Sego Lily

Newsletter of the Utah Native Plant Society

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MAR/APR 2002

# Interagency Botany Project Continues to Benefit Federal Agencies and Rare Plant Species

*By Deborah J. Clark, Bureau of Land Management, 150 East, 900 North, Richfield, Utah 84701*

This is a sequel to the article printed in the Jan/Feb 2001 issue of the *Sego Lily*. In 2000, Capitol Reef National Park (CARE) received funding for a three-year rare plant species inventory through the National Park Service (NPS). In 2001, CARE received a $1,000 grant from the Utah Native Plant Society to assist with this project. CARE used the grant money to hire a student from Southern Utah University to work on the field crew. This article will report a summary of our findings from last years' field season.

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As mentioned in the earlier article, the Bureau of Land Management (BLM), U.S. Forest Service, Dixie National Forest (DNF), Fishlake National Forest (FNF), and CARE share management responsibilities for many of the same Threatened, Endangered & Sensitive plant species (TE&S). To enable each of these agencies to better manage their shared TE&S species, they decided to create an interagency botany position and hire an employee to survey and/or monitor for these species throughout their ranges, regardless of agency boundaries. A BLM employee was hired and stationed at CARE to act as project leader for this three-year project. Through the interagency agreement, the agencies are able to pool funding in order to extend surveys onto federal lands adjacent to CARE. This has expanded the scope of the NPS project to include FNF, DNF and BLM adjacent to CARE.

### The study

The primary purposes of this project are to (1) conduct intensive surveys for target species on potential habitat within and adjacent to CARE, and (2) determine potential for impact by visitor, recreational or livestock use if possible. The 2001 field season focused on the following species; *Gilia tenuis*, *Erigeron maguirei*, *Erigeron abajoensis*, *Erigeron awapensis*, *Townsendia aprica, Sclerocactus wrightiae, Astragalus harrisonii, Cymopterus beckii, Gilia caespitosa, Hymenoxys acaulis var. nana, Thelesperma subnudum var. alpinum, Spiranthes diluvialis*, *Habenaria zothecina,* and *Salix arizonica*. Additional tasks were to continue annual monitoring of targeted species on both CARE and BLM and to continue surveys for the suite of Tushar endemics on

**Interagency Botany Project Continues to Benefit Federal Agencies and Rare Plant Species (cont.)**

FNF. Later in the season we were asked to assist DNF with surveys for an endemic species, *Potentilla angelliae*, on Boulder Mountain. During all these surveys, crews looked for other TE&S species when we were in appropriate habitats.

Surveys were conducted for the target species from March through September when the majority of plants were in full bloom to ensure proper plant identification and increased survey accuracy. We began in the early spring at lower elevations and as the season progressed we moved to higher elevations thus ensuring proper search times for each species. Each area was surveyed by walking wandering transects through all accessible areas and/or by using binoculars to search cliff-faces. Surveys for *Sclerocactus wrightiae* in the southern end of CARE were conducted from horseback since there was such a large area to cover. For future reference, crews noted on maps all areas surveyed regardless of findings.

For each new occurrence of a species, crewmembers completed a modified version the Utah Natural Heritage Division Site Visit Account Survey Form, took photographs, and mapped its location on 7.5' quadrangle maps. Wherever possible, a Global Positioning System was used to map the precise location of each new occurrence. All new localities will be entered into each agencys' Geographic Information System along with a summary of data about the locality. This ensures long-term retrieval capabilities for future resource managers.

### Survey results

In 2001, the crew consisted of the interagency biologist employed by BLM; a seasonal crew leader and five seasonal crewmembers employed by CARE; a seasonal biological technician from DNF; and three biological technicians from FNF (names of field crew listed at the end of the article). The technicians from both DNF and FNF worked intermittently with the crew primarily when the crew was working on the respective Forests. The FNF Ecologist, CARE Chief of Resources and BLM Biologist also assisted with surveys in specific locations. Surveys began on March 20 and continued through September 20, 2001. We surveyed approximately 10,320 acres (excluding the Tushar Mountains) of potential habitat and recorded 75 new site locations for 20 of the target species. Twelve additional sites were revisited and documented for three species. Table 1 lists species found by agency and number of site locations.

Fishlake National Forest provided additional funding to support the field crew to work in the Tushar Mountains and to survey for Arizona willow in the Monroe Mountains. We spent the week of July 23, 2001 in the Tushar Mountains and several days in August in the Monroe Mountains. Dixie National Forest provided a field crew to work with the NPS crew leader to survey for *Potentilla angilliae* on Boulder Mountain. This work was done the week of August 6, 2001.

