutting/mowing plant when plants are beginning to bloom
- Biological: None available
- Chemical: Milestone (aminopyralid), Transline (clopyralid), Curtail (clopyralid + 2,4-D), Redeem (clopyralid + triclopyr), Telar (chlorsulfuron)

Spotted knapweed

Centaurea maculosa

ID tips

- Flowers are lavender to purple, bracts under flower have black tips
- Leaves are deeply lobed, first year growth a rosette

Identification

- Lifecycle: Biennial or short-lived perennial
- Flower: Flowers are lavender to purple, bracts under flower have black tips
- Leaves: Leaves are deeply lobed, rosette leaves larger, leaves decrease in size on the stem
- Roots: Taproot
- Seedling: Seedlings have deeply lobed leaves that form a rosette
- Other: Flower structure breaks off and becomes a tumbleweed, may hybridize with Diffuse knapweed

Management

- Cultural: Maintaining healthy desired vegetation
- Mechanical: Hand pulling or cutting off flowering structure can reduce seed production, digging out plant
- Biological: Goats and sheep can help manage infestations, *Cyphocleonus achates*, root weevil, *Larinus minutus*, flower weevil
- Chemical: Milestone (aminopyralid), Transline (clopyralid), Curtail (clopyralid + 2,4-D), Redeem (clopyralid + triclopyr)

Diffuse knapweed

Centaurea diffusa

ID tips

- White to lavender flowers, bracts under flower spiny and straw colored
- Leaves highly dissected, first year's growth a rosette


Identification

- Lifecycle: Biennial or short-lived perennial
- Flower: White to lavender <1/2" diameter flowers, clusters of 2 – 3, bracts under flower spiny and straw colored
- Leaves: Basal leaves and rosette leaves are highly dissected, leaves on stem smaller and less dissected
- Roots: Taproot
- Seedling: Seedlings have highly dissected leaves that form a rosette
- Other: Flower structure breaks off and becomes a tumbleweed, may hybridize with Spotted knapweed

Management

- Cultural: Maintaining healthy desired vegetation
- Mechanical: Hand pulling or cutting off flowering structure can reduce seed production, digging out plant
- Biological: Goats and sheep can help manage infestations, *Cyphocleonus achates*, root weevil, *Larinus minutus*, flower weevil
- Chemical: Milestone (aminopyralid), Transline (clopyralid), Curtail (clopyralid + 2,4-D), Redeem (clopyralid + triclopyr)

Scotch thistle

Onopordum acanthium

ID tips

- Plants have a gray green appearance
- Flowers are purple 1 – 2" in diameter with spines under the flower that point up toward the flower


Identification

- Lifecycle: Biennial
- Flower: Flowers are solitary, purple, 1 – 2" in diameter, spiny bracts under the flower
- Leaves: Alternate on the stem, large, gray green in color may be 2' long 1' wide, covered with hairs, irregularly lobed with spines
- Stems: Plants may reach 12' tall, stems have broad spiny wings
- Roots: Taproot
- Seedling: First year's growth is a large gray green color rosette
- Other: Only spreads by seed

Management

- Cultural: Maintaining healthy desired vegetation
- Mechanical: sever root below soil surface and remove plant or cutting/mowing plant when plants are beginning to bloom
- Biological: None available
- Chemical: Milestone (aminopyralid), Transline (clopyralid), Curtail (clopyralid + 2,4-D), Redeem (clopyralid + triclopyr), Telar (chlorsulfuron)

Field Bindweed

Convolvulus arvensis

ID tips

- White to pink morning glory shaped flower
- Leaves arrow shaped on long trailing stems


Identification

- Lifecycle: Perennial
- Flower: White to pink morning glory shaped flower
- Leaves: Leaves arrow shaped on long trailing stems
- Roots: Extensive creeping rhizomes
- Seedling: Seedlings look similar to adult plant without long vine
- Other: Seeds may survive 35 years in the soil and roots may reach 30' deep

Management

- Cultural: Maintaining healthy desired vegetation
- Mechanical: Hand pulling, digging and mowing of limited use unless done frequently (every week)
- Biological: *Aceria malherbae*, Bindweed gall mite
- Chemical: Paramount (quinclorac), dicamba, 2,4-D, Arsenal (imazapyr)

Knotweeds, Japanese, Giant, Bohemian

Polygonum cuspidatum, sachalinense, X bohemicum

ID tips

- Clustered small showy white flowers
- Hollow reddish colored stems with heart shaped leaves



Identification

- Lifecycle: Perennial
- Flower: Clustered small showy white flowers in late summer
- Leaves: Leaves are heart shaped, alternate and large,
- Roots: Extensive creeping rhizomes
- Seedling: Seedlings look similar to mature plant with smaller leaves
- Other: Stems reddish color, hollow, often swollen at nodes, membranous sheath at nodes, tends to grow in riparian areas, can reach 10' tall

Management

- Cultural: Cultural management helps but the knotweeds can compete with desired vegetation
- Mechanical: Hand pulling with complete removal of root system, solarization, mowing of limited use
- Biological: None available
- Chemical: Habitat (imazapyr), Rodeo (glyphosate) Requires an herbicide labelled for use in and around water.

