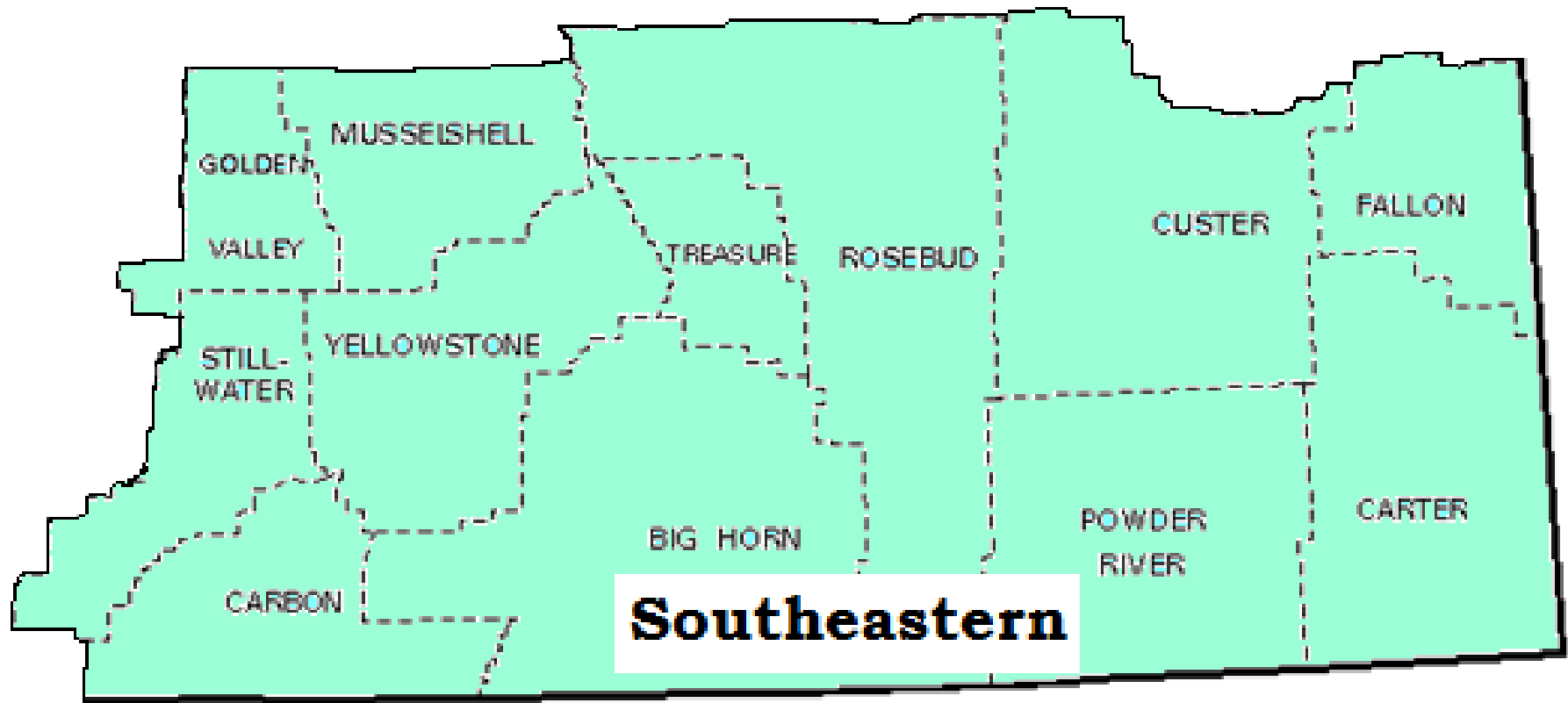


Southeastern Area



- Consists of 12 counties:
Musselshell, Powder River, Treasure, Golden Valley, Stillwater, Carbon, Yellowstone, Big Horn, Rosebud, Custer, Fallon, Carter

Weed Lifecycles

- Annual
 - Example: Yellow starthistle
- Biennial
 - Example: Houndstongue
- Simple perennial
 - Example: Orange hawkweed
- Creeping perennial
 - Example: Leafy spurge

Weed Spread

Weeds are hitchhikers and can be spread through many ways...

Wash me!



Karan A. Rawlins, U of Georgia

Check me for weed seeds!



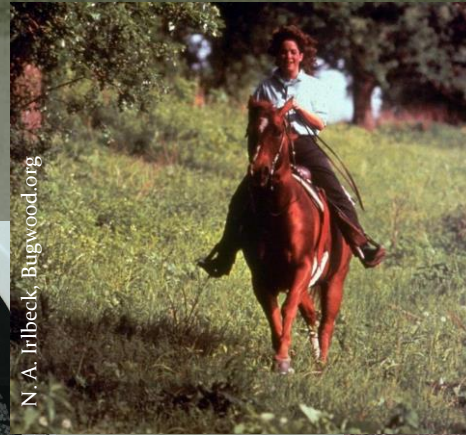
Steve Dewey, Utah State University, Bugwood.org

Use NWSFF!



N.A. Irbeck, Bugwood.org

Always check to make sure you're not a contributing factor to weed seed spread!



N.A. Irbeck, Bugwood.org



Howard F. Schwartz, Colorado State University, Bugwood.org



Chris Schnepf, Bugwood.org

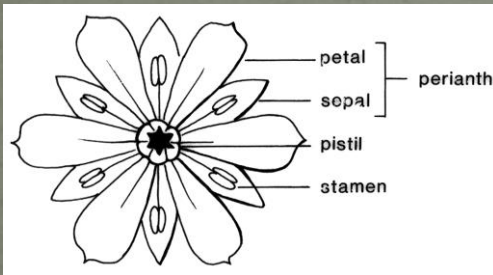


Joseph LaForest, U of Georgia, Bugwood.org

Plant characteristics commonly used in identification and subsequent control selection:

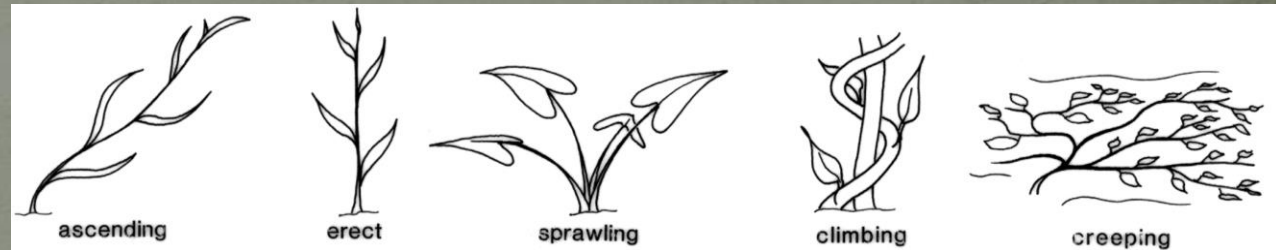
Flowers

- Color
- Number of petals
- Blossom location



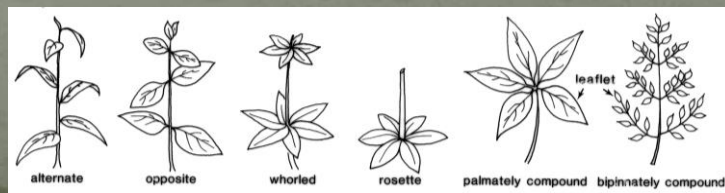
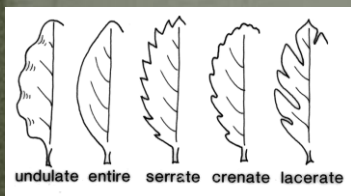
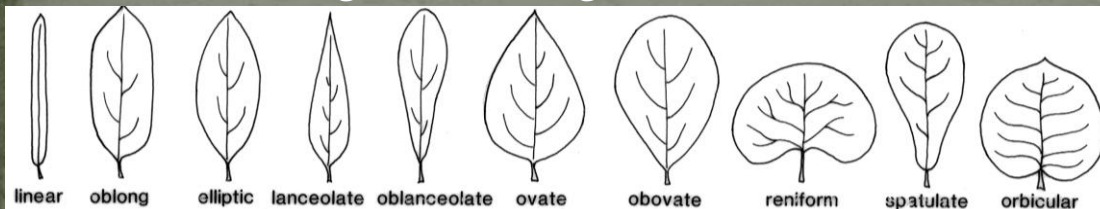
Stem habit

- Single stems
- Highly branched



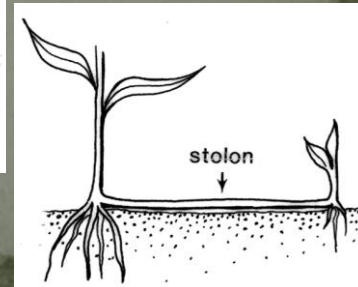
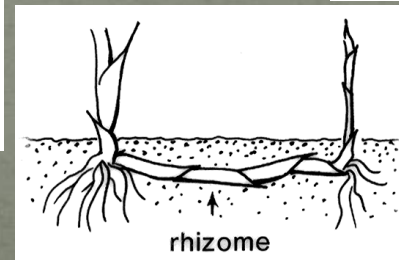
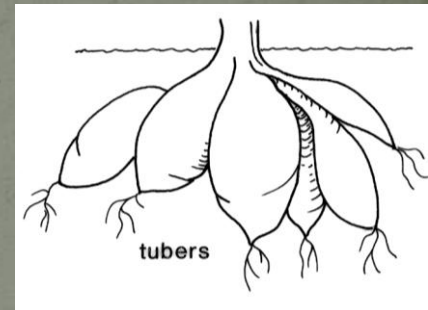
Leaves

- Shape
- Type of edge
- Arrangement along stem



Root systems

- Taproot
- Bulbed
- Rhizomes



Habitat: Commonly Found along Roadsides/Right-of-Ways

- Canada thistle
- Houndstongue
- Russian knapweed
- Spotted knapweed
- Purple loosestrife (in wet roadside ditches)
- Blueweed
- Diffuse knapweed
- Field bindweed
- Common tansy
- Dyer's woad
- Leafy spurge
- Meadow hawkweed
- Rush skeletonweed
- St. Johnswort
- Scotchbroom
- Sulfur cinquefoil
- Tall buttercup
- Hoary alyssum
- Tansy ragwort

Montana's Noxious Weed Species

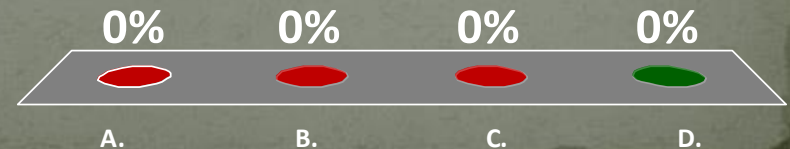
How many plant species are officially listed on Montana's Noxious Weed List?

A. 28

B. 42

C. 56

★ D. 32



Noxious Weed Facts:

- Currently 32 state listed noxious weeds infest about 7.6 million acres in Montana.
- First recorded in the state in the early 1920's, spotted knapweed has spread to infest about 2.7 million acres.
- Direct impacts of knapweed to grazing land value in Montana were \$11 million (Hirsch and Leitch 1996).
- Annual direct impacts to wildland values were \$3.1 million, including \$1.2 million for reduced wildlife associated recreation and \$1.9 million for reduced soil and water conservation (Hirsch and Leitch 1996).

