

## Weed Spotlight

### Sahara Mustard

*Brassica tournefortii*

Article and Photos By: Heather Olsen

African – or Sahara – mustard (*Brassica tournefortii*) is a winter annual mustard that can grow from 1-4 feet tall. The basal leaves are deeply lobed and the upper leaves are greatly reduced to almost non-existent (Figure 1). The lower stem is covered in dense, white hairs. An early-bloomer, the four-petaled, pale yellow flowers (Figure 2) can be open as early as January with flowering continuing into June. Typical of the mustard family, the petals are generally arranged in a cross-shape and there are 6 stamens per flower - 4 long stamens accompanied by 2 shorter stamens. The seed pod – a silique – can be up to 3.5 inches long, is constricted around the seeds, and has an obvious beak at the tip (Figure 3).

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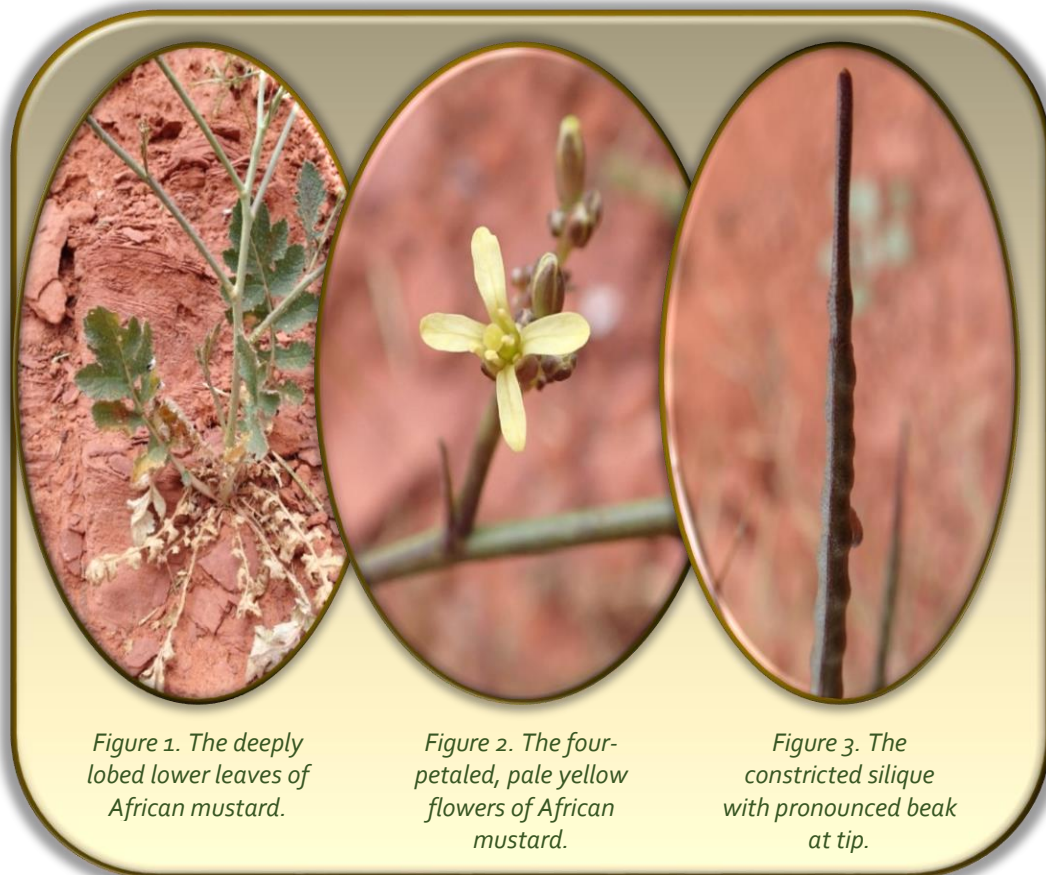


Figure 1. The deeply lobed lower leaves of African mustard.

Figure 2. The four-petaled, pale yellow flowers of African mustard.

Figure 3. The constricted silique with pronounced beak at tip.

### Does Sahara mustard really come from the Sahara Desert in Africa?

Sahara Mustard is a common native mustard in the semi-arid deserts of Northern Africa, including regions of the Sahara Desert. However, it is also found in parts of the Middle East, Pakistan and in drier Mediterranean regions of Southern Europe, where it may be a recent “colonist.”