Mediterranean Sage

Salvia aethiopis

ID tips

- Gray/blue green hairy triangular lobed leaves
- Flowering structure with white flowers that becomes a tumbleweed


Identification

- Lifecycle: Biennial
- Flower: Hooded, 2 lipped white to cream colored, clustered
- Leaves: Gray/blue green hairy aromatic leaves
- Stems: Single lower stem becomes multi branched flowering structure
- Root: Taproot
- Seedling: Gray/blue green rosette with leaves having none to limited lobes
- Other: Rosette the first year, may be confused with ornamental sages

Management

- Cultural: Maintaining healthy desired vegetation
- Mechanical: severe root below soil surface and remove plant or cutting/mowing plant when plants are beginning to bloom
- Biological: None available
- Chemical: Telar (chlorsulfuron), Escort (metsulfuron methyl) + 2,4-D tank mix or Plateau (imazapic)

Oxeye Daisy

Chrysanthemum leucanthemum

ID tips

- Daisy appearing flower, flowers solitary and 1 to 3” in diameter
- Leaves are spoon shaped on the lower part of stem and narrow toothed leaves that clasp the stem on the upper stem


Identification

- Lifecycle: Perennial
- Flower: Daisy appearing flower, flowers solitary and 1 to 3” in diameter 15 to 30 white ray flowers
- Leaves: Leaves are spoon shaped, toothed and on long petioles on the lower stem and narrow toothed and clasp the stem on the upper stem
- Roots: Extensive creeping rhizomes
- Seedling: Seedlings have spoon shaped, toothed leaves
- Other: Seeds can survive for 40 years in the soil, so continued monitoring required

Management

- Cultural: Cultural management helps but Oxeye daisy can compete with desired vegetation
- Mechanical: Hand pulling can reduce seed production, digging out plant
- Biological: Goats and sheep can help manage infestations
- Chemical: Milestone (aminopyralid), Escort (metsulfuron methyl), Telar (chlorsulfuron)

Dalmatian toadflax

Linaria genistifolia ssp. dalmatica

ID tips

- Yellow snapdragon shaped flowers, orange bearded throat and long spur
- Leaves blue/green color, heart shaped that clasp the stem


Identification

- Lifecycle: Perennial
- Flower: Yellow snapdragon shaped flowers, orange bearded throat
- Leaves: Leaves waxy and blue/green color, heart shaped that clasp the stem
- Stems: Multi stemmed
- Roots: Extensive creeping rhizomes
- Seedling: Seedlings look similar to mature plant
- Other: Dalmatian toadflax spreads by both seed and root system. Tillage can spread infestation by producing viable root segments

Management

- Cultural: Cultural management helps but Dalmatian toadflax can compete with desired vegetation
- Mechanical: Mowing can help if done every 2 weeks and at a low height
- Biological: *Mecinus janthinus* stem weevil
- Chemical: Telar (chlorsulfuron) , Plateau (imazapic), Tordon (restricted use herbicide)

Yellow toadflax

Linaria vulgaris

ID tips

- Pale yellow to cream snapdragon shaped flowers, orange bearded throat
- Leaves are pale green, narrow and pointed


Identification

- Lifecycle: Perennial
- Flower: Pale yellow to cream snapdragon shaped flowers, orange bearded throat
- Leaves: Leaves are alternate pale green, narrow and pointed
- Roots: Extensive creeping rhizomes
- Seedling: Seedlings look similar to mature plant
- Other: Yellow toadflax spreads by both seed and root system. Tillage can spread infestation by producing viable root segments

Management

- Cultural: Cultural management helps but Yellow toadflax can compete with desired vegetation
- Mechanical: Mowing can help if done every 2 weeks and at a low height
- Biological: *Mecinus janthinus* stem weevil
- Chemical: Telar (chlorsulfuron) , Plateau (imazapic), Tordon (restricted use herbicide)