



Sego Lily

Newsletter of the Utah Native Plant Society

January 2012 (volume 35 number 1)



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Cisco sego-lily (*Calochortus cis-coensis*) was described as a new species by Drs. Stanley Welsh and Duane Atwood in the 2008 edition of *A Utah Flora*. It is native to Mancos Shale and other clay habitats of eastern Utah and adjacent Colorado. Note the pinkish-purple color and absence of a prominent purple chevron-pattern on the inner surface of the petals, which helps distinguish this species from the closely related *Sego-lily* (*C. nuttallii*). *Cisco sego-lily* gets its latin name from the tiny town of Cisco, south of Interstate 70 in Grand County. For more on Utah places names used in species epithets, see the article on page 5. Photo by William Gray from near Lapoint, Utah, June 2011.

Utah Native Plant Society



Utah Native Plant Society

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Website: For late-breaking news, the UNPS store, the *Sego Lily* archives, Chapter events, sources of native plants, the digital Utah Rare Plant Field Guide, and more, go to unps.org. **Many thanks to Xmission for sponsoring our website.**

For more information on UNPS: Contact Bill King (801-582-0432) or Susan Fitts (801-756-6177), or write to UNPS, PO Box 520041, Salt Lake City, UT, 84152-0041 or email

Sego Lily Editor: Walter Fertig (walt@kanab.net). The deadline for the March 2012 *Sego Lily* is 15 February 2012.

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Chapter News

Cache: The dates are now set, mark your calendars, get ready to plant!

Cache Chapter and the Cache Master Gardeners announce the 2012 Native Plant Propagation Workshop dates. There are two times/days to choose from: Thursday, March 22 @ 6 PM or Saturday, March 24 @ 9 AM. If both sessions fill up an afternoon session will be added on Saturday, March 24. Registration begins Monday, January 9. - *Michael Piep*

Fremont (Richfield area): Thanks to Lisa White and welcome to Marianne Orton. The last two years have been chuck full for Lisa White: she has served as chairperson of the Fremont Chapter while giving birth to a baby, working in Zion National Park, and fulfilling church callings. We appreciate her energy and contributions to our chapter. Thank you!

We now welcome Marianne Breeze Orton as our new chairperson. She moved to Richfield from Panguitch last year and has worked for the US



Forest Service for 31 years, most recently as Environmental Coordinator. Her career has taken her throughout the Intermountain West including Nevada, California, Idaho, and Utah.

Our chapter has worked hard over the past few years raising money for our events, so to celebrate we enjoyed a tasty dinner at Sage Brush Grille. We are committed to worthy projects in the future,

such as hosting the 2012 *Penstemon* festival and a native plant sale.

Merrill Johnson of Great Basin Natives will head this event. More information will come later as plans get solidified.

We also plan to start a native garden at Fremont Indian State Park museum. Since the garden at Sam Stowe Campground is becoming established, we can direct our efforts at the museum which will give us a more public presence.

A new benefit to chapter members is the 10% discount we will get at local, home-owned nurseries, such as Great Basin natives in Holden, Brooklyn Gardens in Elsinore, Wildland Nursery in Joseph, and Larsen's Ace Hardware in Richfield. Be sure your membership is current to take advantage of the discount.

Manzanita (Kane County): After a fall hiatus, the chapter will resume its speaker series and member meetings in early January 2012 (TBA). Following in the tradition of the Salt Lake Chapter, our January meeting will be

Bulletin Board

2012 Rare plant meeting; March 6: Red Butte Garden and the Utah Native Plant Society will be sponsoring the annual rare plant meeting, planned for Tuesday, March 6 at Red Butte Garden’s new upstairs classroom (300 Wakara Way, Salt Lake City). The format will be similar to past years and feature a series of oral presentations by researchers and agency botanists on topics pertaining to rare plant species or plant conservation. Please submit abstracts for 20 minute oral presentations or posters by February 15, 2012 to Rita (Dodge) Reisor (Rita.Reisor@redbutte.utah.edu) or Walter Fertig (walt@kanab.net). We ask participants to register in advance online at the Red Butte Garden website (www.redbutte garden.org/conservation) or by calling the Red Butte front desk at 801-585-0556. A boxed lunch will be provided as part of the \$15 registration fee. If there is sufficient interest, we will hold a separate meeting on March 7 to revise the UNPS rare plant species list. -*W. Fertig and Rita Reisor*

