

The Invader

Utah Weed Supervisors Association Newsletter

Weed Spotlight

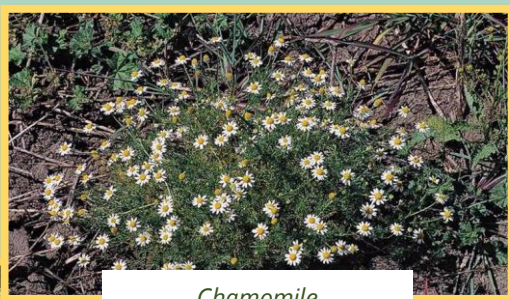
Oxeye Daisy

Leucanthemum vulgare

Article and Photos By: Chad Dewey

Oxeye daisy, *Leucanthemum vulgare*, is a noxious weed native to Europe that is currently found in every state within the United States and is recorded in over half of the counties in Utah (EddmapS.org). Oxeye daisy is a clumping perennial weed with shallow, creeping roots and white, daisy flower heads. Oxeye daisy is a Class 1B weed on the Utah noxious weed list. Oxeye daisy was intentionally introduced as an ornamental plant and is still found in many residential and commercial ornamental landscapes throughout the state. It has escaped landscape settings and is often found in wetlands, riparian areas, pastures, and roadsides. In general, livestock and wildlife avoid eating it, decreasing forage production on range and agricultural landscapes. It can also host diseases that damage agricultural crops.

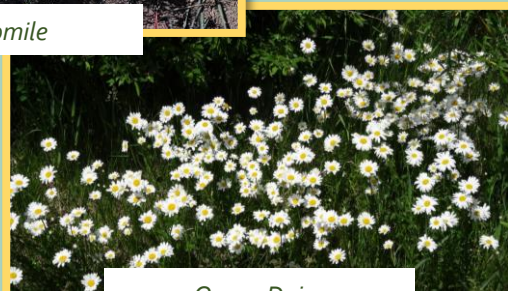
Oxeye daisy is often confused with the ornamental Shasta daisy (*Leucanthemum x superbum*), which is a very popular ornamental landscaping plant. There are many cultivars of Shasta daisies, differing in size and leaf characteristics, but the main way to distinguish Oxeye daisy from other daisies is by their leaves. Oxeye daisy leaves are alternate, toothed and uniquely shaped. Lower (basal) leaves are usually narrow near the stem and wide and rounded at the tip. Upper leaves have 2-3 "teeth" right at the base of the stem, then slowly widen to the tip. (Continued on Page 2)>>>



Chamomile

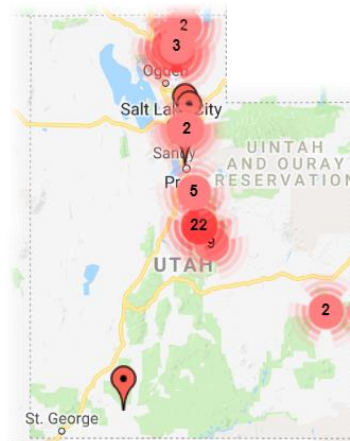


Shasta Daisy



Oxeye Daisy

Oxeye Daisy Distribution in Utah



Source:
<http://www.eddmaps.org>

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Leaf Examples of Oxeye Daisy



Basal Leaves



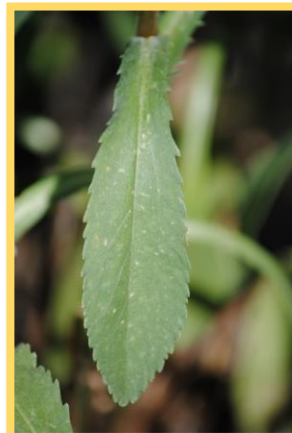
Upper Leaves

Oxeye Daisy (Continued from Page 1)

Shasta daisy leaves are generally entire (smooth) or serrated. Oxeye daisy also grows from 1-3 ft tall and spreads through creeping roots where Shasta grows from 1-4 feet tall and has a much more “bunchy” appearance and often a larger flower. Oxeye daisy flower petals are slightly notched at the tips and the flower head is smaller than Shasta daisy heads. Another weed called stinking chamomile (*Anthemis cotula*) has a similar flower but it is an annual plant has much more deeply dissected leaves than oxeye daisy.