Montana's
noxious weeds
are prioritized
by establishment.

Montana Noxious Weed List

Effective: December 2013

PRIORITY 1A These weeds are not present or have a very limited presence in Montana. Management criteria will require eradication if detected, education, and prevention:

- (a) Yellow starthistle (*Centaurea solstitialis*)
- (b) Dyer's woad (*Isatis tinctoria*)

PRIORITY 1B These weeds have limited presence in Montana.

Management criteria will require eradication or containment and education:

- (a) Knotweed complex (*Polygonum cuspidatum*, *P. sachalinense*, *P. × bohemicum*, *Fallopia japonica*, *F. sachalinensis*, *F. × bohémica*, *Reynoutria japonica*, *R. sachalinensis*, and *R. × bohémica*)
- (b) Purple loosestrife (*Lythrum salicaria*)
- (c) Rush skeletonweed (*Chondrilla juncea*)
- (d) Scotch broom (*Cytisus scoparius*)

PRIORITY 2A These weeds are common in isolated areas of Montana. Management criteria will require eradication or containment where less abundant. Management shall be prioritized by local weed districts:

- (a) Tansy ragwort (*Senecio jacobaea*, *Jacobaea vulgaris*)
- (b) Meadow hawkweed complex (*Hieracium caespitosum*, *H. procaltum*, *H. floridundum*, and *Pilosella caespitosa*)
- (c) Orange hawkweed (*Hieracium aurantiacum*, *Pilosella aurantiaca*)
- (d) Tall buttercup (*Ranunculus acris*)
- (e) Perennial pepperweed (*Lepidium latifolium*)
- (f) Yellowflag iris (*Iris pseudacorus*)
- (g) Blueweed (*Echium vulgare*)
- (h) Hoary alyssum (*Berteroa incana*)

PRIORITY 2B These weeds are abundant in Montana and widespread in many counties. Management criteria will require eradication or containment where less abundant. Management shall be prioritized by local weed districts:

- (a) Canada thistle (*Cirsium arvense*)
- (b) Field bindweed (*Convolvulus arvensis*)
- (c) Spurge (*Euphorbia esula*)
- (d) Whitetop (*Cardaria draba*, *Lepidium draba*)
- (e) Russian knapweed (*Acroptilon repens*, *Rhaponticum repens*)
- (f) Spotted knapweed (*Centaurea stoebe*, *C. maculosa*)
- (g) Diffuse knapweed (*Centaurea diffusa*)
- (h) Dalmatian toadflax (*Linaria dalmatica*)
- (i) St. Johnswort (*Hypericum perforatum*)
- (j) Sulfur cinquefoil (*Potentilla recta*)
- (k) Common tansy (*Tanacetum vulgare*)
- (l) Oxeye daisy (*Leucanthemum vulgare*)
- (m) Houndstongue (*Cynoglossum officinale*)
- (n) Yellow toadflax (*Linaria vulgaris*)
- (o) Saltcedar (*Tamarix* spp.)
- (p) Flowering rush (*Butomus umbellatus*)
- (q) Eurasian watermilfoil (*Myriophyllum spicatum*)
- (r) Curlyleaf pondweed (*Potamogeton crispus*)

Priority 3 Regulated Plants: (NOT MONTANA LISTED NOXIOUS WEEDS)

These regulated plants have the potential to have significant negative impacts. The plant may not be intentionally spread or sold other than as a contaminant in agricultural products. The state recommends research, education and prevention to minimize the spread of the regulated plant.

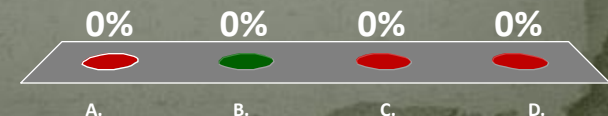
- Cheatgrass (*Bromus tectorum*)
- Hydrilla (*Hydrilla verticillata*)
- Russian olive (*Elaeagnus angustifolia*)

Weed Laws:

- Landowners are required to control noxious weed infestations on their land; including **BOTH** state and county listed species.
- **7-22-2131. Noncompliance with weed control requirements -- general notice.** (1) (a) If a complaint is made against a landowner or if the board has reason to believe that noxious weeds are present on a landowner's property, the board shall notify the landowner by certified mail of the complaint and shall request permission for the board's agent to enter the property to conduct an inspection.
- **7-22-2116. Unlawful to permit noxious weeds to propagate -- notice required in sale.** (1) It is unlawful for any person to permit any noxious weed to propagate or go to seed on the person's land, except that any person who adheres to the noxious weed management program of the person's weed management district or who has entered into and is in compliance with a noxious weed management agreement is considered to be in compliance with this section.
- **7-22-2134. Noncompliance -- actions by board.** (1) The board may seek a court order to enter upon the infested parcels of the landowner's property if attempts to achieve voluntary compliance have been exhausted.
- **7-22-2152. Revegetation of rights-of-way and areas that have potential for noxious weed infestation.** (1) Any person or state agency proposing a mine, a major facility under Title 75, chapter 20, an electric, communication, gas, or liquid transmission line, a solid waste facility, a highway or road, a subdivision, a commercial, industrial, or government development, or any other development that needs state or local approval and that results in the potential for noxious weed infestation within a district shall notify the board at least 15 days prior to the activity.

How are weeds that occur on the MT State Noxious Weed list grouped?

- A. Categories
- ★ B. Priorities
- C. By scientific name
- D. Levels



Priority 1A

--require **eradication, education
and prevention** if detected--



Steve Dewey, Utah State University, Bugwood.org

Identify this plant:

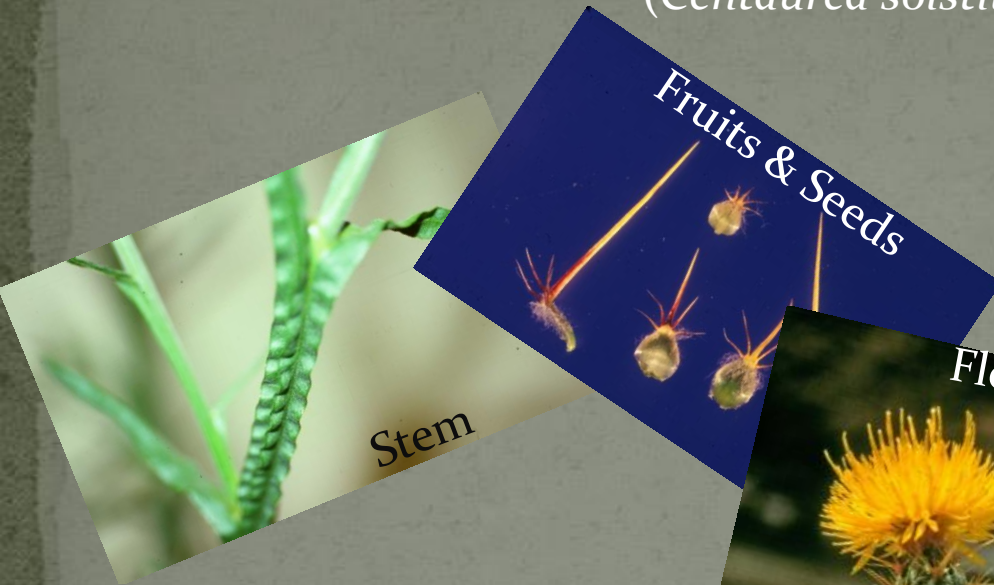
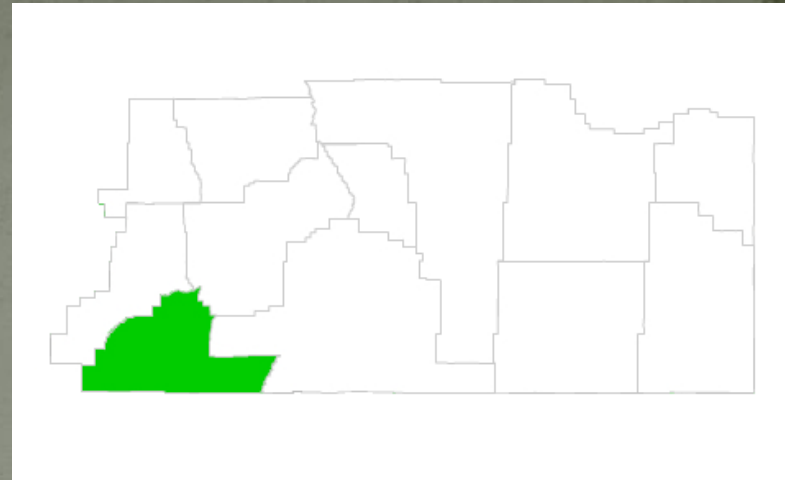


- A. Purple loosestrife
- B. Houndstongue
- C. Scotch broom
- ★ D. Yellow starthistle



Yellow starthistle

(*Centaurea solstitialis*)



Not currently found in MT

Leaves:

- Deeply lobed with pointed tip
- Cottony hairs
- Greyish-green

Flower:

- Yellow, 1 per stem
- Sharp, straw colored spines

The spines on a yellow starthistle stem are sharp enough to puncture car tires.

- ★ A. True
- B. False

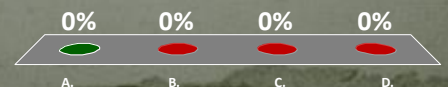


Steve Dewey, Utah State University, Bugwood.org



Identify this plant:

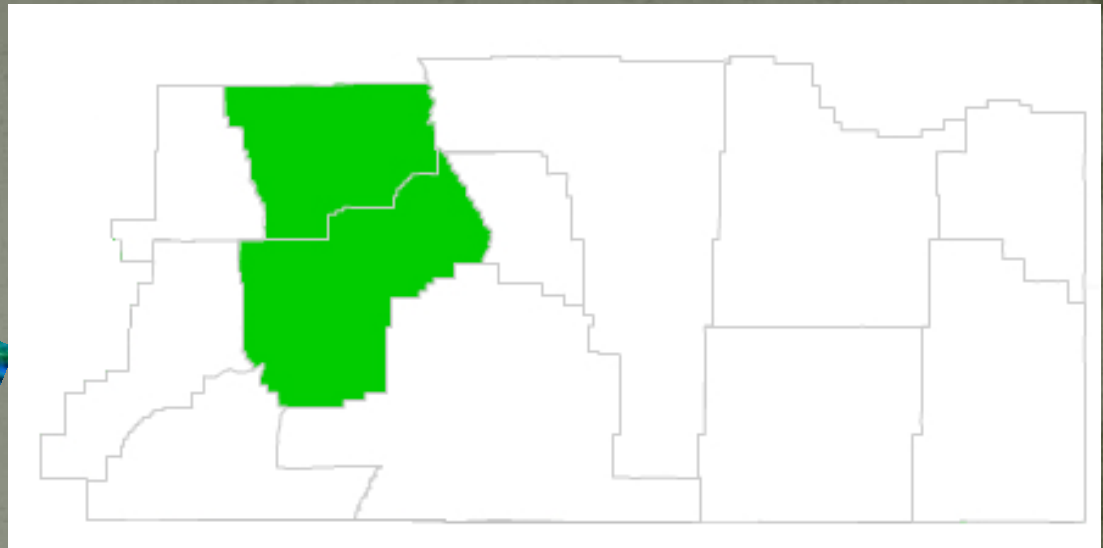
- ★ A. Dyer's woad
- B. Yellow starthistle
- C. Blüeweed
- D. Field bindweed



Dyer's woad

(*Isatis tinctoria*)

Roots



Rosette



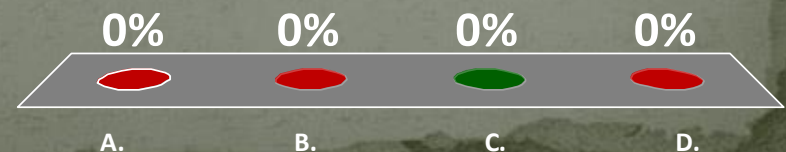
Flower



- Leaves:
 - Bluish-green
 - White midrib
- Flower:
 - Yellow
 - Flat topped

Dyer's woad was brought to North America on purpose during the colonial period, for what purpose?