Calendar year 2001 was an excellent year for surveys since the previous fall and winter were wet with record snowfalls in the project area. All species targeted for surveys bloomed, often for extended time periods. In fact, a fall reconnaissance trip was planned in the San Rafael Swell to review an area for *Gilia tenuis*, and three new sites were found with *Gilia tenuis* in bloom.

### Partnerships

Each of the participating agencies used the interagency agreement to pool funding for this project. This enabled them to extend surveys onto federal lands adjacent to CARE and to expand the scope of the NPS project to FNF, DNF and BLM. For Fiscal Year 2001, NPS contributed $53,000, BLM contributed $26,000, DNF contributed $7,200 and FNF contributed $12,000. Capitol Reef Natural History Association (CRNHA) is very supportive of natural resource issues within CARE and joined the agencies in support of the project by donating $4,000 this year also. Utah Native Plant Society (UNPS) also joined the agencies in support of this effort with a $1,000 grant. The non-federal dollars from CRNHA and UNPS enabled FNF, DNF and BLM to obtain cost share dollars from their budgets and enabled CARE to hire an additional crew member and to purchase field equipment to improve the quality of work accomplished.

### Conclusions

Work accomplished during this field season resulted in the discovery and documentation of several new localities for 20 TE&S species. Some of the target species were recorded for the first time on FNF and DNF, confirming that more work needs to be done before these species ranges and niches are completely understood. Individual species reports summarizing findings this year will be submitted to each agency (if the species is located on that agencies' land), Utah Natural Heritage Division and FWS.

The creation of this interagency crew has proven beneficial to all participating agencies. There are numerous TE&S plant species whose distributions overlap agency jurisdictions, so it is to the mutual scientific and economic benefit of the agencies to manage these TE&S species cooperatively on an ecosystem basis. Fieldwork is conducted throughout the range of each target species regardless of agency boundaries, so a more accurate picture of the species and its habitat requirements is gained.

Information gathered during this three-year study enables the participating agencies to meet legal requirements of the Endangered Species Act, comply with NPS, BLM and USFS management policies, and address Government Performance and Results Act goals. Knowledge gained about these species and their specific habitat requirements will enable federal officials to ensure that these plants are protected and will assist in predicting which areas may contain additional occurrences. Results from this study will also help in determining which species should be monitored to determine impacts.

Field Crew Members for the 2001 season; Shirley Bell, Shanna Ray Brown, Deborah Clark, Keith Durfey, Chris Groebner, Gary Lenhart, Erin Magoon, Terry Miller, Zachary Miller, Phil Scarry, Amy Schwarzbach, David Tait, and Kyle Wheeler.

**Table 1. List of TE&S species found in 2001, by agency and number of sites.**

| Species | Status | Agency | # of Sites |
|---|---|---|---|
| *Astragalus asclepioides* | G4/S3S4 | BLM | 1 |
| *Astragalus consobrinus* | G2G3/S2S3 | BLM | 1 |
| *Cymopterus beckii* | G2G3/S2S3 | CARE | 6 |
| *Erigeron maguirei* | Threatened | BLM/CARE | 8 |
| *Eriogonum corymbosum var. re-* | G3/S1 | FNF | 1 |
| *Gilia caespitosa* | G2/S2 | CARE/FNF | 6 |
| *Gilia tenuis* | G1/S1 | BLM | 11 |
| *Habenaria zothecina* | G2/S2 | DNF/CARE | 3 |
| *Lomatium junceum* | G3/S3 | FNF | 1 |
| *Opuntia basilaris var. heilii* | G5/T2T3/S2S3 | BLM | 1 |
| *Pediocactus despainii* | Endangered | BLM | 1 |
| *Pediocactus winkleri* | Threatened | CARE | 1 |
| *Physaria acutifolia var. purpurea* | G5/T2/S2 | FNF | 1 |
| *Potentilla angelliae* | G1/S1 | DNF | 8 |
| *Salix arizonica* | G3/S2 | FNF | 3 |
| *Sclerocactus wrightiae* | Threatened | BLM/CARE | 21 |
| *Sphaeralcea psoroloides* | G2/S2 | BLM | 2 |
| *Thelesperma subnudum var.* | G5/T2/S2 | FNF | 4 |
| *Townsendia aprica* | Threatened | BLM/CARE/DNF | 6 |
| *Xylorhiza confertifolia* | G1G2/S1S2 | DNF | 1 |
| | | | |
| **Total** | | | 87 |