2012 Penstemon Festival; June 1-2: Back by popular demand, Merrill Johnson and Janett Warner, two of UNPS’s favorite native plant nursery proprietors, will be hosting another *Penstemon* festival on June 1-2, 2012 (see the July 2011 Sego Lily for more on beardtongues and the 2011 event). The 2012 festival will move to the Richfield area of central Utah and feature a dinner presentation by David Salmon of High Country Gardens in Santa Fe, New Mexico. See the March issue of the Sego Lily for more details on the venue, activities, and how to register to attend.

Help Wanted Collecting Milkweed Seed: Dr. Anurag Agrawal of Cornell University has contacted the Society about the availability of seed of Circle Cliffs milkweed (*Asclepias labriformis*). This Utah endemic is among the most toxic of all milkweed taxa, making it of keen interest to researchers studying the interactions between insect herbivores and milkweeds. If anyone has seed of this species, please contact Bill King, 801-808-6393, or mzzzyt@aol.com .

NEW UNPS life members—Leigh Johnson, botany professor and curator of the herbarium at Brigham Young University (Provo) and Jeanette Townsend of Salt Lake City are the newest life members of the Utah Native Plant Society. Thanks for making this commitment to the Society!

UFO night, or “unidentified flowering object”. Please email digital photos beforehand (walt@kanab.net) or bring some dusty old polaroids to share and befuddle the crowd. Prizes will be awarded for the trickiest photo and crowd favorite.

In February, chapter stalwart and retired pharmacist Steve Dahl will speak about pharmacognosy (medicines from herbal plants—yeah, I had to look it up too). For March, your umbel leader will talk about the flora of Zion National Park. In April Kanab restaurateur Victor Cooper will discuss the flora and fauna (well, mostly the fauna) of Antarctica. Also in April our spring outdoor expeditions will resume. - *W. Fertig*

Salt Lake: Our November meeting was held jointly with the Annual Members meeting, as reported on elsewhere. We had a great turnout on December 7th when Richard Jonas spoke about the wizardry behind some of his great photos. It was a fine combination of beautiful flower pictures and how to get them. As Steve Hegji did earlier in the year, Richard

emphasized the importance of thinking carefully about what it is you want to capture in the photograph. This is especially true when using a medium level camera which restricts your options. Especially stunning were some magnificent landscape photos patiently stitched together from multiple exposures.

On Wednesday January 4, our next meeting will be held at the REI store on 3300 South, close to 3300 East, starting at 7PM. Dr. Ty Harrison, emeritus professor of biology at Westminster College, will present a program on “Common edible wild plants” which are found in Salt Lake County in the Wasatch Mountains and foothills. He continues a tradition of wild fruit, greens, and mushroom foraging which spans many generations. There will be taste samples of his wild jam and jelly. - *Bill Gray*

Unidentified Flowering Object: This month’s UFO comes from Bill Gray with the following comments: “What the heck is that?” was my first response: then I started counting parts which gave me a clue.



Then the leaves ... It’s quite wide-spread, but not common and found in most Utah counties and all western states except Washington. The photo was taken at 9400 feet near Tasha Creek on Fish Lake Mountain on August 10, 2010.

The November UFO was Telegraph weed (*Heterotheca grandiflora*), a native that barely sneaks into southern Utah.

Do you have a UFO to share? Send it in and try to stump your fellow readers! - *W. Fertig*

2011 UNPS Members Meeting

The annual Utah Native Plant Society members meeting was held on Saturday, 5 November 2011 at Red Butte Garden in Salt Lake City. Former UNPS President Bill Gray entertained the assembled group with his slide show on Marcus E. Jones. Bill has recently digitized a trove of historical Jones photos housed at Rancho Santa Ana Botanical Garden. He has begun traveling across Utah and the west to relocate and reshoot sites photographed by Jones over a century ago (see the November 2011 *Sego Lily* for more).