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## Mark Your Calendars:

### **Upcoming 2018 Biocontrol Collection Dates**

#### Dalmatian Toadflax Collections

(*Mecinus janthiniformis*)  
Wednesday, May 16, and  
Tuesday, May 29th  
(Tooele and Weber  
Counties)

#### Purple Loosestrife Collection Field Day (*Galerucella* spp.)

Thursday, May 17th  
(Davis County)

#### Poison Hemlock Collection Field Day (*Agonopterix alstromeriana*)

Wednesday, May 30th  
(Cache County)

#### Russian Knapweed Collections

(*Jaapiella ivannikovi*)  
The Week of June 4th-7th  
(TBD)

#### Annual Knapweed Biocontrol Field Day Hosted by Squarrose CWMA

(*Larinus minutus*)  
Tuesday, July 10th (Tintic)

## **Sahara Mustard (Continued from Page 1)**

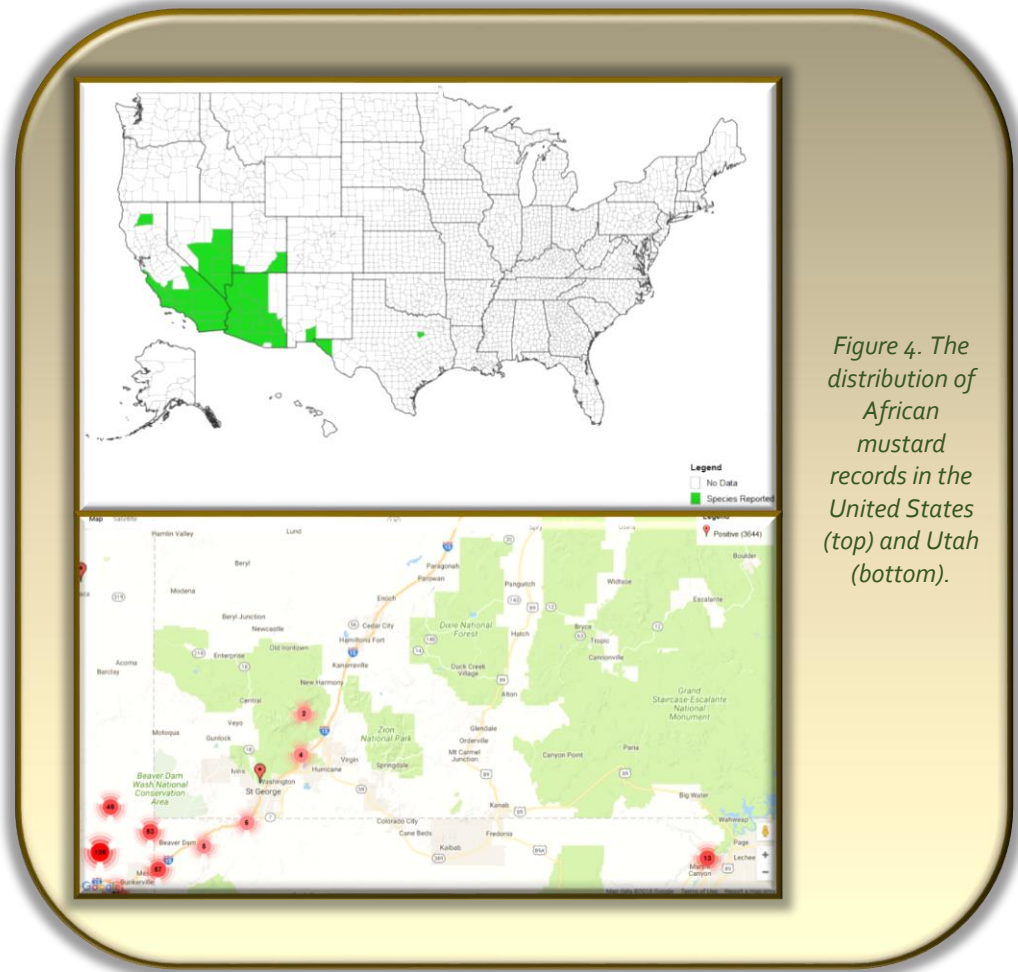


Figure 4. The distribution of African mustard records in the United States (top) and Utah (bottom).

A native to the Mediterranean region, it was first introduced – unintentionally – in California in the 1920s, and has remained a weed of the southwest with most of the infestations found in southern California and Arizona. It has been recorded as far east as Texas and as far north as Ruby Valley, Nevada. In Utah, most infestations have been recorded in Washington County with one record (but no GPS location) in San Juan County (Figure 4).

It infests roadsides, washes, sand dunes, other disturbed and dry sites, and can be a problem in annual pasture. As the plant matures and dries it can break at the base and tumble along spreading seeds as it goes.

Because it spreads exclusively by seed, managing to prevent seed production and deplete the seed bank are the most effective strategies. Physical removal after the plant bolts, but before it sets seed, can be effective for small infestations. For larger infestations, foliar applied herbicides before flowering occurs that also have residual effects may be a better option. Currently there are no available biocontrol options.

## Project Journal

# USFS Grant Helps Counties with Noxious Weed Control

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 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. Here are two such examples of projects completed using UWSA, USFS grants.