# Keep Off the Grass!

*From the Native Plant Society of New Mexico Newsletter, excerpt from the Nov/Dec 2001 issue of Sierra Magazine.*

What began as an anti-lawn party has become a mini-revolution. In May 1991, the Montreal suburb of Hudson passed a law banning the "cosmetic" use of pesticides within town boundaries-making it illegal to douse those dandelions in the garden or on private lawns. Recreational facilities such as parks and golf courses were also restricted from using pesticides. TruGreen Chemlawn and Spray Tech, two pesticide-application companies, didn't care for the ruling and challenged the law, taking it all the way to Canada's Supreme Court. This summer it became official: The high court ruled that municipalities across the country now have a right to ban pesticide use on public and private property.

And for good reason: Of the 36 most commonly used lawn pesticides, 13 have been found to cause cancer, 14 cause birth defects, 15 have been linked to liver or kidney damage, and 21 damage the nervous system.

# 2nd Notice: All Complimentary Newsletter Subscribers!

The Utah Native Plant Society is updating its complimentary subscription list. Anyone, such as a library or native plant society, that currently receives the UNPS newsletter, the ***Sego Lily,*** free of charge must contact the Society in order to continue receiving the newsletter. No response equals no subscription.

Please contact Abby Moore at: A.moore@m.cc.utah.edu
Or write to:

Utah Native Plant Society
Complimentary Subscriptions
P.O. Box 520041
Salt Lake City, UT 84152-0041

# Fungi Can Whack Invasive Weeds

American farmers and homeowners spend millions combating weeds and other alien organisms introduced from foreign countries. With the increase in international commerce and trade, the number of alien species becoming established in this country is growing every year.

"Luckily, fungi provide a vast arsenal of ammunition to control noxious weeds—both established and newly arrived—that invade roadsides, rangelands, and waterways and crowd out useful and native plants," says mycologist Amy Y. Rossman. She heads the Agricultural Research Service's Systematic Botany and Mycology Laboratory in Beltsville, Maryland.

Fungi are among the most biologically diverse organisms on Earth. Once discovered and characterized, many previously unknown species can be put to work. Thanks to research at Rossman's lab, ARS scientists at several U.S. laboratories are testing the effectiveness of three new fungus species as biocontrols for some of the United States' major invasive weeds: ragweed, purple loosestrife, kudzu, and morningglory.

Mycologist David F. Farr is curator of ARS' U.S. National Fungus Collections, maintained at Beltsville. A systematist, Farr probes the collection's 1 million fungal specimens to discover, name, scientifically describe, and classify agriculturally important fungi.

"Once these organisms are characterized, their weed-control potential can be tested in field and lab experiments," says Farr. He recently discovered several fungi—two new to science—that may offer nonchemical control of these four weeds

### An Irritant Wherever It Grows

"Ragweed, *Ambrosia artemisiifolia*, is a noxious plant that infests thousands of acres of arable land worldwide and causes allergic reactions—often seasonal—in many people," says Farr. "Its pollen causes irritated eyes, runny noses, and general discomfort for many sufferers.

"Last year, scientists in Hungary—where ragweed is even more of a problem—reported that they had found a fungus, possibly a *Septoria*, that was pathogenic to ragweed. It causes leaves to die and kills some plants, probably by entering through leaf pores."

After searching the literature and fungus collection, Farr determined that this beneficial species of *Septoria* is also found in the United States, though not previously described anywhere. Using molecular sequencing, he characterized it, named it *S. epambrosiae*, and illustrated it. Then he showed it to be distinct from three other related, known *Septoria* species.

"Scientists will use this information to communicate about the new fungus in developing it as a biocontrol agent for ragweed," says Farr.

### Garden Plant Gone Wild

One of the other fungi that Farr discovered was one that attacks purple loosestrife, *Lythrum salicaria.* "This perennial garden plant has become a noxious weed and is spreading rapidly throughout North America," says Farr. "Native to Europe and Asia, purple loosestrife grows and reproduces prolifically in wetlands and other moist habitats. It's degrading

## Fungi Can Whack Invasive Weeds (cont.)

the quality of thousands of acres of wetlands, becoming the dominant vegetation by outcompeting native plants that provide critical food, shelter, and breeding areas for wildlife."