Chamomile



Shasta Daisy



Oxeye Daisy

Oxeye daisy has been successfully managed by mechanical, cultural, and chemical control methods. Mechanical control can be done by cultivating the soil six inches or deeper, followed by re-cultivation of surviving root fragments. This is oftentimes the best option for control in ornamental landscape settings that can then be replaced with Shasta daisy. A cultural method that has shown some success is applying fertilizer, which can favor grasses and choke out oxeye daisy infestations. The following table (Table 1) shows the recommended herbicides used to control oxeye daisy. Other herbicide options can be found in the book “Weed Control in Natural Areas in the Western United States” by DiTomaso et al.

TABLE 1. Examples of herbicides that can be used to manage oxeye daisy. Consult herbicide labels for additional rate, application, and safety information. Additional information can be found at <http://www.greenbook.net>.

Herbicide Active Ingredient Trade Name	Product per acre	Timing
Aminopyralid Milestone	4 to 6 ounces	Prebud
Aminopyralid + 2,4-D ForeFront R&P	2 to 2.5 pints	Rosette to early flower
Metsulfuron Escort/Cimarron	0.5 to 1 ounce	Rosette to early flower
Picloram Tordon 22K/Picloram22	1.5 pints or 1.5 pints + 1 quart 2,4-D	Rosette to early flower
Glyphosphate Many trade names	1 to 2 quarts	Use as part of a revegetation program
Clopyralid Transline	$\frac{2}{3}$ to 1 pint (weak control)	Young, actively growing plants
Clopyralid + 2,4-D Curtail	64 ounces (weak control)	Young, actively growing plants

store.msuextension.org/publications/AgandNaturalResources/MT200002AG.pdf

Project Journal

USFS Grant Helps Counties with Noxious Weed Control (Part 2)

By: Amber Mendenhall

The Utah Weed Supervisor's Association (UWSA) devotes a great deal of effort to securing additional funding for county weed supervisors. This additional funding is spent on special projects within counties to control new infestations and difficult noxious weeds. The US Forest Service (USFS) grants a large amount annually to this effort. Funding is available to any county weed supervisor willing to take on additional integrated weed control projects on or near forested properties. This is part two of our series about the USFS, UWSA grants.



*Monitoring plot near hardware ranch.
Photo: Justin Stubbs*



*Backpack crews spraying on hillside
Photo: Justin Stubbs*

The Cache County Weed Department used \$6,000 to treat noxious weeds near Hardware Ranch. This project protected important wildlife habitat adjacent to USFS lands. Cache County treated 514 acres of Spotted Knapweed, Canada thistle, Black Henbane, and Perennial Pepperweed using Kabota's w/ sprayers and backpacks. Much of the terrain is on hillsides therefore the weed crew strapped on backpacks and hiked to spray infested areas. Cache County monitored this project using the camera-on-a-stick method. Monitoring showed that they were able to reduce noxious weeds by 50% in one year.

Box Elder County requested \$7,000 to treat 100 acres of EDRR weeds in East Box Elder County. Box Elder County used funding to treat infestations of yellow starthistle, goatsrue, and knapweeds using UTV and backpack sprayers. Box Elder County used letters to alert landowners of infestations in their area. The County Weed Board held public meetings and visited individual landowners to discuss the importance of controlling noxious weeds along canal banks on private property.

Box Elder County along with Utah Division of Forestry, Fire and State Lands organized a spray day and floated the Bear River to treat all known goatsrue below Cutler Dam near the USFS Wellsville Range. (Continued on Page 4)>>>

New Video Series on How to Control Noxious Weeds

Ron Patterson from USU Extension in Weber County has created a new video series on How To Control Noxious Weeds.