Part of the attraction of the annual meeting is visiting with old and new friends. Dr. Stanley Welsh attended the meeting (upper right) and held court with his own stories of Utah botanical history and adventure. Ever-dapper speaker Bill Gray (bottom right) attracted his usual share of groupies, including, from left, TNC's Elaine York, Sylvia Gray, and Ann Mitchell. Of course the hallmark of all annual meetings is the New World potluck, here being enjoyed by Steve Hegji under the watchful eye of Susan Fitts (below).



Although he could not be in attendance, Ben Franklin was honored by the UNPS board with the Society's Lifetime Achievement Award for his years of service as state botanist with the Utah Conservation Data Center (heritage program). Ben recently retired from that position and has been replaced by his long-time colleague and UNPS board member Robert Fitts. The award comes with an honorary life membership in the Society.

Members at the meeting voted unanimously to renew the terms of existing board members and welcome newcomer Blake Wel-lard.
Photos by Larry Meyer

Where's in a Name: Utah Plant Name Geography

By Walter Fertig

Coming up with a unique species name can be hard, especially in large genera. Pretty soon all the obvious descriptive terms are taken (*aurea*, *rubra*, *longifolia*, *minima*, *pubescens*, etc.), and there are only so many colleagues and benefactors to commemorate (*fremontii*, *jonesii*, *torreyi*, *wislizeni*, etc.).

Geographic names can come to the rescue of the tongue-tied taxonomist. Such terms may describe general environmental features such as mountains (*montana*), valleys (*vallicola*) or bodies of water (*lacustris*, *riparia*). Vegetation types are popular too, such as forests (*sylvatica*), meadows (*pratense*, *campestris*), alpine tundra (*alpina*), or deserts (*deserta*, *arida*). Coordinates are also commonly used for north (*borealis*), south (*australis*), east (*orientale*), or west (*occidentale*).

More specific place names are often used to describe the primary range of a species. These can be whole continents (*africana*, *europea*, *asiatica*) or individual countries (*japonica* for Japan, *gallicum* for France, *canadensis* for Canada, *mexicana* for Mexico, etc.). Country names can provide a valuable clue for deducing the nativity of species. For example, salt-cedar has the scientific name *Tamarix chinensis* for its native land, China.

The epithet *americana* refers to species from the United States or the "Americas" (North, Central, or South). Many states have also been Latinized for use in plant names. Common eastern species often have the name *virginiana* (Virginia), *caroliniana* (Carolina, either North or South), or *pennsylvanica* (Pennsylvania). Sometimes geographic names describe