After careful examination of form and structure and DNA sequencing, Farr was able to determine the molecular fingerprint of the fungus—also new to science.

"We described, illustrated, and named it *Harknessia lythrii,*" says Farr. "Many species of Harknessia are host specific—but not all of them—so scientists need to ensure that this fungus attacks only purple loosestrife."

### Kudzu—A Colossal Creep

Plant pathologist C. Douglas Boyette at ARS' Southern Weed Science Research Unit, Stoneville, Mississippi, recently discovered that the sicklepod fungus *Myrothecium verrucaria* is also an effective bioherbicide for controlling kudzu. This fast-growing, nonnative weed covers more than 7 million acres of the South.

"Kudzu resembles a giant beanstalk," says Boyette. "It spreads at a rate of about 120,000 acres a year, reducing land productivity. Homeowners have a hard time controlling this vine, which grows up the sides of buildings, along fences, and on trees and telephone poles. Control costs increase by nearly $6 million each year."

In greenhouse and small field plot studies, Boyette and ARS plant pathologist Hamed K. Abbas found that the *Myrothecium* bioherbicide killed 100 percent of kudzu weeds treated at different growth stages and under varying physical and environmental conditions. It should provide a good nonchemical control alternative, since one spray treatment kills leaves and stems and appears to invade the roots. This research was done in collaboration with Louisiana Tech University-Ruston.

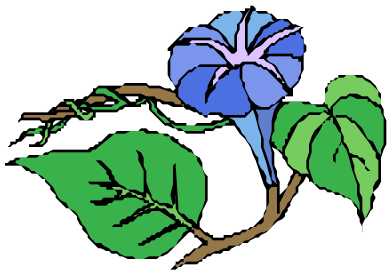
The Stoneville researchers are doing extensive toxicological studies on the fungus and are looking for a company to license the patented kudzu-control technology.

### Quarantine and Morningglories

Farr recently collaborated with ARS plant pathologist Douglas G. Luster, who is at the ARS Foreign Disease-Weed Science Research Unit in Frederick, Maryland, on the systematics of a different strain of *M. verrucaria*. With four microbial containment greenhouses, this unit is the nation's largest facility for studying whole plants under quarantine conditions.

Scientists there have developed techniques to monitor biocontrol agents after release into the environment. They use the polymerase chain reaction, amplified fragment length polymorphism, DNA sequencing, molecular marking, and other sensitive technologies to detect and identify a weed pathogen's unique genetic fingerprint. This lets them differentiate strains of the same fungal species.

"DNA fingerprinting also helps scientists keep close tabs on spore growth and spread, host range, and effectiveness of biocontrol pathogens like *Myrothecium* once they've been released," Luster says. They've fingerprinted several strains of this soil fungus that kill morningglories, a weed that plagues sugarcane growers.



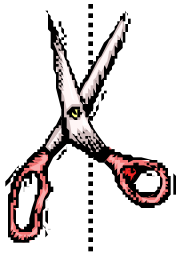
# Native Plant Propagation Workshops


## Hands-on Experience with Growing Utah Native Wildflowers, Shrubs, and Ornamental Grasses from Seed

These workshops are part of the UNPS Heritage Garden Program, which has the goal of increasing love and knowledge of native plants through horticulture. Participants will receive information on native plant horticulture and will have the opportunity to take home planted seeds and watch them grow.

Send a **$10** check to the contact listed for the workshop you will be attending or call for more information.

| | **Salt Lake Workshops** | **Provo Workshops** | **Park City Workshops** |
|---|---|---|---|
| Date and Time | Two workshops:<br>Saturday, March 9, 9:00 am to 12 pm<br>Saturday, March 9, 12 noon to 3 pm | Two workshops:<br>Saturday, March 16, 9 am to 11 am<br>Saturday, March 9, 1 pm to 3 pm | One workshop:<br>March 2, 1:00 p.m. |
| Location | Liberty Park Greenhouse (enter on the west side), 700 E between 900 | USFS Shrub Sciences Laboratory Greenhouses, 735 North 500 East | Park City (call Dave or Mindy for more information) |
| Contact | Therese Meyer, 801-272-3275, 2931 E. Tolcate Lane, Holladay, UT 84121 | Susan Meyer, 412 East Salem Hills Circle, Elk Ridge UT 84651 | Dave Gardener 435-649-3355 or Mindy Wheeler 801-699-5459 |



## Native Plant Propagation Workshops

Name_____ Phone #_____Email_____

Address_____

Workshop location, date and time you will be attending_____

"We shall never produce an art of landscaping worthwhile until we have learned to love the soil and the beauty of our homeland."