These videos can be accessed on YouTube or following the links below.

How to Control Dyers Woad:

https://www.youtube.com/watch?v=_X8NvUY4OUY

How to Control Whitetop:

<https://www.youtube.com/watch?v=M52Wiva86PE>

How to Control Myrtle Spurge:

<https://www.youtube.com/watch?v=IQKXeSOtaWg>

How to Control Puncturevine:

<https://www.youtube.com/watch?v=9WHuAHDv5Sw>



Mark Your Calendars:

**Utah Department of
Agriculture
Invasive Species
Mitigation Grant
Deadline comes earlier
this year**

**Look for announcements
in the next few weeks.
Grants for the Calendar
Year 2019 will be due in
Mid-September 2018.**



*Galerucella spp. Loosestrife
defoliating beetles*



*Cooperators releasing biocontrol
agents in Kane County
Photo: Morgan Mendenhall*

USFS Grants (Continued from Page 3)

Box Elder County coordinated with canal companies and gravel pit owners to treat and retreat yellow starthistle. This grant assisted private landowners in treating spotted knapweed on their own property. All areas were able to be treated in the spring and retreated in the fall yielding excellent control of known infestations.

Box Elder County also released biocontrol agents on spotted and diffuse knapweed and surveyed biocontrol populations on rush skeletonweed. Three SIMP Monitoring plots were placed for biocontrol monitoring in conjunction with this project.

Box Elder County coordinated with over 20 organizations and private landowners during this project. This level of coordination included spray days, public meetings, press releases and individual visits in order to create a community wide noxious weed control program.



Before and After Yellow Starthistle. Photos by: Mark Anderson

Biocontrol Today

Kane County Loosestrife Biocontrol Blitz

By: Amber Mendenhall



Cooperators from Kane County met at the Best Friends Animal Society in May to conduct a biocontrol blitz on purple loosestrife. Three species of biocontrol were taken to a pond called Big Lake north of Kanab. The site is a marshy area that is difficult to access. This is the only known purple loosestrife in Kane County. The infestation is located near Kane Creek. 7,000 biocontrol agents were purchased using an ISM grant. Cooperators released 5,000 *Galerucella* spp., the loosestrife defoliating beetle, and 2,000 *Nanophyes marmoratus*, the loosestrife seed head weevil. Amber Mendenhall provided 300 *Hylobius transversovittatus*, the loosestrife root feeder, through the Utah Weed Supervisor's Association.

Cooperators also placed three SIMP monitoring plots to follow biocontrol establishment and efficacy. This was a great example of coordination among Kane County and Best Friends Animal Society for the purpose of controlling noxious weeds.

Ask the Experts

Controlling Squarrose Knapweed

By: Jerry Caldwell and Amber Mendenhall

Squarrose knapweed (*Centaurea virgata*) is a class 2 noxious weed. It occurs in 13 counties, but Squarrose knapweed is largely contained to 100,000 acres in Utah, Tooele, Juab and Millard Counties. Squarrose knapweed was introduced from the Mediterranean region. Habitat for Squarrose knapweed is degraded rangeland, disturbed areas and roadsides. It tolerates drought and cold conditions.

Characterized as a long lived perennial, Squarrose knapweed has a woody base and a branching structure. Basal leaves are deeply lobed. Upper leaves are entire and bractlike. Squarrose knapweed can grow up to 4 feet tall and 6 feet wide. Rosettes can remain dormant for years until conditions are favorable. Flowers are pink or purple.

Squarrose knapweed can be mistaken for other knapweeds. It can be distinguished by the large, bushy form. Flowers of Squarrose knapweed are slender and more numerous than other knapweeds. Bracts of Squarrose knapweed flowers curve backwards.

