




WHAT IS A WEED?


- ❖ A weed is an unwanted plant in an unwanted area.
- ❖ Noxious weeds are **non-native** invasive plants that displace desirable vegetation and degrade natural and agricultural lands. They threaten our drinking water supply, agricultural crops, pasture lands and native habitats.



COLORADO
Department of Agriculture



Colorado Noxious Weed Act



Colorado State University
Extension

Colorado Noxious Weed Ratings:

A – these weeds “must be eradicated” & Colorado State “law mandates compliance from all local governing bodies (counties and cities), as well as affected public and private landowners.”

B – These weeds require weed management plans to be “develop[ed] and implement[ed] to stop the continued spread of these species.” Some B-list weeds are even designated for eradication by the State. For example, Bouncing Bet is only found in small quantities in Fremont and Custer Counties, so instead of controlling and containing the infestations, eradication is the goal.

C – The goal with these weeds is not “to stop the spread of these weed species, but to provide additional educational, research and biological control resources to jurisdictions that choose to require management of List C species.”

Please see “Noxious Weeds of Colorado” booklet, 10th edition, produced by the Colorado Weed Management Association.



Custer County’s Noxious Weeds

- A Myrtle Spurge (*Euphorbia myrsinites*)
- A Cypress Spurge (*Euphorbia cyparissias* L.)
- B Bouncing Bet (*Saponaria officinalis*) **DESIGNATED FOR ERADICATION**
- B Bull thistle (*Cirsium vulgare*)
- B Canada thistle (*Cirsium arvense*)
- B Dalmation toadflax (*Linaria dalmatica*)
- B Diffuse knapweed (*Centaurea diffusa*)
- B Hoary cress (*Cardaria draba*)
- B Houndstongue (*Cynoglossum officinale*)



Custer County's Noxious Weeds Continued

- B Leafy spurge (*Euphorbia esula*) **DESIGNATED FOR ERADICATION**
- B Musk thistle (*Carduus nutans*)
- B Oxeye daisy (*Chrysanthemum leucanthemum*)
- B Perennial Pepperweed (*Lepidium latifolium* L.)
- B Russian knapweed (*Acroptilon repens*)
- B Spotted knapweed (*Centaurea maculosa*)
- B Yellow toadflax (*Linaria vulgaris*)
- C Common mullein (*Verbascum thapsus*)



Custer County's Noxious Weeds Continued

Watch List –
Spreading Dogbane
Bindweed
Star Thistle
Elongated Mustard
Swainsonpea
Tamarisk





Historically:

- Curse on the earth
- Created in a moment of grief
- Sign of an un-kempt land, untidiness and neglect



Sunflower family,
Asteraceae



Genus *Cirsium* was first described in 1754
by P. Miller

Genus name was chosen after the Greek
word *Ciros*=swollen vein as thistles were
considered a remedy for this

Native vs. non-native

- In general, non-native thistles are much more robust,
- grow in much larger clumps, and
- tend to be purplish rather than whitish



Carduus acanthoides
Plumeless thistle

Positive associations:

- food: artichokes, young leaves in salad, young stems and roots peeled and eaten raw or cooked, seeds roasted
- medicinal values: anti-inflammatory properties, astringent.

Non-native Thistles vs. Native

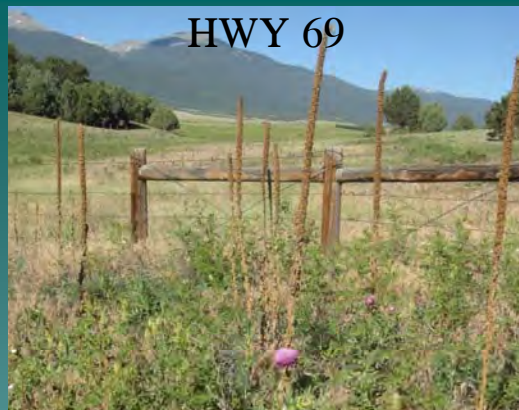


NON-NATIVE THISTLES

- ◆ Musk - *Carduus nutans*
- ◆ Canada - *Cirsium arvense*
- ◆ Bull - *Cirsium vulgare*
- ◆ Scotch - *Onopordum acanthium*

- ◆ Others
 - Yellow Starthistle - *Centaurea solstitialis*
 - Sow thistle - *Sonchus arvensis*
 - Plumeless - *Carduus acanthoides*
 - Russian - *Salsola tragus L.*

Musk Thistle Rating: B



Musk Thistle *Carduus nutans* has the ability to form dense stands in nearly any soil. It can choke out native species and other desirable plants, which can affect grazing livestock. Milestone herbicide is effective and is most effective mid-summer.