-Jane Jensen, landscape architect and conservationist (1860-1951)

"Whatever its condition, the environment is, after all, a reflection of ourselves, our tastes, our aspirations, our successes, and our failures."

-Lady Bird Johnson

# Events and Activities

## Western Society for Weed Science Annual Conference

March 11-14, 2002. Salt Lake City, Utah. Keep up with the latest in weed control in western North America. Lots of great talks and networking. For more information visit the WSWS website at: www.wsweedscience.org

## Water Conserving Plants Class

March to May. Jess Wagstaff, retired USDA poisonous plant expert, and the Utah Valley Chapter have teamed together to organize a UVSC continuing education class called **Water Conserving Plants**. Emphasis throughout will be on water conservation. This class will be a combination of lectures on Wednesday evenings and 4 Saturday workshops and field trips. The lectures will be held in Pleasant Grove, with location to be announced in the UVSC Discovery catalog. The first class is on March 13 and scheduled from 7-9 pm. The final field trip is scheduled for Saturday, May 18.

Lectures include the following topics: Introduction by Jess Wagstaff, Nomenclature and Taxonomy of native and other water conserving plants, by Renee Van Buren, Utah Valley State College Biology Department, Xeric Landscaping by Paula Mohadjer, Jordan Valley Water Conservancy District, Sources of Native and Xeric Plants, Xeric plants and the environment by Stan Kitchen, Shrub Sciences Lab, Public Policy Implications and Use of Native and Xeric Plants on Public Land, speaker TBA, Commercial sources of plants, speakers TBA, Roundtable Discussion of Challenges in the Use of Native Plants, including but not limited to weeds, fire, deer, toxic plants.

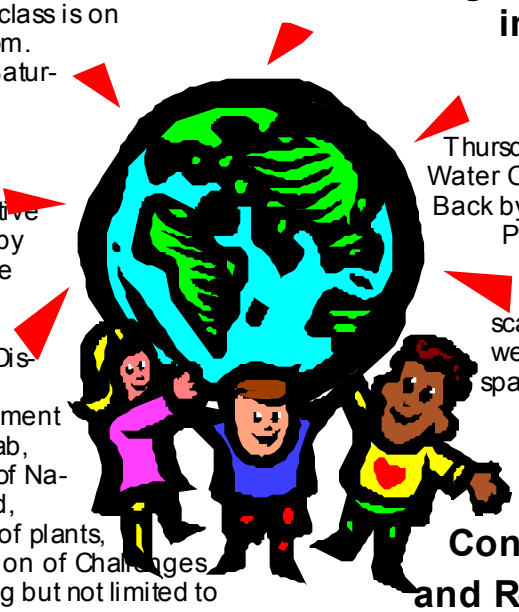
Saturday events include: Workshop on Propagation of Utah Native plants, by Susan Meyer, Tour of Commercial Grower, Tour of Xeric Gardens at Jordan Valley Water Conservancy District by Paula Mohadjer, Rush Valley tour, including examples of poisonous plants, good rock garden plants, examples of weed invasion, salt desert and sagebrush ecosystems.

Cost of the class is $55. Registration is through UVSC Continuing Education . Participants will use private vehicles for field trips. For more details call Jess Wagstaff, 785-5660 or email him at djwagstaff@att.net.

## Design Basics for Waterwise Landscapes

Saturday, April 20, 10-noon. Jordan Valley Water Conservancy District, 8215 S 1300 W. Don't miss this free workshop by Stephanie Duer, Conservation Coordinator for Salt Lake City and experienced landscape designer and horticulturist. Learn the basic landscape design principles for your home landscape. Includes incorporating Utah native plants! Due to limited space, please RSVP 1-877-728-3420.