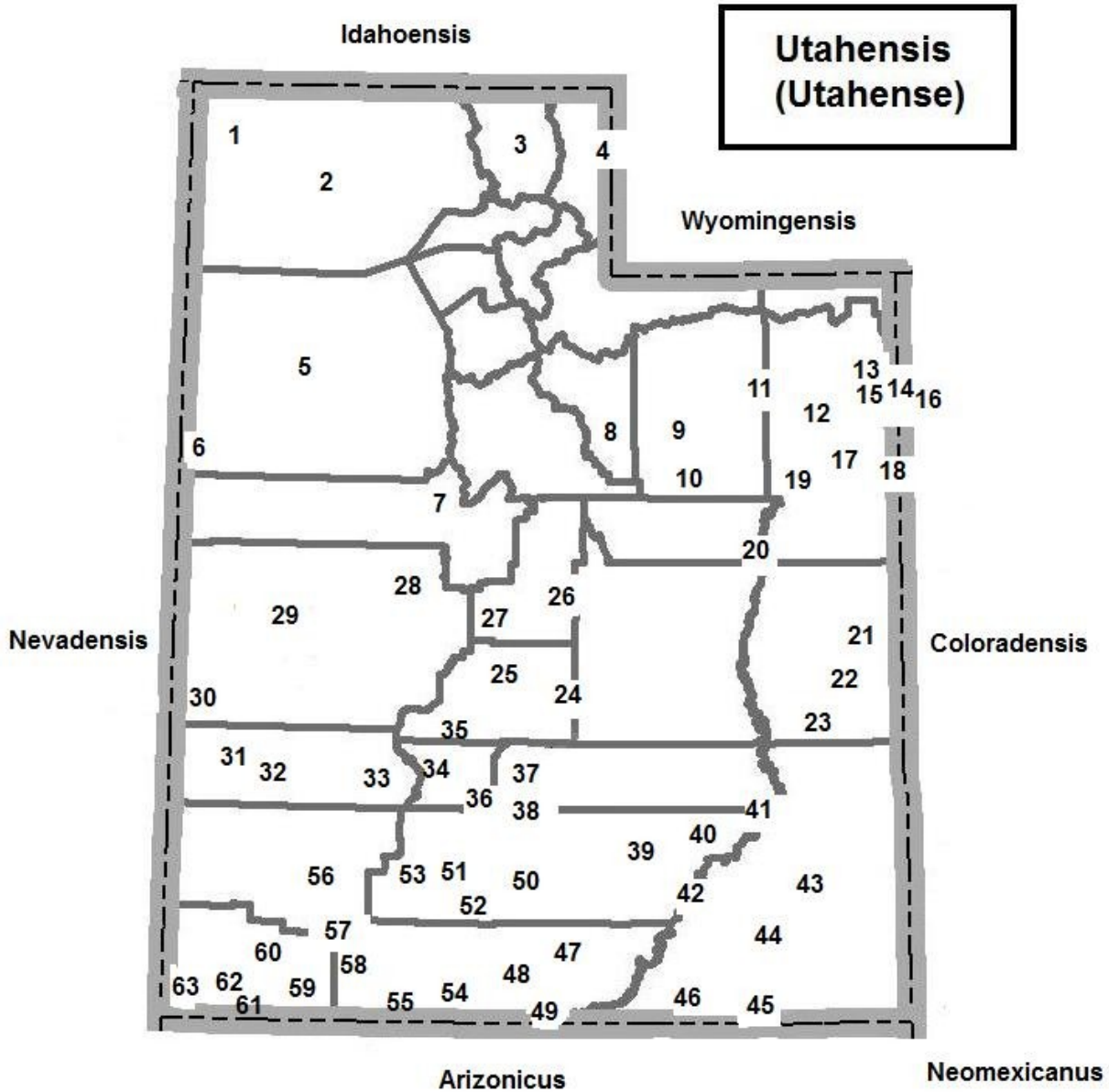
a region, such as *novae-angliae* (New England). *Ludoviciana* can refer to the state of Louisiana, but more is used for the Louisiana Purchase. Louisiana sage-wort (*Artemisia ludoviciana*) is a widespread western species that barely enters prairies of northern Louisiana, while the Louisiana broomrape (*Orobanche ludoviciana*), another common westerner, is completely absent from the Pelican State.

Nearly all of the western states appear in plant species' names in Latinized form. Utah is especially rich in plant names bearing the epithet *utahensis* or *utahense* (depending on the gender of the genus name). At least 33 species have 'Utah' in their scientific name (see list on page

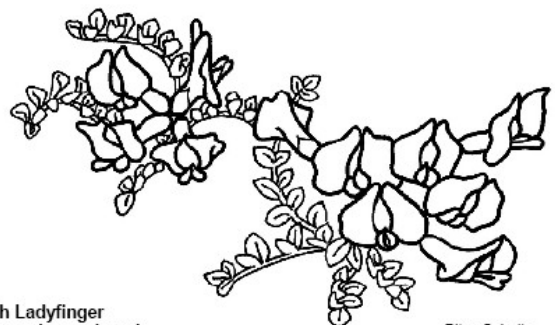
Above: *Zion shooting star* (*Dodecatheon pulchellum* var. *zionense*), named originally by Alice Eastwood from Zion Canyon, Utah. Photo by W. Fertig.

6). Nathaniel Lord Britton and Joseph Rose even named a cactus genus *Utahia*, though it is lumped with *Pediocactus* today.

At least 63 Utah place names have been used for naming vascular plant species. Often these localities are at or near the spot where the type specimen was collected. Some of the place names are now obscure, or the authors have had fun in tweaking common names into Latin. Use the map and legend on the following pages to find a place name near your town that has been given botanical immortality.