Canada Thistle

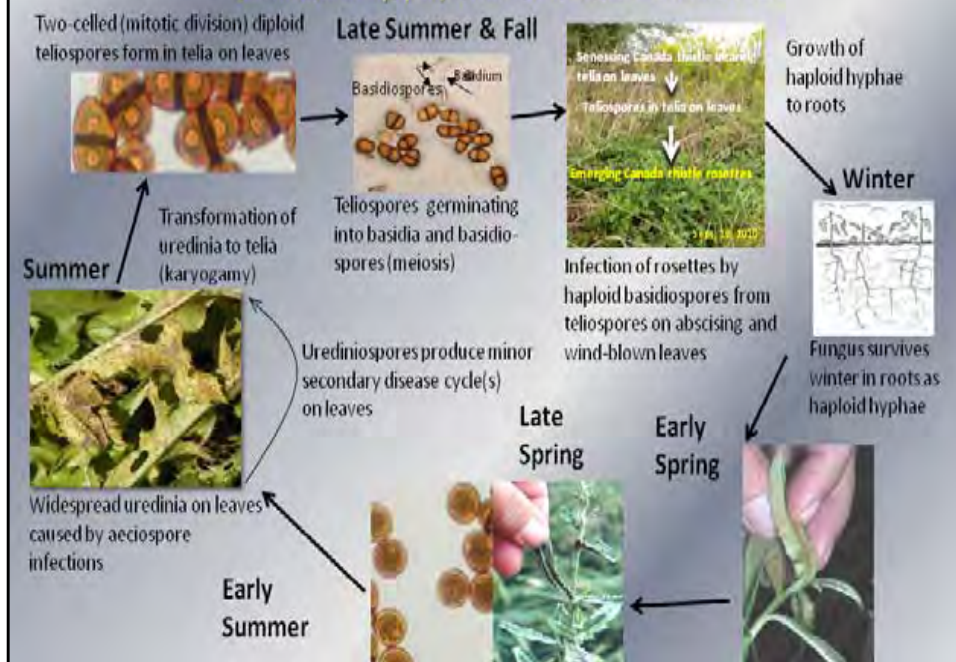
Rating: B

Canada Thistle *Cirsium arvense* has an extensive, interconnected root system. The majority of the plant is unseen, as it is underground. It is therefore best to treat Canada Thistle later in the growing season, as there is more plant material exposed causing more herbicide to translocate into the root system. Milestone has some residual effect and is very successful in controlling Canada Thistle.

Palisade Insectary is working on a biological control (rust) as we speak!



Successful epiphytotic of Canada thistle rust





Cirsium (=Breaa) arvense, Canada thistle



Bull Thistle
Cirsium vulgare
Rating B

Scotch Thistle

Rating: B

Scotch Thistle *Onopordum acanthium* In the late 19th century, it was introduced to temperate regions of North America, South America, and Australia as an ornamental plant, and is now considered a major agricultural and wildland noxious weed. It is difficult to eradicate because of its drought resistance. It can spread rapidly and eventually dense stands prohibit foraging by livestock.



We have about 15 native species of *Cirsium* in Colorado ranging from lowest elevations to above treeline, in moist to dry habitats



- source of food for birds and insects



American Goldfinch eating bull thistle

- pollination ecology for insects



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Native thistles in Colorado

- We will cover 4 species in Custer County
- Give a sense for diversity, and key identifying characteristics

Cirsium canescens Prairie thistle, or Platte thistle

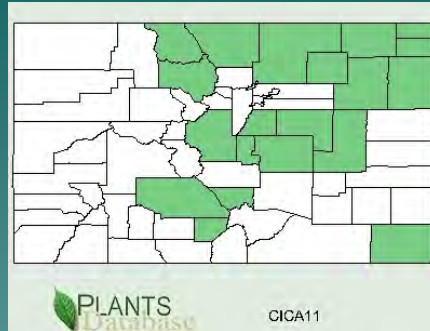
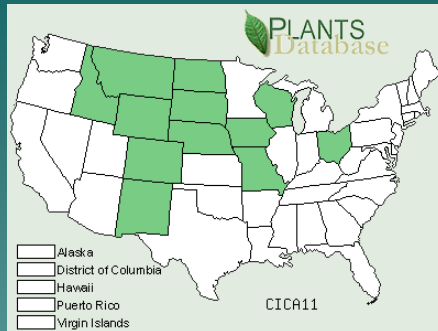




*Cirsium
canescens*
Platte thistle

- Flowers whitish
(May-July)
- Leaves reduced
upwards

Cirsium canescens



In Colorado: plains and
intermountain parks up to
9000 ft.