## Gorgeous Utah Native Plants in the Landscape

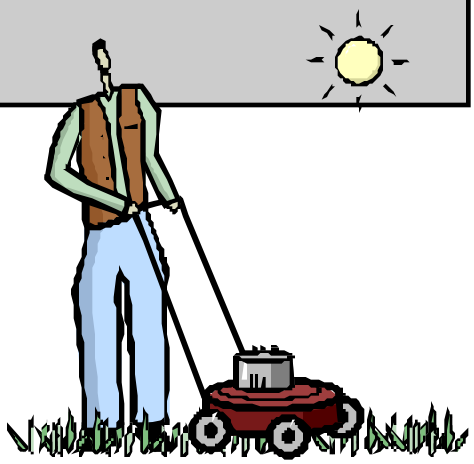


Thursday, June 6, 7-8:30 p.m. Jordan Valley Water Conservancy District, 8215 S 1300 W. Back by popular demand! Susan Meyer, President of the Utah Native Plant Society, is once again teaching her acclaimed Native Plants in the Landscape workshop. Great slides and a wealth of information! Due to limited space, please RSVP 1-877-728-3420.

## 2002 SER Conference: A Convocation: Understanding and Restoring Ecosystems

August 4-9, 2002. Tucson, AZ. This is a joint conference with SER and Ecological Society of America. Both organizations are putting together shared and unique sessions, symposia, workshops and fieldtrips!

# God's Take on Lawns



**Imagine the conversation The Creator might have had with St. Francis on the subject of lawns:**

GOD: Frank, you know all about gardens and nature. What in the world is going on down there in the Midwest? What happened to the dandelions, violets, thistle and stuff I started eons ago? I had a perfect, no-maintenance garden plan. Those plants grow in any type of soil, withstand drought and multiply with abandon. The nectar from the long lasting blossoms attracts butterflies, honey bees and flocks of songbirds. I expected to see a vast garden of colors by now. But all I see are these green rectangles.

ST. FRANCIS: It's the tribes that settled there, Lord. The Suburbanites. They started calling your flowers "weeds" and went to great lengths to kill them and replace them with grass.

GOD: Grass? But it's so boring. It's not colorful. It doesn't attract butterflies, birds and bees, only grubs and sod worms. It's temperamental with temperatures. Do these Suburbanites really want all that grass growing there?

ST. FRANCIS: Apparently so, Lord. They go to great pains to grow it and keep it green. They begin each spring by fertilizing grass and poisoning any other plant that crops up in the lawn.

GOD: The spring rains and warm weather probably make grass grow really fast. That must make the Suburbanites happy.

ST. FRANCIS: Apparently not, Lord. As soon as it grows a little, they cut it—sometimes twice a week.

GOD: They cut it? Do they then bale it like hay?

ST. FRANCIS: Not exactly, Lord. Most of them rake it up and put it in bags.

GOD: They bag it? Why? Is it a cash crop? Do they sell it?

ST. FRANCIS: No, Sir. Just the opposite. They pay to throw it away.

GOD: Now let me get this straight. They fertilize grass so it will grow. And when it does grow, they cut if off and pay to throw it away?

ST. FRANCIS: Yes, Sir.

GOD: These Suburbanites must be relieved in the summer when we cut back on the rain and turn up the heat. That surely slows the growth and saves them a lot of work.

ST. FRANCIS: You aren't going to believe this, Lord. When the grass stops growing so fast, they drag out hoses and pay more money to water it so they can continue to mow it and pay to get rid of ir.

GOD: What nonsense! At least they kept some of the trees. That was a sheer stroke of genius, if I do say so myself. The trees grow leaves in the spring to provide beauty and shade in the summer. In the autumn they fall to the ground and form a natural blanket to keep moisture in the soil and protect the trees and bushes. Plus, as they rot, the leaves form compost to enhance the soil. It's a natural circle of life.

ST. FRANCIS: You better sit down, Lord. The Suburbanites have drawn a new circle. As soon as the leaves fall, they rake them into great piles and pay to have them hauled away.

GOD: No. What do they do to protect the shrub and tree roots in the winter and to keep the soil moist and loose?

ST. FRANCIS: After throwing away the leaves, they go out and buy something which they call mulch. They haul it home and spread it around in place of the leaves.

GOD: And where do they get this mulch?

ST. FRANCIS: They cut down trees and grind them up to make the mulch.

GOD: Enough. I don't want to think about this anymore. St. Catherine, you're in charge of the arts. What movie have they scheduled for us tonight?

ST. CATHERINE: "Dumb and Dumber", Lord. It's a really stupid movie about…

GOD: Never mind, I think I just heard the whole story from St. Francis.

*From the internet, Infomaniac.*

# Biocontrol Beetles Set Free to Tackle Saltcedar

By Kathryn Barry Stelljes
May 22, 2001

Chinese leaf beetles (*Diorhabda elongata*) are beginning official duty as the first biological control agents released into the environment against saltcedar (*Tamarix* spp.).