- A. An ornamental plant for gardens
- B. Fodder for livestock
- ★ C. A form of dye before indigo dye was available
- D. A form of erosion control



Priority 1B

Require **eradication** or
containment and **education**.

Scotch broom



Eric Coombs, Oregon Department of Agriculture, Bugwood.org

Identify this plant:

- A. Saltcedar
- ★ B. Purple loosestrife
- C. Common tansy
- D. Blueweed

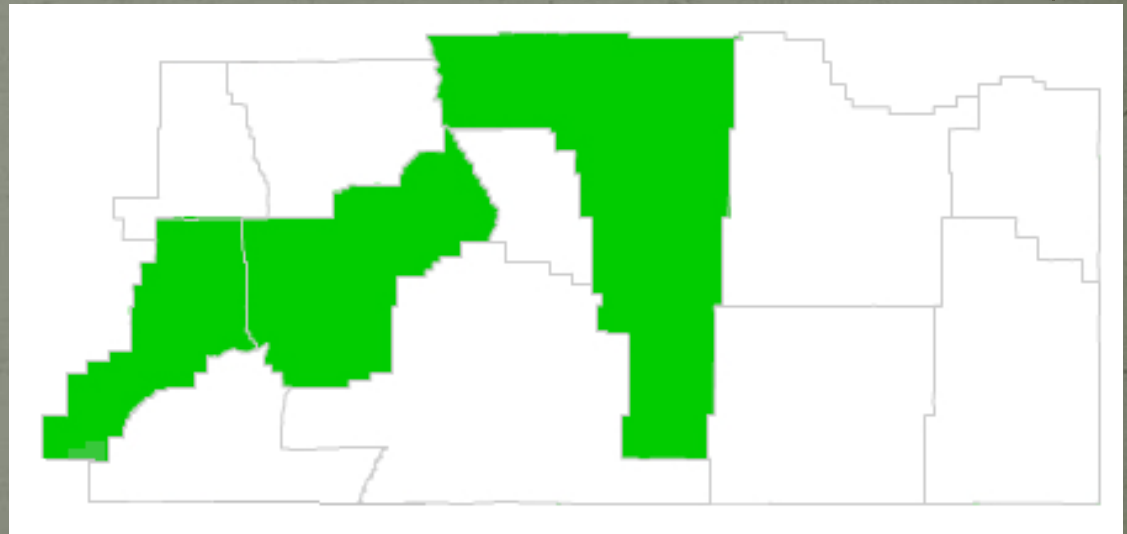


Purple loosestrife

(*Lythrum spp.*)



- **Leaves:**
 - Lance-shaped
 - Smooth margins
- **Stems:**
 - Square-octagonal in shape
- **Flower:**
 - Rose-purple
 - Clustered spike
 - Multiple flowering branches



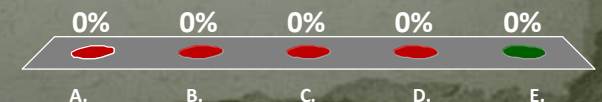
The square stem will help you know its loosestrife!

Areas you're most likely to find purple loosestrife are:

- A. Irrigation canals
- B. Seasonal wetlands
- C. River & stream banks
- D. The edges of ponds
- ★ E. All of the above



John D. Byrd Mississippi State University, Bugwood.org



Management prioritized by
local weed districts

Tansy Ragwort

Priority 2A



Michael Shepard, USDAFS, Bugwood.org

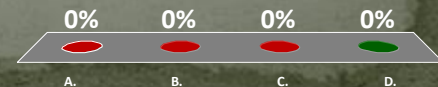
Require **eradication** or
containment where less abundant

Identify this plant:

- A. Hoary alyssum
- B. Houndstongue
- C. Cheatgrass
- ★ D. Tall buttercup



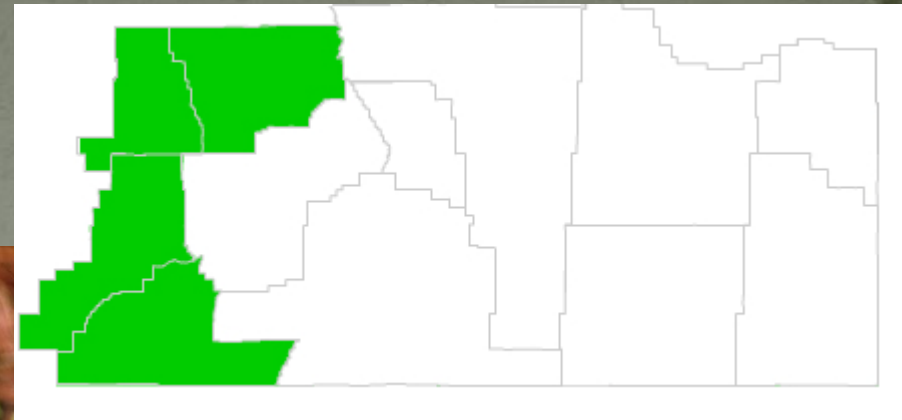
John Cardina, Ohio State University, Bugwood.org



Tall buttercup

(*Ranunculus acris*)

- **Leaves:**
 - Hairy
 - Deeply lobed
- **Stems:**
 - Branched
 - Hairy
- **Flower:**
 - Glossy yellow with greenish center
 - Occur in clusters



Which is which?

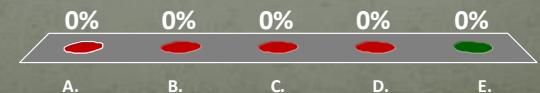
Tall buttercup



Native buttercup

Tall buttercup produces an oil called protoanemonin that is bitter to the taste and causes irritation if ingested; what type of irritation does it cause?

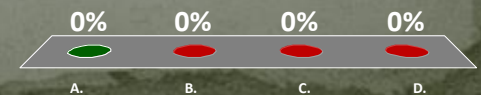
- A. Blistering of the skin
- B. Blistering and irritation of the skin
- C. Blistering of the lining of the mouth
- D. Blistering in the digestive tract
- ★ E. All of the above



Identify this plant:



- ★ A. Perennial pepperweed
- B. Hoary alyssum
- C. Whitetop
- D. Oxeye daisy



Perennial pepperweed (*Lepidium latifolium*)

Foliage



Flowers



Seedheads

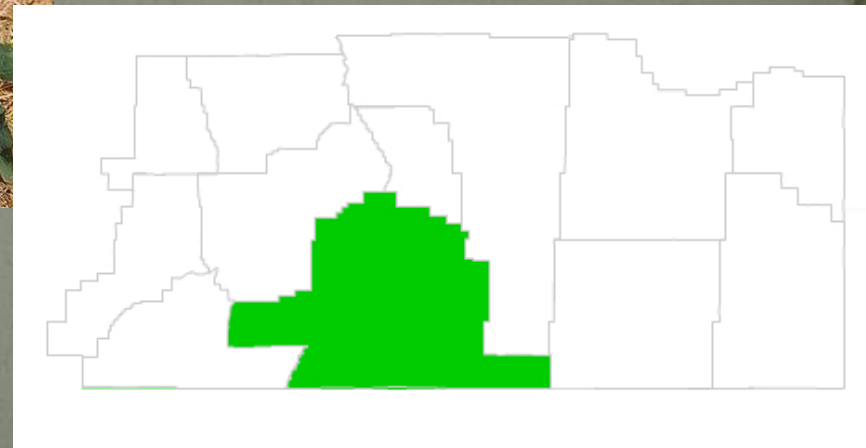


Rosette



Steve Dewey, Utah State University, Bugwood.org

- **Leaves:**
 - Greenish gray green
 - Prominent white mid-vein
- **Flower:**
 - Four white petals
 - Dense rounded clusters on terminal branches



It is thought that perennial pepperweed was introduced into North America as a contaminant in _____.

A. Wheat seeds

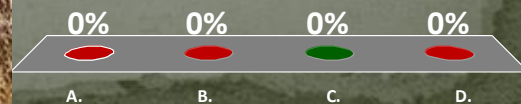
B. Barley seeds

★C. Sugar beet seeds

D. Canola seeds



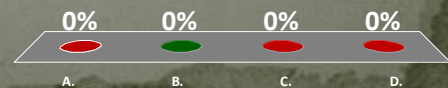
Joseph M. Di Tomaso, University of California-Davis, Bugwood.org



Identify this plant:

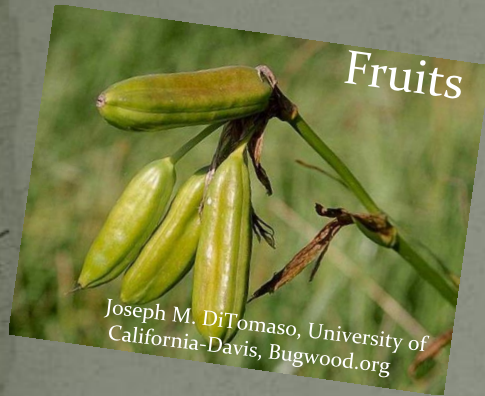


- A. Dalmatian toadflax
- ★ B. Yellowflag iris
- C. Yellow toadflax
- D. Tansy ragwort

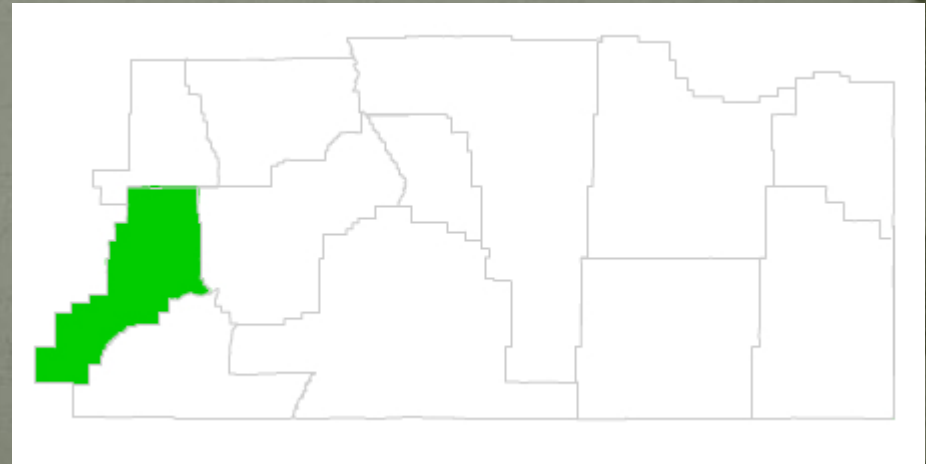


Yellowflag iris

(*Iris pseudacorus*)



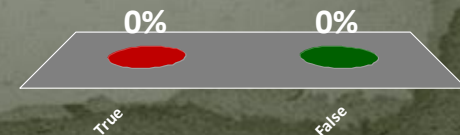
- **Leaves:**
 - Long & linear
 - Dark green
 - Emerge from ground in fanlike arrangement
- **Flower:**
 - Yellow
 - Light-brown to purple veins or flecks



Yellowflag iris has never been used in mining reclamation areas or sewage treatment plants even though it has the ability to remove heavy metals from the water through its roots.