*Musk and Canada thistle treated with the UWCA grant. Photos by: Kevin Bailey*

Juab County requested \$8,000 to control a remote patch of Canada thistle and musk thistle. This project helped to protect valuable grazing lands adjacent to forests. This funding allowed Juab County to access remote areas that they would not otherwise have the time and resources to treat.

Juab County employees had to travel a great distance to start spraying the project. Juab County took transect data and will be interested to see what comes from the work accomplished. It took a few days to spray the area with ATV sprayers. The ATV's were very effective. Employees and volunteers were able to apply herbicide on the musk thistle and cover much more acreage than on horseback. They were able to treat 200 acres and monitor an additional 1000 acres. The ten employees and volunteers contributed over \$8,000 in match to this grant. Juab County will be following up in 2018 in the same area to re-read transect data and to spray any areas missed. (Continued on Page 4)>>>

## Utah Weed Supervisors get a new logo

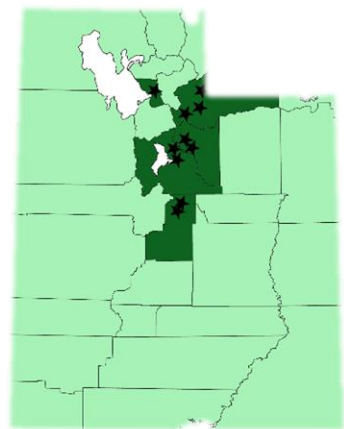
After months of searching, the UWSA has created a new logo for letterheads, hats and documents.



This logo represents the valleys, mountains and waterways that we protect from invasive weeds.

## Where Did Utah's New Canada Thistle Biocontrol Go?

Ten inoculation sites were set up in five counties including Davis, Wasatch, Summit, Utah and Juab. Two additional control sites were set up in Davis and Summit Counties.





*Canada thistle rust fungus, Puccinia punctiformis*

### Steps for Inoculating Fungal Biocontrol

Step 1: Fall collection of Canada thistle infested with fungus.

Step 2: Dry plants containing fungus.

Step 3: Grind fungus and store at 0 deg. Celcius for release the following summer.

Step 4: Inoculate fungus onto new infestations of Canada thistle.



*Joel Price and Quintin Lewis inoculating Canada thistle rust*

## USFS Grants (Continued from Page 3)

Grand County also used the UWSA Grant to combat Canada thistle in a different way. They asked for \$3,500 to tackle Canada thistle County wide. Grand County sent personnel to almost every known site of Canada thistle.

EDDMapS was used to identify Canada thistle infestations. They located and treated Canada thistle from the Book Cliffs to the Colorado River to the La Sal Mountains. Employees used ATV's and rafts to access remote sites. Most of the areas are small and native vegetation should move in on its own. During visits to EDDMapS points, Grand County was also able to mark several locations as treated or eradicated.



*Before and After spraying Canada thistle along the Colorado River. Photos by: Tim Higgs*

Grand County faced many different challenges implementing this grant. Three different seasonals quit during the summer. Another employee got sunburned while treating weeds from the raft. Access to BIA and private lands also posed a challenge. In spite of the challenges, Grand County located three new infestations of Canada thistle and treated all known Canada thistle. Private landowners were especially pleased at Grand County's willingness to assist in treating weeds on private lands.

This is Part One of a three part series. The summer issue of "The Invader" will feature more successful grants in Part Two of the UWSA grant series.

## Biocontrol Today

# Canada Thistle Gets a New Biocontrol Agent

By: Amber Mendenhall

There's a new biocontrol agent for Canada thistle, but this one isn't an insect! The new biocontrol agent is a fungus called *Puccinia punctiformis*. Preliminary data shows that the fungus can reduce Canada thistle by up to 80% in select sites.

Joel Price of the Colorado Department of Agriculture established a BCIP grant to establish and monitor at least ten inoculations of fungus in six western states. In September 2017, Utah joined this program. We set up test plots and implemented the Canada thistle rust in Utah. We set up monitoring plots to check the progress over the next five years. Thanks to our many dedicated cooperators, we were able to set up ten release sites and two control sites in five counties in only two days!

## Getting to Know

# Award Recipients from the 2017 UWCA Conference

By: Utah Weed Control Association Contributors

### Bert Harris, Outstanding Weed Supervisor



Bert has worked for Kane County for close to 30 years and most of that time he has been involved with noxious weed issues. Bert knows the importance of noxious weed control and education and has a passion for both. Bert was a driving force in the establishment of the Canyon Country CWMA for Kane and Garfield counties and continues to be an active and supportive member. Bert is willing to go the extra mile with weed control issues from budgets to putting on a backpack sprayer. There is no question that the Kane County weed department and Canyon Country CWMA would not be the success it is today without the continued help and support of Bert Harris.