These invasive trees, which can grow up to 30 feet tall, infest more than 1 million acres along western waterways. In addition to crowding out native plants, saltcedar can increase soil salinity, divert natural streamflow and increase wildfire frequency.

Unprecedented monitoring of the beetle and its impacts began in July 1999, when the insects were put out in large cages at 10 locations in six western states.

Scientists first released the beetles from field cages last week near Seymour, Texas, and Pueblo, Colo. They plan to make other releases near Bishop, Calif.; Fallon, Lovelock and Schurz, Nev.; Delta, Utah; and Lovell, Wyo. Additional nursery cages are being established at new sites near Woodland and King City, Calif.

Biological control agents are often released directly into the environment. In this case, the U.S. Department of Agriculture and cooperating scientists are watching these beetles closely to ensure their establishment and to evaluate their impact, population growth and safety.

This information has been used to ensure that the biocontrol project protects all native species in the area, including the southwestern willow flycatcher, *Empidonax traillii extimus*. In some locations, these endangered birds nest in saltcedar that has crowded out their native willow nesting sites.

Biological control is expected to slowly reduce saltcedar, allowing beneficial plant and animal species to reestablish in severely infested areas. Other planned activities include continued monitoring of the insects, plants and associated wildlife, and studies to facilitate revegetation with native plants.

The project, initiated and coordinated through USDA's Agricultural Research Service, operates in conjunction with a consortium of more than 30 federal, state, and local agencies; universities; and private organizations. The team received a $3 million grant in 2000 from the USDA's Initiative for Future Agriculture and Food Systems for work on a complex of invasive weeds, including saltcedar.

*ARS is USDA's chief scientific research agency.*

***Scientific contacts:*** *C. Jack DeLoach, ARS Grassland, Soil and Water Research Laboratory, Temple, Texas, phone (254) 770-6531, fax (254) 770-6561, deloach@brc.tamus.edu; Raymond I. Carruthers, Exotic and Invasive Weeds Research Unit, ARS Western Regional Research Center, Albany, Calif., phone (510) 559-6127, fax (510) 559-6123, ric@pw.usda.gov.*

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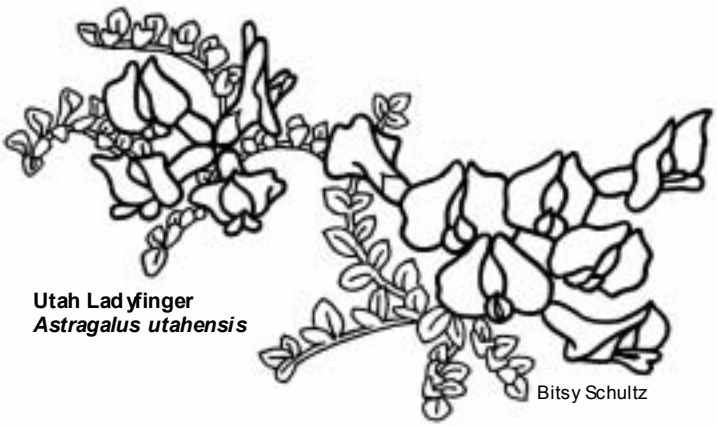

**Utah Ladyfinger**
***Astragalus utahensis***

Bitsy Schultz

# Utah Native Plant Society Membership and Information

ۋNew Member ۋRenewal ۋGift

Name:_____
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Check membership category desired:

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| ۋStudent | $9.00 |
| ۋSenior | $12.00 |
| ۋIndividual | $15.00 |
| ۋHousehold | $25.00 |
| ۋSustaining | $40.00 |
| ۋSupporting Org. | $55.00 |
| ۋCorporate | $250.00 and up |
| ۋLifetime | $250.00 |

Please send a complimentary copy of the Sego Lily to the above individual.

Please enclose a check, payable to Utah Native Plant Society and send it to:

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For more information about the Utah Native Plant Society call:

Bill King: 582-0432
Susan Garvin: 356-5108
Larry Meyer: 272-3275
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**Check out our website!**

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Many thanks to Xmission for sponsoring the Utah Native Plant Society website.

Please direct all suggestions, articles and events for the newsletter to Paula Mohadjer at paulam@jvwcd.org. **Deadline for next issue is Feb 15.**

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