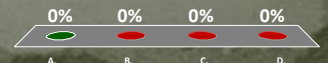
A. True

★ B. False



Identify this plant:

- ★ A. Blueweed
- B. Russian knapweed
- C. Spotted knapweed
- D. Purple loosestrife



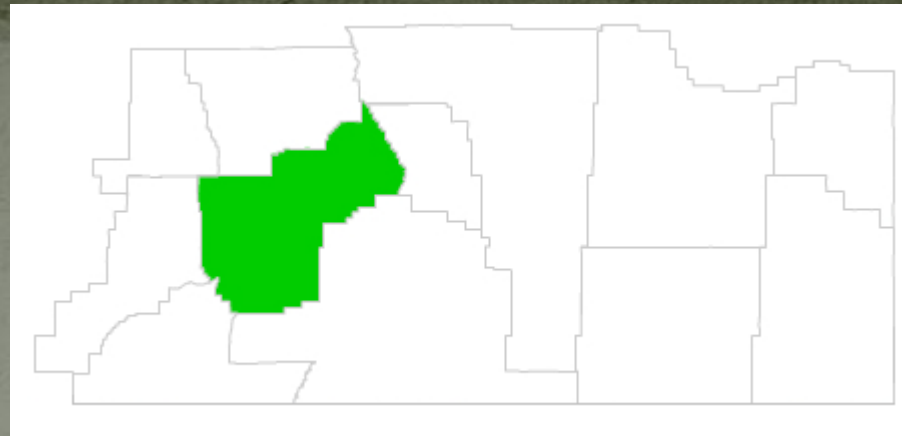
Blueweed

(*Echium vulgare*)

Flower



Rob Routledge, Sault College, Bugwood.org



- **Leaves**

- Covered with stiff hairs

- **Stems:**

- Covered with short hairs and scattered long stiff hairs
- Swollen dark bases that form flecks

- **Flower:**

- Bright blue
- Petals fused to form a short tube that flares



Rob Routledge, Sault College, Bugwood.org

Stem/foliage



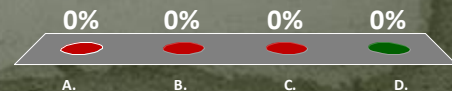
Robert Vidicki, Doronium Kft., Bugwood.org

What color is blueweeds' taproot?



- A. Blue
- B. Lavender
- C. White
- ★ D. Black

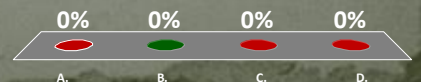
Robert Videli, Doronicum Kft., Bugwood.org



Identify this plant:



- A. Whitetop
- ★ B. Hoary alyssum
- C. Field bindweed
- D. Houndstongue



Hoary alyssum

(*Berteroa incana*)

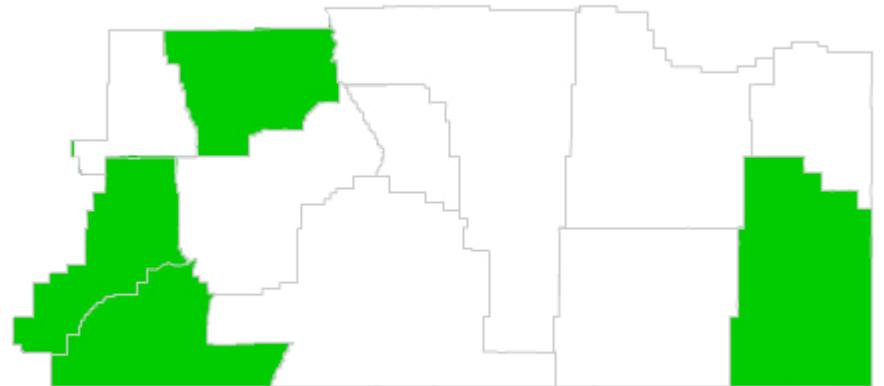


Catherine Herms, Ohio State University, Bugwood.org

Flower



- **Leaves:**
 - Grayish-green
 - Star-shaped hairs
- **Flower:**
 - White
 - Deeply notched petals
 - Sepals hairy and drop off

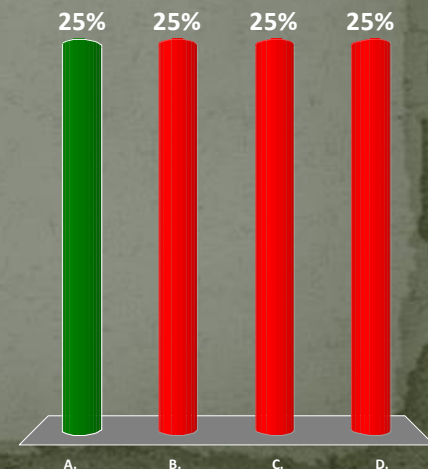


Historically, hoary alyssum was used as a folk remedy to treat what ailment?



John M. Randall, The Nature Conservancy, Bugwood.org

- ★ A. Rabies
- B. Headaches
- C. Stomach flu
- D. Measles



Priority 2B

Management shall be prioritized
by local weed districts.



Abundant & widespread
in many counties.



Require **eradication** or
containment where less abundant.

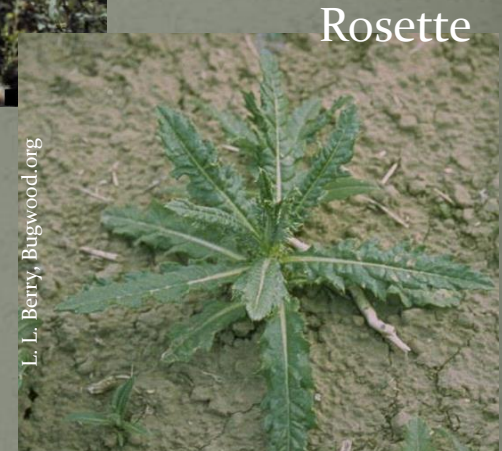
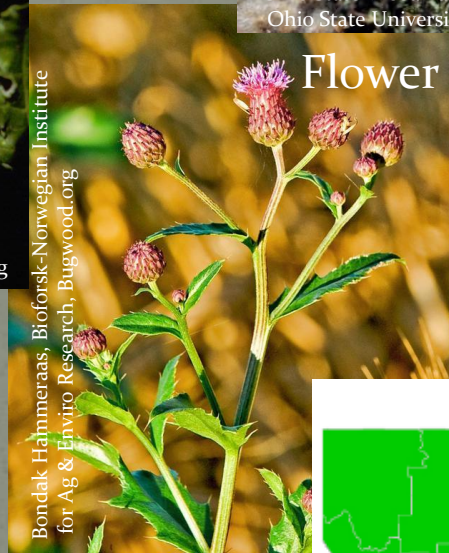
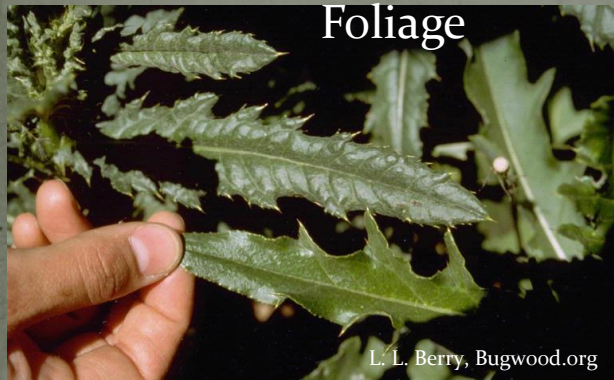
Identify this plant:

- A. Saltcedar
- B. Hydrilla
- C. Russian olive
- ★ D. Canada thistle

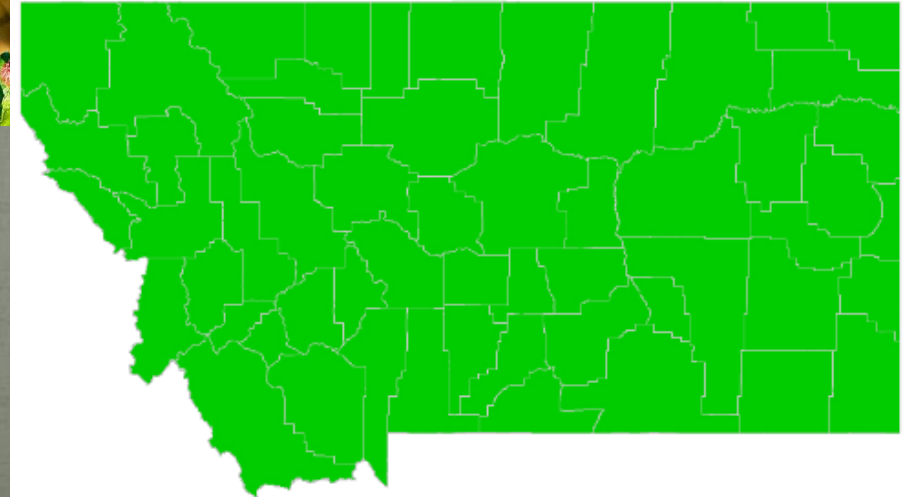


Canada thistle

(*Cirsium arvense*)

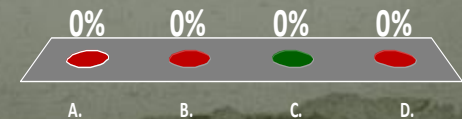


- **Leaves:**
 - Lance shaped
 - Spine-tipped
- **Stems:**
 - Slightly hairy
- **Flower:**
 - Purple fading to white
 - Form clusters at branch ends



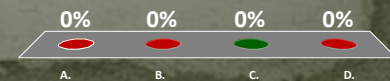
What 2 characteristics of Canada thistle make this plant difficult to control?

- A. High seed production
- B. Adventitious roots
- ★ C. Both A & B
- D. I have no idea...