### Kay Englestead and Lynn Allen, Outstanding Weed Workers

Kay Englestead and Lynn Allen work hand-in-hand to make weed control happen across all jurisdictional lines. Kay, a retired school teacher, has worked for Garfield County since 2005. At that time, the Weed Department consisted of an old truck with a spray rig. He jumped in and built a great working relationship with private landowners and federal land managers which has continued to grow. Thousands of acres have been treated under his spray boom.

Lynn, a retired business owner, came to Garfield County in 2012. He brought a unique set of mechanical skills. Anything Kay breaks, Lynn can fix. He, along with Kay, have brought Garfield County into the 21st century by installing GPS spray monitors in each of the up-to-date UTV Spray Rigs and spray trucks. He spearheaded efforts to document thousands of weeds on EDD maps.

Together, Kay and Lynn have hosted hundreds of spray days. Kay and Lynn's service will be irreplaceable as they plan on retiring soon. Don't worry, there will still be plenty of weeds for their replacements because, Kay always says "We don't want to kill all weeds, we need job security." Their passion, humor and dedication will greatly be missed.

*(Continued on Page 6)>>>*



### We would like to thank all of the commercial sponsors for the Utah Weed Control Awards

- Outstanding Weed Supervisor Sponsor: Wilbur Ellis
- Outstanding Weed Workers CoSponsors: Helena Chemical and Steve Regan
- Outstanding Weed Board Sponsor: Dow Agriscience
- Environmental Stewardship Award Sponsor: IFA
- Biocontrol Award Sponsor: Integrated Weed Control

## Mark Your Calendars:

Sanpitch CWMA Field  
Tour

Tuesday, June 12<sup>th</sup>

Squarrose CWMA Field  
Tour

Wednesday, June 13<sup>th</sup>

WRI Combined  
Central/Northern Area  
Field Tour

Tuesday, July 17<sup>th</sup>



## The Invader -Utah Weed Supervisor's Association Newsletter

Editor: Amber  
Mendenhall

For questions, comments,  
article submissions or  
ideas please email:

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-or-  
utahweedsupervisors@  
gmail.com

## **UWCA Awards (Continued from Page 5)** **Box Elder County, Outstanding Weed Board**

The Box Elder County Weed Board has held quarterly meetings and served as a complete, active board for three years. The chairman has been active in stimulating constructive discussion at meetings and been instrumental in planning cooperative sprayings between landowners and the county. As a board, all members have taken an active role in promoting weed awareness amongst neighbors and through the county. They have always done their part to support education at the County Fair, schools and Town Hall meetings. The board has been united in support of the Weed Supervisor in locating and contacting citizens of the county who are in violation of the Noxious Weed Law. They have always maintained a position of cooperation for weed control and are always supportive and encouraging rather than judgmental.



## **Patrick Nelson, Environmental Stewardship Award**



Patrick and his team of watershed rangers work tirelessly to protect and improve the Wasatch Mountains water supply, to ultimately protect the very water that comes out of our tap. About 1 million people along the Wasatch Front depend upon the Wasatch Mountains for water. The population of the Salt Lake County is projected to grow by 700,000 by 2050, further increasing demand for water flowing from the Wasatch Mountains.

Patrick exemplifies the message of watershed protections through noxious weed management. He and his staff truly embody the phrase "integrated weed management", through judicious use of herbicides, strategic planning and partnerships, timely labor and biological control. Patrick is passionate about the Wasatch Mountains as the Watershed Supervisor, but also as an avid recreationist, who often finds new populations of weeds when out hiking and hunting. We are lucky he is never off the clock! Thank you, Patrick!

## **Brandon Hunt, Biocontrol Award**

Brandon has been involved in bio-control for many years with his county and the state. He has had some very good successes in his endeavors on purple loosestrife and with the new insect for Russian knapweed. He is also the creator of the "Bug Sucker 2000" that allows at least 25 people to aspirate at the same time and travels many miles a year helping the state bio control program.



## Conference Review

# Utah Weed Control Association Annual Conference, February 2018

By: Amber Mendenhall

The Utah Weed Control Association's annual meeting was held at the Grand Center in February. Participants were welcomed by President, Dave Bingham. Local farmer, Luke Peterson presented a keynote speech about farming on Bangerter Highway. Corey Ransom of USU delivered a "hands on" presentation on herbicide drift and we met the new USU Extension researcher, Steve Young. Jake Forsgren was elected as the next Vice President. Conference participants earned CEU's and door prizes while learning about noxious weed issues from honeybees to EDDMapS.



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Utah Weed Supervisors Association Newsletter

# The Invader



*Sahara Mustard  
Photo: Heather Olsen*



*Canada Thistle Rust Fungus  
Photo: Amber Mendenhall*

What's Inside?

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