Squarrose knapweed reproduces by seed. A single Squarrose knapweed plant can



Diffuse knapweed

Spotted knapweed

Squarrose knapweed

produce over 100,000 seeds! Spines cling to hair, wool, and clothing, allowing the seeds to disperse over great distances.

Squarrose knapweed is not palatable to livestock. Chemicals released into the soil can inhibit growth of other plants giving this noxious weed a competitive edge.

Prevention is key to control of Squarrose knapweed. 2,000 seeds may be caught underneath a vehicle after driving through a patch of knapweed. Several biological control agents are available and two insects show promise. *Larinus minutus*, the knapweed seed head weevil reduces seed production. (Continued on Page 6)>>>

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Squarrose knapweed (Continued from Page 5)



Sphenoptera jugoslavica, the shiny root beetle, can damage root systems. *S. jugoslavica* affects 50-60% of Squarrose knapweed plants.

Chemical control can be effective using aminopyralid (Milestone) or Picloram (Tordon) at labelled rates. In some test plots, aminopyralid shows control for several years. If perennial grasses are abundant, application of a broadleaf herbicide may allow the grasses to exclude weeds. If timed correctly, fertilization and irrigation encourage growth of competitive grasses over Squarrose knapweed. Revegetation with perennial grass will enhance control of regrowth and deter the establishment of new seedlings.

Jeff Banks Retires

The Utah Weed Supervisors would like to thank Jeff Banks for his 39 years of service as a USU Extension Agent in Juab County. Jeff was a great supporter of noxious weed control programs and was instrumental in helping the Squarrose CWMA on spray days and other grant related projects. Jeff also assisted Juab County in weed ID and herbicide programs for private landowners.



Getting to Know

Juab County Gets a New Extension Agent

By: Barbara Bradford

Beth Crandall is the new Agriculture Extension Assistant Professor for Juab County. She received her B.S. in Animal Science and her M.S. in Agriculture Extension from USU. Beth grew up on a cattle ranch and married into a ranching family. Being involved in agriculture has given her the opportunity to understand the many trials that are facing the agricultural industry today. She has a passion for agriculture, animal health and helping youth understand the importance of ensuring that this industry is around for future generations. Beth looks forward to working with farmers and ranchers in her area by learning about their concerns and providing educational opportunities to improve their operations. She would like to focus on rangeland improvement projects, irrigation systems, animal health, nutrition and any other needs of producers. Beth recognizes the importance of water conservation in Juab County and plans to have an active role in assisting the community by providing education about water wise planting, irrigating and landscaping. She also has a deep love for 4-H and enjoys seeing how the programs impact the youth, their families and the entire community. She plans to implement the 4-H dog program, encourage youth to learn new skills and strengthen current youth livestock and horse programs in Juab County. In her spare time, she enjoys ranching with her husband, training horses and working dogs, being outdoors and spending quality time with her family. Beth is excited to learn more about this wonderful community and about your interests and needs.



Conference Review

Utah Weed Supervisors Annual Tour, April 2018

By: Amber Mendenhall

The Utah Weed Supervisor's Association met for their annual summer tour in St. George in April. Weed supervisors spent the first day in the classroom out of the rain. Chuck Bargerone gave an update on EDDMapS pro and Todd Neel came from Montana to give an update on USFS grants. Corey Ransom from USU Extension discussed "The Fate of Herbicides." The following day, we took a tour and visited annual grasses and Sahara mustard herbicide test plots. We looked at a Hoary Cress ISM grant and reviewed camera-on-a-stick monitoring. We finished off with a drone demonstration by Jake Johnson on a cutleaf vipergrass site discussed by Corey Ransom and Jody Gale. Thanks to all of the presenters that attended and provided their expertise and advice.



Photo: Tim Higgs

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UTAH WEED SUPERVISOR ASSOCIATION

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*Squarrose Knapweed
Photo: Morgan Mendenhall*

*Oxeye Daisy
Photo: Chad Dewey*



What's Inside?

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