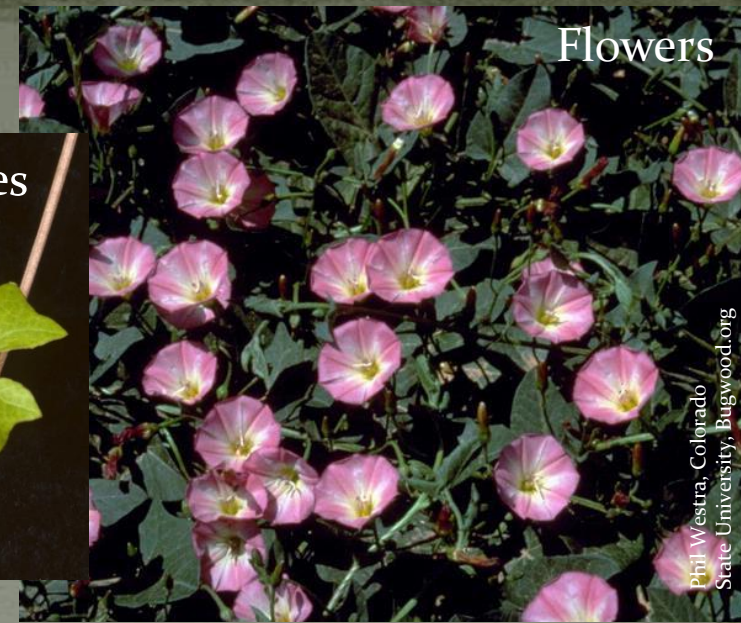
Identify this plant:

- A. Orange hawkweed
- B. Sulfur cinquefoil
- ★ C. Field bindweed
- D. Russian olive

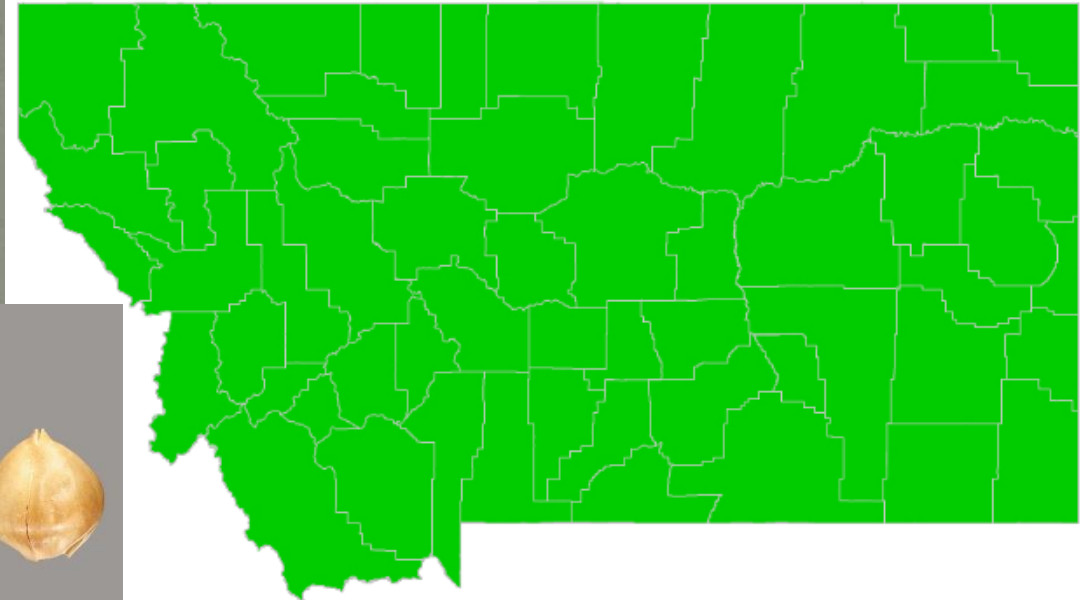


Field bindweed

(*Convolvus arvensis*)



- **Leaves:**
 - Dark green
 - Arrowhead shape
- **Flower:**
 - Tubular or bell-shaped
 - White to pink



Julia Scher, USDA-APHIS-PPQ, Bugwood.org

The seeds of field bindweed are a favorite of many bird species; when eaten and discarded, seeds can remain viable in the soil for _____ years.

A. 10

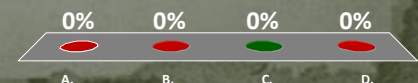
B. 15

★ C. 20

D. 25



Phil Westra, Colorado State University, Bugwood.org

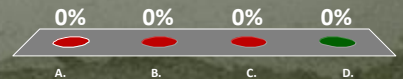


Identify this plant:

- A. Blueweed
- B. Yellow starthistle
- C. Flowering rush
- ★ D. Leafy spurge



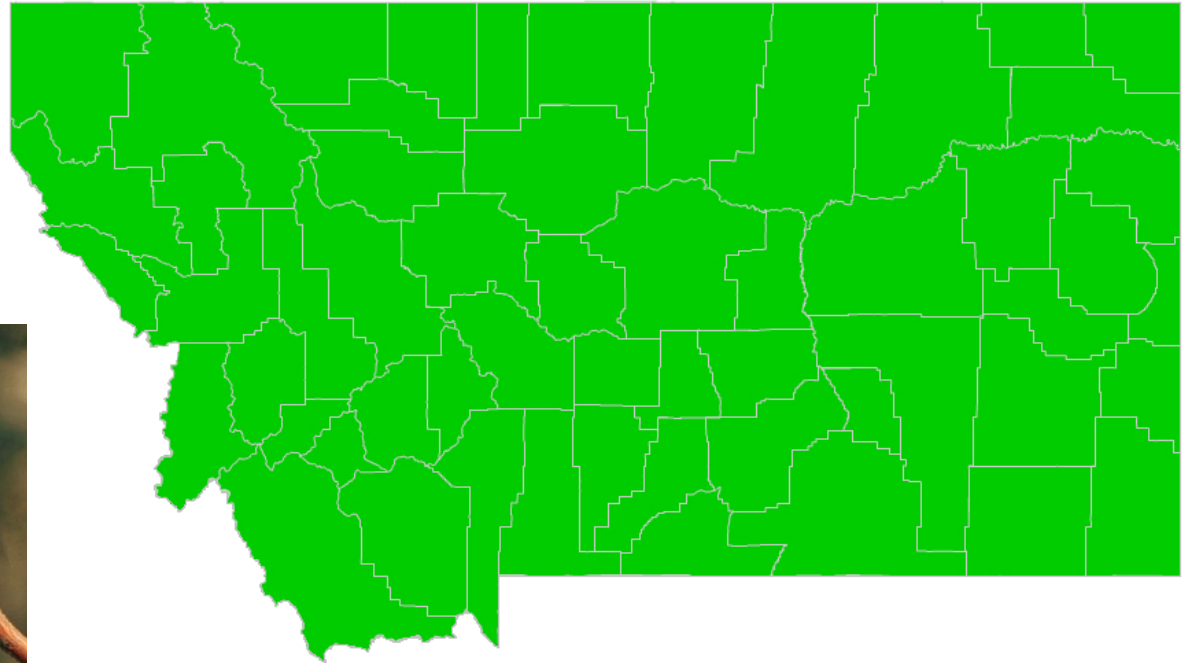
Leslie J. Mehrhoff, University of Connecticut, Bugwood.org



Leafy spurge

(*Euphorbia esula*)

Roots



Seeds



Flowers



- **Leaves:**

- Alternate
- Contain a white milky sap if severed.

- **Flower:**

- Yellowish green

Seedlings

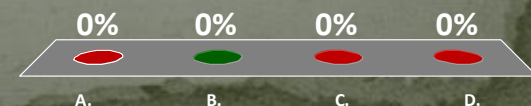


In the state of Montana, how many bio control agents are approved for use and how many are listed as effective for use on leafy spurge?

- A. 5 approved, 2 effective
- ★ B. 7 approved, 3 effective
- C. 10 approved, 1 effective
- D. 2 approved, 2 effective



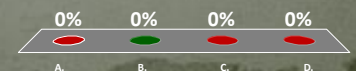
Leafy spurge hawkmoth



Identify this plant:



- A. Hoary alyssum
- ★ B. Whitetop
- C. Common tansy
- D. Tall buttercup



Whitetop

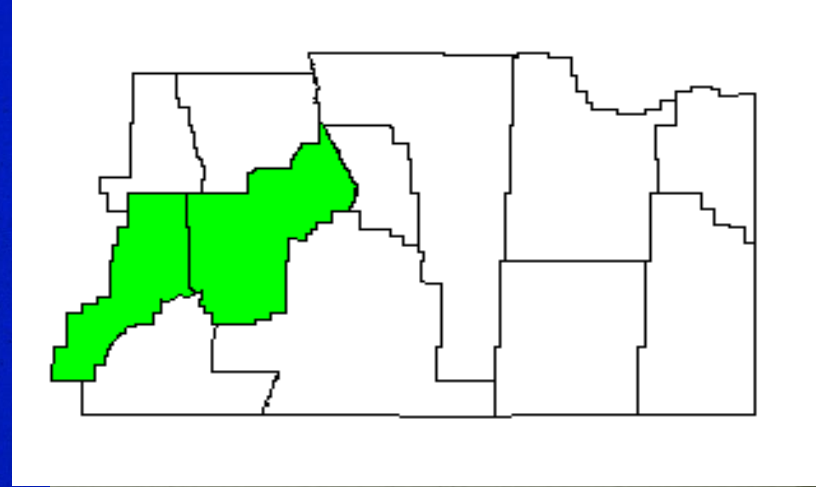
(*Cardaria draba*)



Steve Dewey, Utah State University, Bugwood.org



John M. Randall, The Nature Conservancy, Bugwood.org



Steve Dewey, Utah State University, Bugwood.org

- Leaves:
 - Blue-green to gray-green
 - Covered with soft white hairs
- Flower:
 - White flowers
 - Dense cluster creates a flat-top

The first discovery of whitetop in Montana occurred in Gallatin county in 1916.

- ★ A. True
- B. False



Steve Dewey, Utah State University, Bugwood.org



Identify this plant:



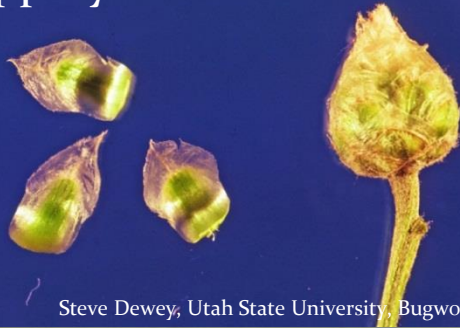
- A. Spotted knapweed
- B. Diffuse knapweed
- C. Canada thistle
- ★ D. Russian knapweed



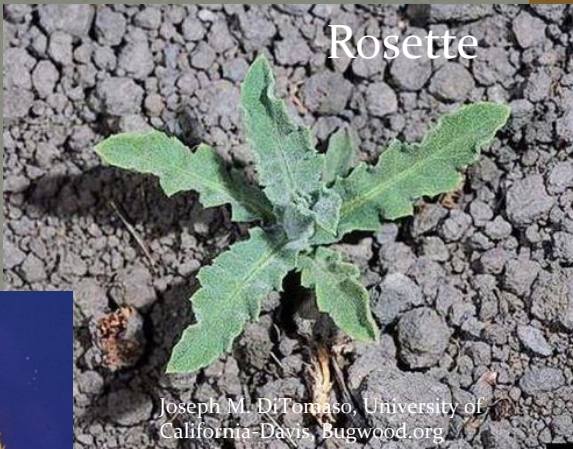
Russian knapweed

(*Acroptilon repens*)