Cirsium ochrocentrum
Yellowspine thistle



Cirsium ochrocentrum



- flowers purple, pink, or cream in relatively large (4 cm.)
- (July-September)
- flower heads are terminal and solitary

Cirsium ochrocentrum



© Patrick J. Alexander

- phyllaries have stout, reflexed yellow spine tips (4-10 mm long)

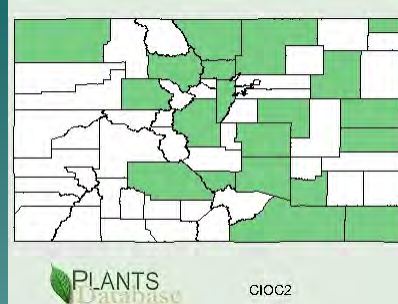
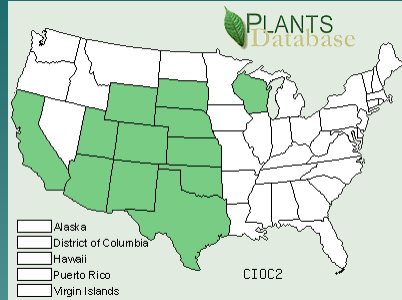
Cirsium ochrocentrum



© Patrick J. Alexander

- leaves point somewhat downward and strongly spiny
- grows in clumps of several stems

Cirsium ochrocentrum



In Colorado: dry sites in prairies
and piedmont valleys.
5000-6000 ft.

Cirsium flodmanii Flodman's thistle



Cirsium flodmanii Flodman's thistle

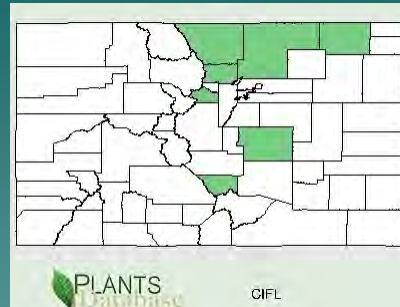
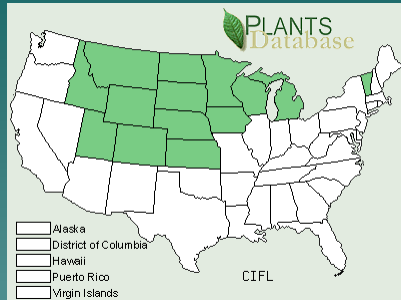
- flowers deep purple (July-Sept.)
- heads solitary and terminal, 2-3 cm high
- tends to form patches by root sprouting, and is found in more moist habitats



Cirsium flodmanii

- leaves have flat hairs beneath
- stems usually branching in upper portions
- rhizomatous

Cirsium flodmanii



Wet swales in piedmont valleys.
Moist, open sites, meadows,
pastures, waste places.

Cirsium scopulorum Mountain thistle



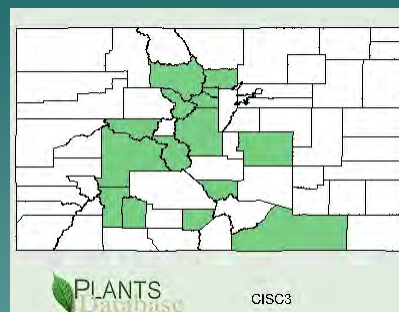
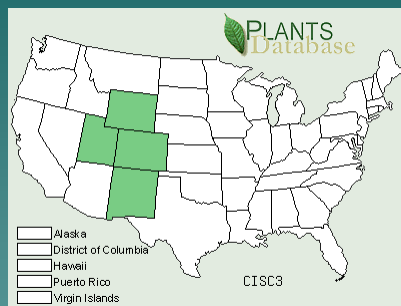
- flowers yellowish in the northern mountains
- purplish in the Sangres
- flowers in late summer

Cirsium scopulorum Mountain thistle



- large, heavy terminal cluster often nodding

Cirsium scopulorum



In Colorado: tundra, boulder fields, and scree. 9,000-12,000 ft.

Threats/Stresses

- Weevils (*Rhinocylus conicus* and others)
- Development (residential, industrial, agricultural)
- Indiscriminate pulling, spraying
- Misconception that all thistles are bad-- education is needed

**YOU CAN HELP STOP THE
SPREAD OF NOXIOUS WEEDS**

**KEEP AN EYE OUT
AND
LET US KNOW!!!!**



Colorado State University
Extension

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Our Time for Critical Engagement