Pappery bracts



Steve Dewey, Utah State University, Bugwood.org

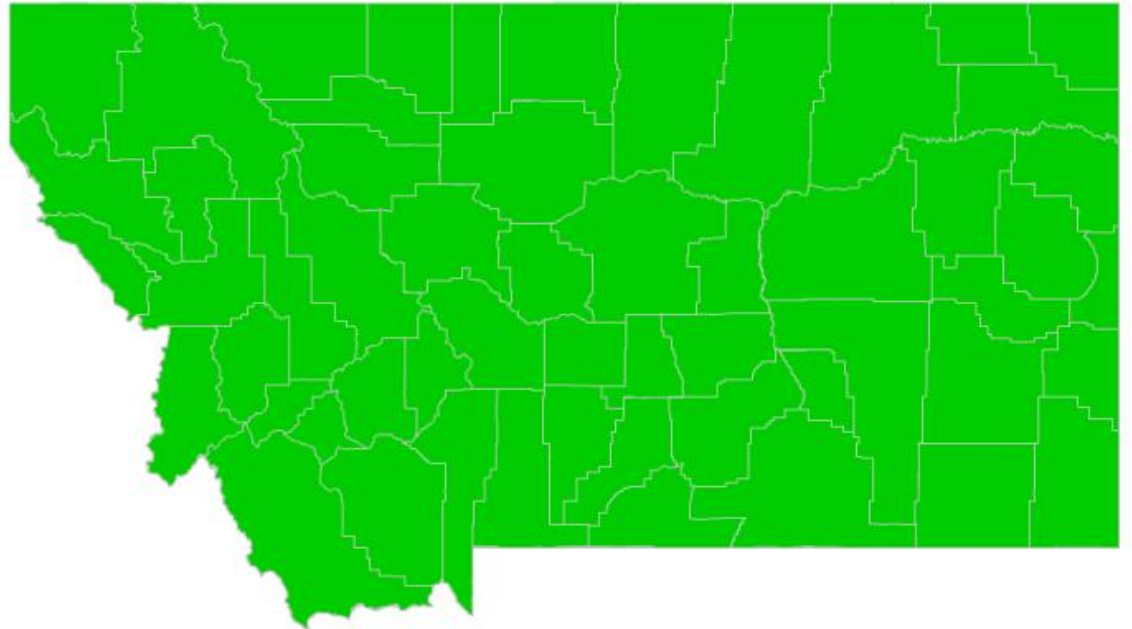


Joseph M. DiTomaso, University of California-Davis, Bugwood.org

Flowers



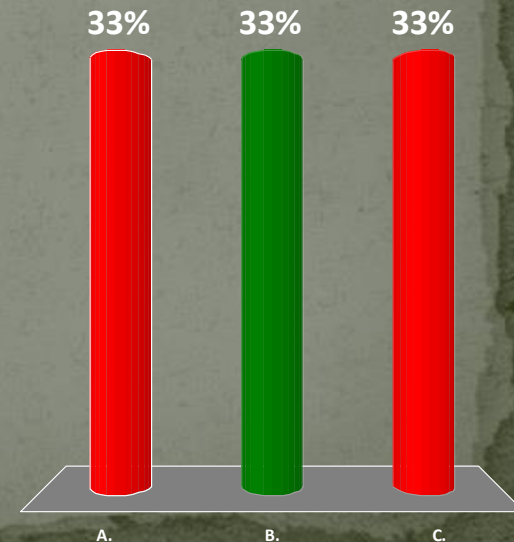
Steve Dewey, Utah State University, Bugwood.org



- **Leaves:**
 - Covered with fine hairs
 - Gray-green
- **Flower:**
 - Purple
 - Papery tipped bracts

It is thought that Russian knapweed was introduced into North America as a contaminant in what seed crop?

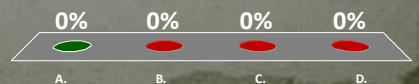
- A. Barley
- ★ B. Turkistan alfalfa
- C. Wheat



Identify this plant:



- ★ A. Spotted knapweed
- B. Russian knapweed
- C. Diffuse knapweed
- D. Canada thistle

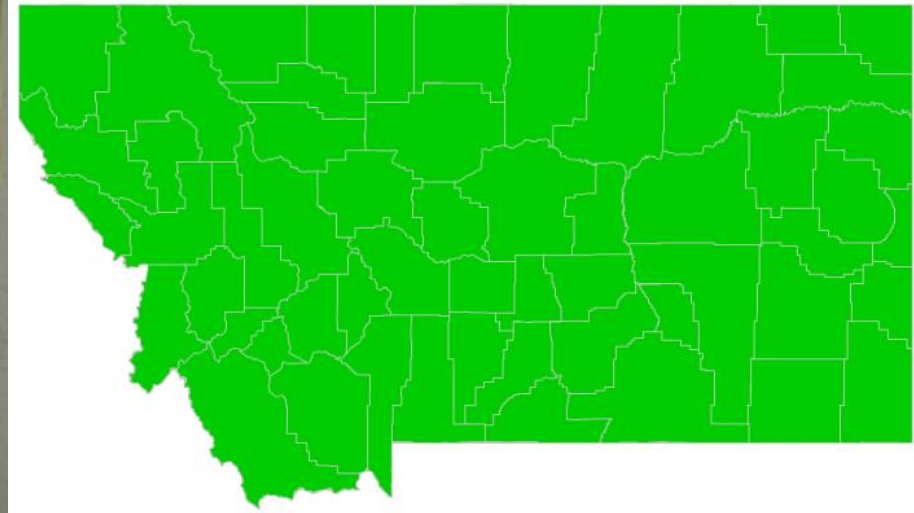


Spotted knapweed

(*Centaurea stoebe*)



- **Leaves:**
 - Gray-green
- **Flower:**
 - Pinkish-purple
 - Dark spot on bract tip with fringed edges



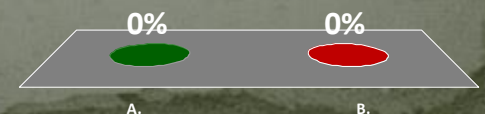
It is believed in some scientific circles that the roots of spotted knapweed have alleopathic properties and produce a chemical called 'catechin' which acts like a natural herbicide, killing off all surrounding plants.

- ★ A. True
- B. False



Rob Routledge, Sault College, Bugwood.org

Laura Parsons, University of Idaho PSES, Bugwood.org

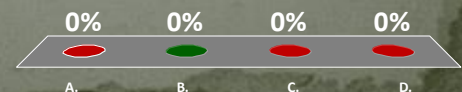


Identify this plant:



Cindy Roche, Bugwood.org

- A. Spotted knapweed
- ★ B. Diffuse knapweed
- C. Russian olive
- D. Common tansy



Diffuse knapweed

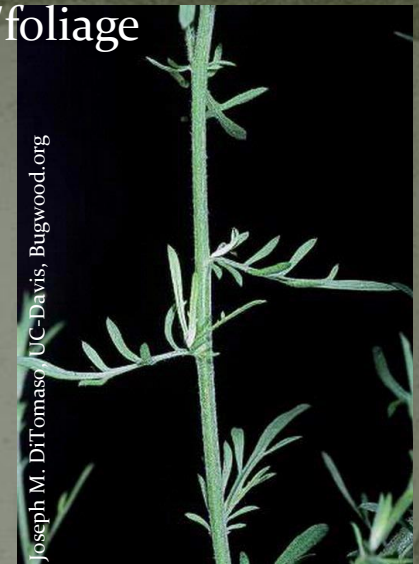
(*Centaurea diffusa*)

Seedling



In bloom

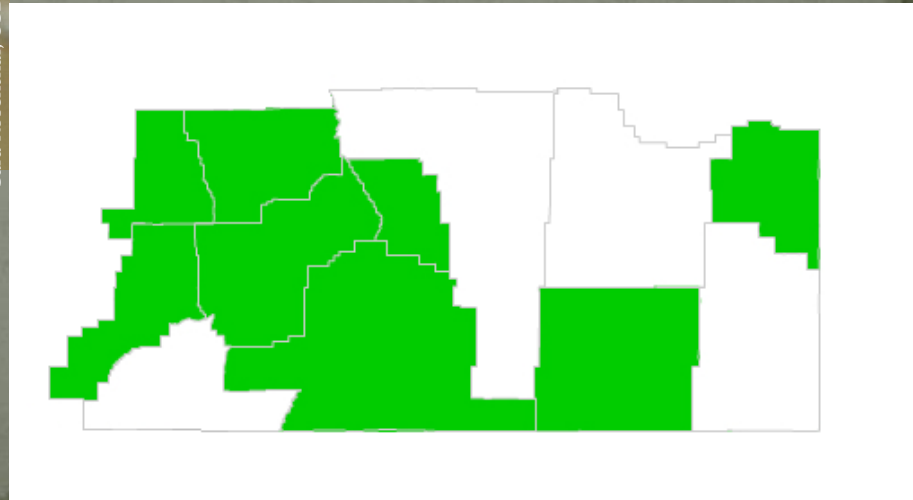
Joseph M. DiTomaso, UC-Davis, Bugwood.org



After bloom/seeds set

Sara Rosenthal, USDA-ARS, Bugwood.org

- **Leaves:**
 - Gray-green
- **Flower:**
 - White or rarely pink
 - Bracts-fringed with cream to brown colored spines



Diffuse knapweed is native to:

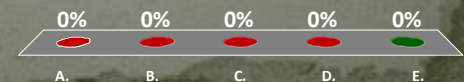
- A. Turkey
- B. Syria
- C. The Balkans
- D. Ukraine & southern Russia
- ★ E. All of the above



Cindy Roche, Bugwood.org



Sara Rosenthal, USDA-ARS, Bugwood.org



Spotted



Russian



Which
is
which?

Diffuse



Identify this plant:

- ★ A. Dalmatian toadflax
- B. Yellow toadflax
- C. Yellowflag iris
- D. Sulfur cinquefoil

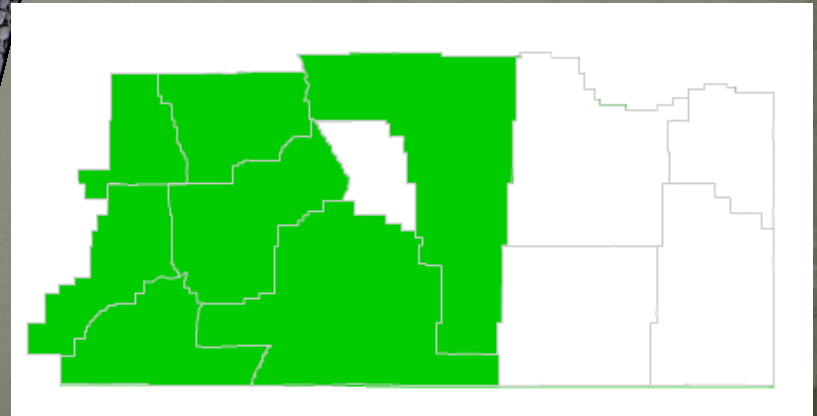
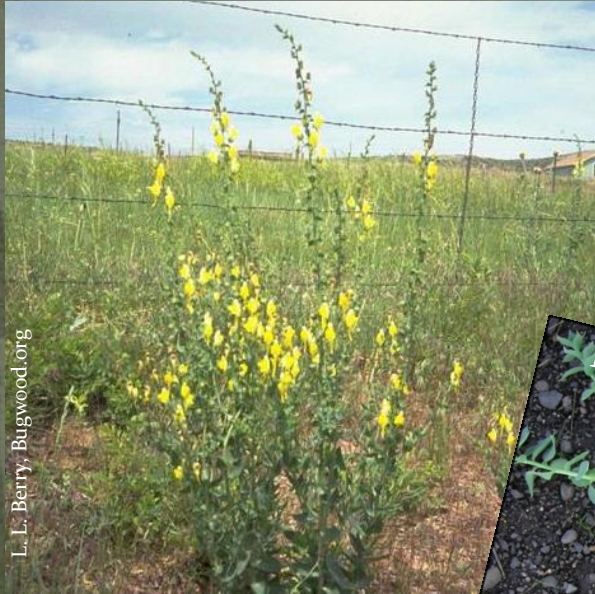


Bonnie Million, NPS, Bugwood.org



Dalmatian toadflax

(*Linaria dalmatica*)



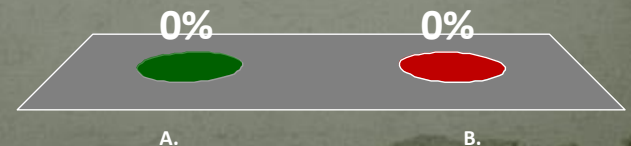
- **Leaves:**
 - Pale green-blue green
 - Heart-shaped
- **Flower:**
 - Snap-dragon-like
 - Bright yellow; orange throat, long spur

A single Dalmatian toadflax plant can produce as many as 500,000 seeds annually.

- ★ A. True
- B. False

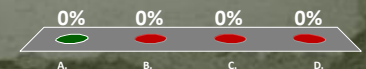


L. L. Berry, Bugwood.org



Identify this plant:

- ★ A. St. Johnswort
- B. Common tansy
- C. Tansy ragwort
- D. Dalmatian toadflax

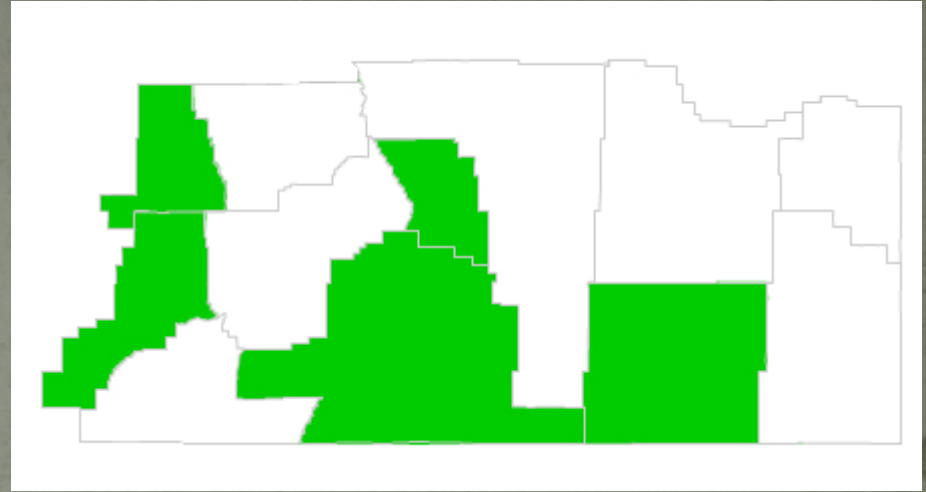


St. Johnswort

(*Hypericum perforatum*)



Norman E. Rees, USDA-ARS, Bugwood.org



- **Leaves:**
 - Oval-shaped
 - Darker green above
 - Tiny transparent dots on surface
- **Flower:**
 - Yellow flowers
 - Black glands along petal margins

Flowers



St. Johnswort is toxic to horses, cattle and sheep,
and if eaten in large quantities, can be fatal.

- ★ A. True
B. False

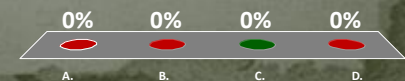


Identify this plant:

- A. Common tansy
- B. Yellow toadflax
- ★ C. Sulfur cinquefoil
- D. Yellow toadflax



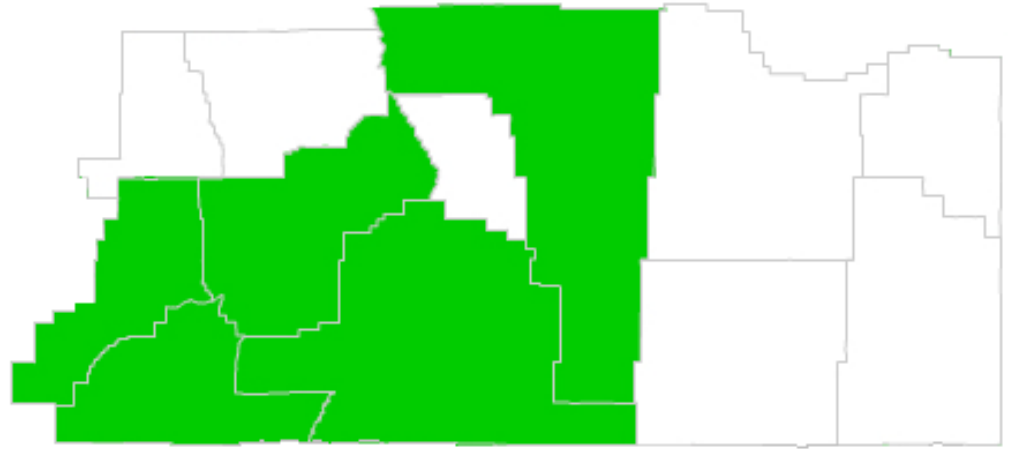
Theodore Webster, USDA-ARS, Bugwood.org



Sulfur cinquefoil

(*Potentilla recta*)

Flower



Stem/leaves



Young plant



- **Leaves:**
 - Palmately compound
- **Flower:**
 - Light yellow
 - Deeply notched petals
 - Yellow center

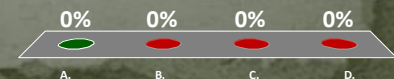
Three characteristics that are helpful in deciphering a native cinquefoil from noxious cinquefoil:

- 1.) Leaves
- 2.) Seeds
- 3.) Stems



Identify this plant:

- ★ A. Common tansy
- B. Tansy ragwort
- C. Yellow toadflax
- D. Saltcedar



Common tansy

(*Tanacetum vulgare*)

Leaf



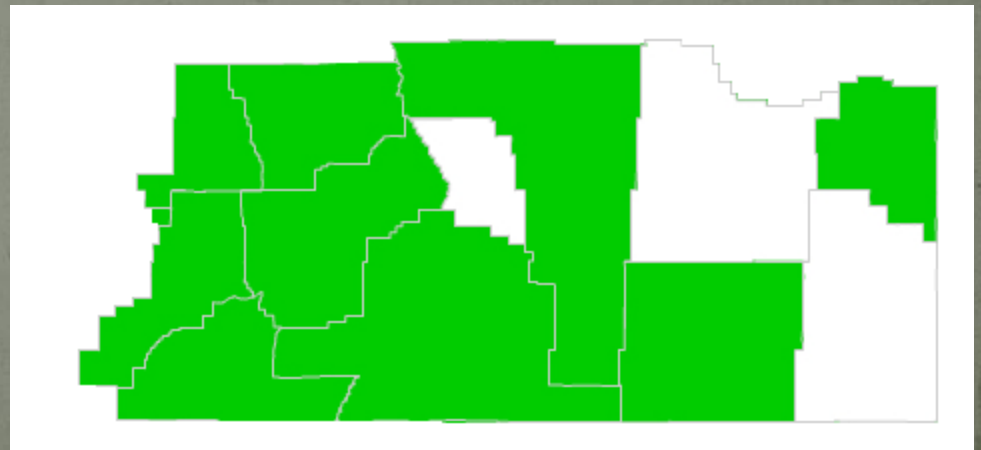
Seedling



Flowers



- **Leaves:**
 - Deeply divided into leaflets
 - Toothed margins
- **Flower:**
 - Yellow-orange
 - Button-like flower heads



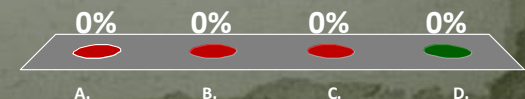
Where and when was the first report of common tansy in Montana?

- A. Wheatland County, 1945
- B. Flathead County, 1983
- C. Valley County, 1978
- ★ D. Silverbow County, 1928

After bloom



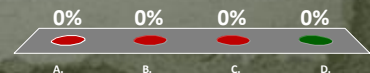
Joseph M. DiTomaso, UC-Davis, Bugwood.org



Identify this plant:

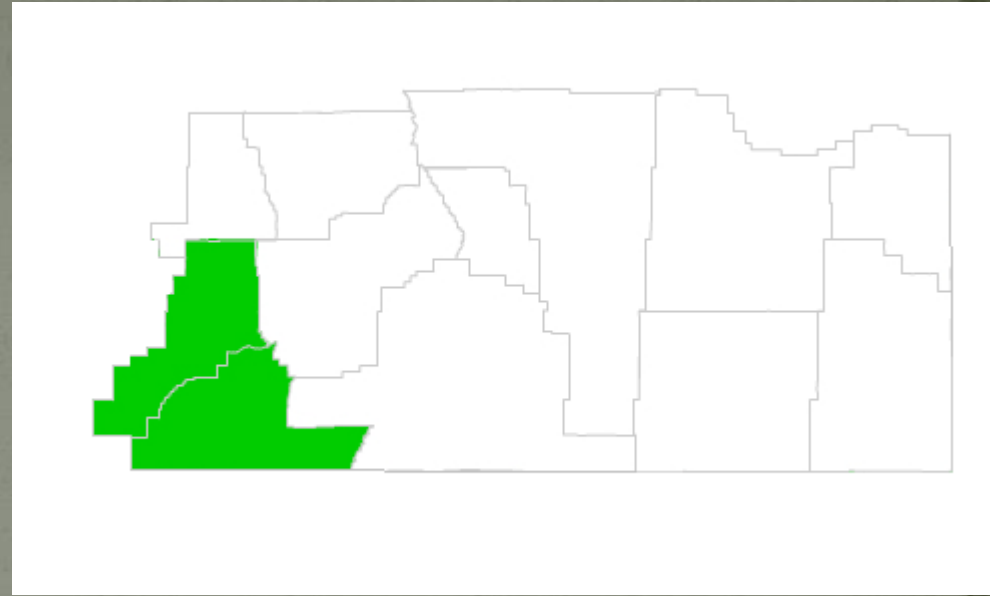
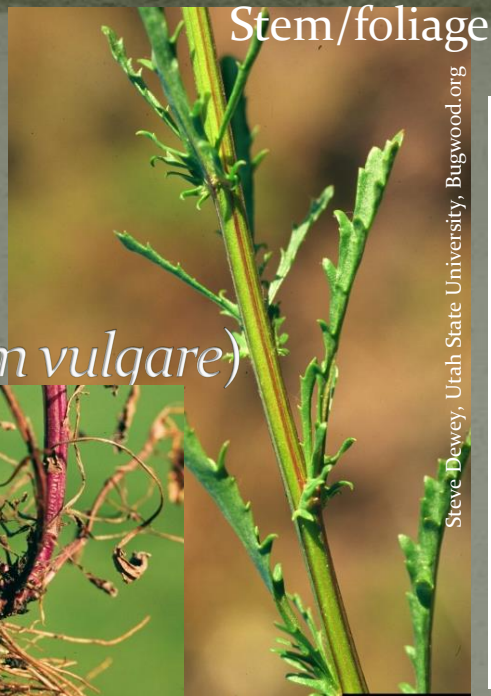


- A. Whitetop
- B. Hoary alyssum
- C. Field bindweed
- ★ D. Oxeye daisy



Oxeye daisy

(*Leucanthemum vulgare*)



- **Leaves:**

- Long narrow stalks, rounded teeth
- Upper stem leaves smaller toward apex, no stalk, toothed.

- **Flower:**

- White outer petals
- Yellow center

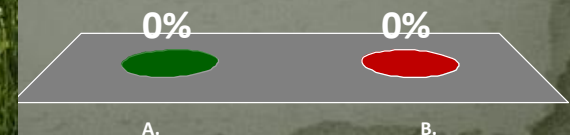


The un-opened flower buds of oxeye daisy are similar to capers and are often marinated and eaten.

- ★ A. True
- B. False

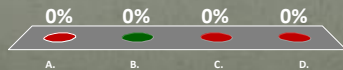


Caleb Slemmons, U of Maine, Bugwood.org



Identify this plant:

- A. Purple loosestrife
- ★ B. Houndstongue
- C. Russian knapweed
- D. Flowering rush



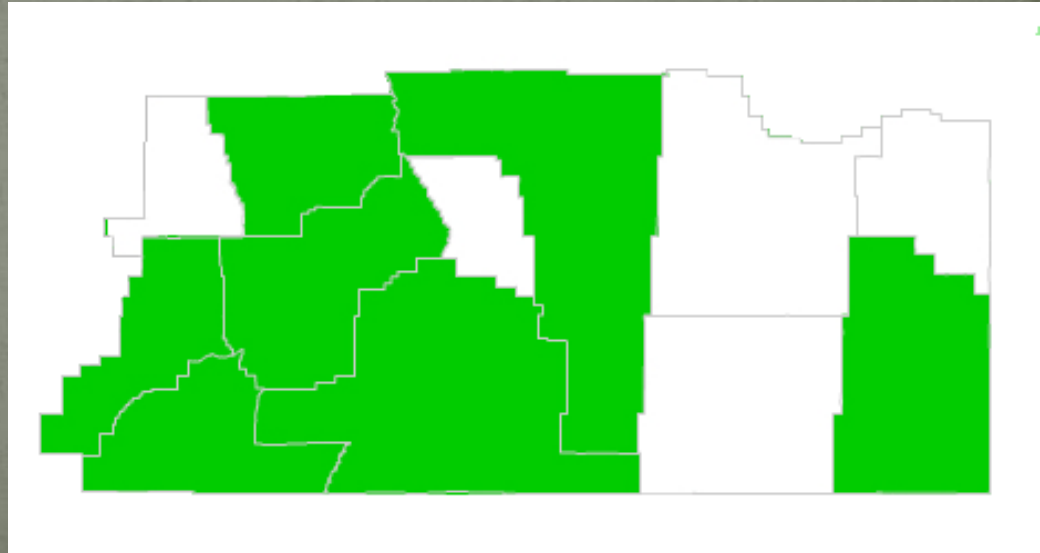
Robert Videki, Doronicum Kft., Bugwood.org

Houndstongue

(*Cynoglossum officinale*)



- **Leaves:**
 - Long & velvety
- **Flower:**
 - Scorpion-tail-shaped branch
 - Reddish purple flowers





Robert Videki, Doronicum Kft., Bugwood.org

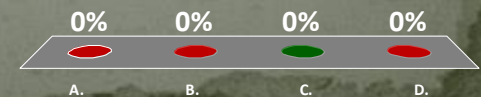
Of the 56 counties in Montana, how many have infestations of houndstongue?

★ A. 29

B. 56

C. 44

D. 35

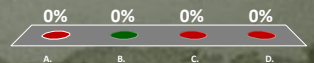


Identify this plant:

- A. Dalmatian toadflax
- ★ B. Yellow toadflax
- C. Common tansy
- D. Tansy ragwort

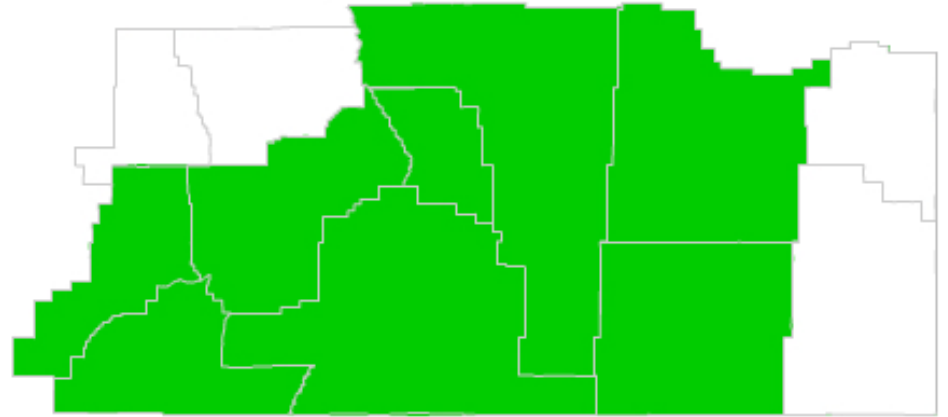


Micheal Shepard, USDA-FS, Bugwood.org



Yellow toadflax

(*Linaria vulgaris*)



Roots



Steve Dewey, Utah State University, Bugwood.org

Seeds



John Cardina, Ohio State University, Bugwood.org

Flowers



Micheal Shepard, USDA-FS, Bugwood.org

- **Leaves:**

- Pale-green to gray-green
- Pointed at both ends, smooth edges

- **Flower:**

- Yellow
- Orange throat, downward spur

Which is which?



Yellow

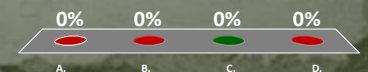
Check out the leaves if unsure of the species!

Dalmation

Identify this plant:



- A. Russian olive
- B. Flowering rush
- ★ C. Saltcedar
- D. Purple loosestrife



Salt cedar

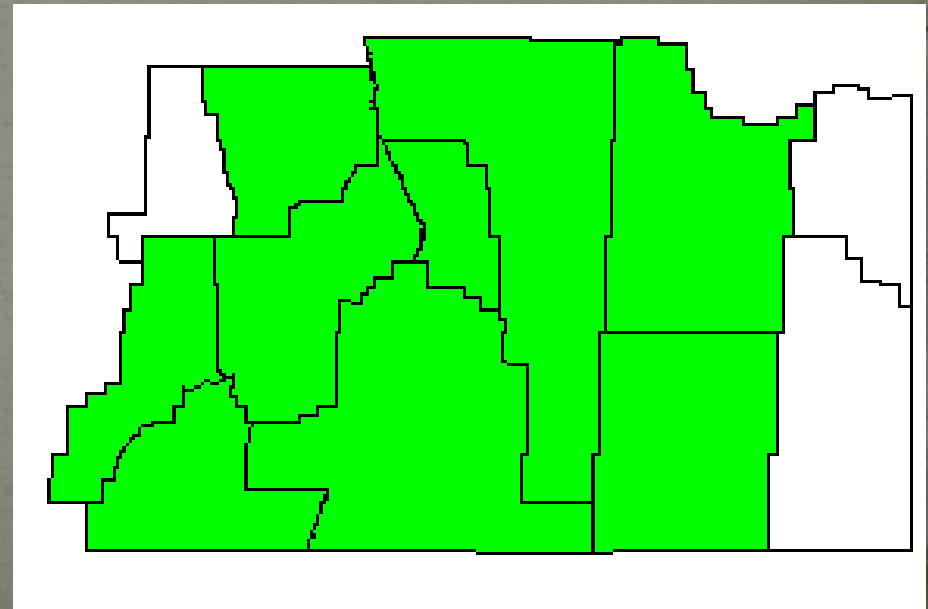
(*Tamarix* spp.)



Branch/foliage



- **Leaves:**
 - Small leaves on green stems
 - Scale-like
 - Foliage salty to taste
- **Stems:**
 - Smooth dark brown to red brown bark
- **Flower:**
 - Pink to white
 - Finger-like clusters

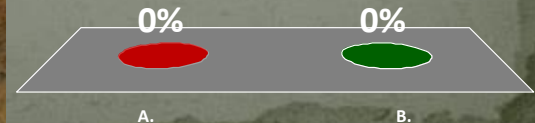


Saltcedar was not ever used
as a wind break in the 1800's.

A. True ★ B. False



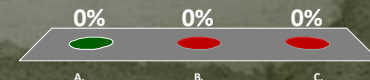
Leslie J. Mehrhoff, University of Connecticut, Bugwood.org



Identify these plants:



- ★ A. Cheatgrass, hydrilla & Russian olive
- B. Saltcedar, cheatgrass & blueweed
- C. Eurasian watermilfoil, hydrilla & cheatgrass



Priority 3: Regulated Plants

Cheatgrass
(*Bromus tectorum*)



Russian olive
(*Elaeagnus angustifolia*)



Hydrilla
(*Hydrilla verticillata*)



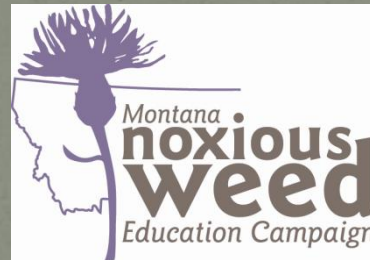
Intentional
spread or
sale is
prohibited

Other species commonly listed on County Noxious Weed Lists:

- In addition to the Montana Noxious Weed List (32 species), many counties in Montana have their own weed lists, these include:
 - Kochia
 - Sweet clover
 - Black henbane
 - Alfalfa
 - Baby's breath
 - Prostrate pigweed

Contributors:

This presentation was developed through the Montana Noxious Weed Education Campaign in collaboration with the Montana Department of Transportation and the following partners:



Literature cited:

- Hirsch, S.A. and J.A. Leitch. 1996. The impact of knapweed on Montana's economy. Fargo, ND: North Dakota State University Ag. Econ. Rep. No. 355. 41p.



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- Japanese Knotweed EDDMapS. 2013. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Available online at <httpwww.eddmaps.org>; last accessed July 15, 2013.
- P. Loosestrife EDDMapS. 2013. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Available online at <httpwww.eddmaps.org>; last accessed July 15, 2013.
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- Spotted Knapweed EDDMapS. 2013. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Available online at <httpwww.eddmaps.org>; last accessed July 16, 2013.
- Diffuse Knapweed EDDMapS. 2013. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Available online at <httpwww.eddmaps.org>; last accessed July 15, 2013.
- St. Johnswort EDDMapS. 2013. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Available online at <httpwww.eddmaps.org>; last accessed July 16, 2013.
- Sulfur cinque EDDMapS. 2013. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Available online at <httpwww.eddmaps.org>; last accessed July 16, 2013.
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- Oxeye daisy EDDMapS. 2013. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Available online at <httpwww.eddmaps.org>; last accessed July 15, 2013.
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- Rice, P.M. INVADERS Database saltcedar_InvadersDataBase_Aug.28,2013
- Yellow toadflax EDDMapS. 2013. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Available online at <httpwww.eddmaps.org>; last accessed July 16, 2013.