Plant species named Utahensis or Utahense: *Agave*, *Amelanchier*, *Astragalus* (right), *Atriplex gardneri* var., *Buddleja*, *Camissonia scapoidea* var., *Cirsium neomexicanum* var., *Croton texensis* var., *Cryptantha*, *Cynanchum*, *Cystopteris*, *Dodecatheon dentatum* var., *Erigeron*, *Fendlerella*, *Ivesia*, *Lathyrus pauciflorus* var., *Lonicera*, *Lotus*, *Lupinus caudatus* var., *Lupinus lepidus* var., *Mimulus glabratus* var., *Montia perfoliata* var., *Mortonia scabrella* var., *Opuntia erinacea* var., *Pentstemon*, *Phacelia*, *Physaria*, *Polygonum douglasii* var., *Sarcocornia*, *Selaginella*, *Swertia*, *Symphoricarpos oreophilus* var., and *Yucca*.



Utah Ladyfinger
Astragalus utahensis

Bitsy Schultz

Key to Map of Utahensis

1. Anserinus (Goose Creek): *Astragalus*
2. Negundo (Box Elder County): *Astragalus lentiginosus* var.
3. Loganum (Logan): *Eriogonum brevicaule* var.
4. Crawfordensis (Crawford Mountain): *Cymopterus*
5. Bonnevilleensis (Lake Bonneville): *Atriplex gardneri* var.
6. Ibapensis (Ibapah): *Cymopterus*, *Hackelia*
7. Eurekaensis (Eureka): *Astragalus*
8. Wasatchensis (Wasatch Range): *Aster*, *Ivesia gordonii* var.
9. Duchesnensis or Duchesnicola (Duchesne): *Artemisia nova* var., *Astragalus*, *Craetagus douglasii* var., *Cymopterus*, *Penstemon*
10. Argylensis (Argyle Canyon): *Phacelia*
11. Uintahensis or Uintaense (Uinta Mountains or Uinta Basin): *Chrysothamnus nauseosus* var., *Erigeron speciosus* var., *Mentzelia multicaulis* var., *Papaver*, *Penstemon*, *Stephanomeria tenuifolia* var.
12. Vernalensis (Vernal): *Penstemon angustifolius* var.
13. Saurinus or Saurinum (Dinosaur National Monument): *Astragalus*, *Eriogonum lonchophyllum* var.
14. Pomariensis (Orchard Creek Draw in Dinosaur National Monument): *Gutierrezia*
15. Cyanomontanus (Blue Mountain): *Penstemon scariosus* var.
16. Yampaensis (Yampa River): *Penstemon acaulis* var.
17. Equisolensis (Horseshoe Bend): *Astragalus*
18. Albifluvis (White River): *Penstemon scariosus* var.
19. Wetlandicus (Pariette Wetlands): *Sclerocactus*
20. Desolaticola (Desolation Canyon): *Aquilegia*
21. Ciscoensis (Cisco): *Calochortus*
22. Piscator (Fisher Mesa): *Astragalus*
23. Moabensis or Moabense (Moab): *Astragalus coltonii* var., *Lepidium*, *Lupinus argenteus* var.
24. Rafaelensis (San Rafael Swell): *Astragalus*, *Phacelia*
25. Salina or Salinensis (Salina Canyon or Salina Pass): *Cirsium wheeleri* var., *Elymus*
26. Musiniensis (Musinea Peak): *Astragalus*, *Senecio*
27. Canone (Canyon Range): *Trifolium andinum* var.
28. Desereticus (Deseret): *Astragalus*, *Penstemon humilis* var.
29. Domensis (House Range): *Primula*
30. Derensis (Desert Experimental Range): *Arabis holboellii* or *Boechera holboellii* var.
31. Wahwahense or Wahwahensis (Wah Wah Range): *Erigeron*, *Trifolium andinum* var.
32. Friscanum (Frisco): *Trifolium*
33. Castoreus or Castorea (Beaver County): *Senecio* or *Packera*
34. Marianus (Marysvale): *Lupinus sericeus* var.
35. Flumensevera (Sevier River): *Mentzelia multicaulis* var.
36. Awapensis (Awapa Plateau): *Erigeron*
37. Loanus (Loa): *Astragalus*
38. Aquariensis (Aquarius Plateau): *Castilleja*
39. Henrimontanensis (Henry Mountains): *Astragalus*
40. Ruinina (Ruin Park): *Krascheninnikovia lanata* var.
41. Imperialis (Imperial Canyon): *Gilia*
42. Coloradoensis (Colorado River): *Astragalus kentrophyta* var.
43. Abajoensis (Abajo Mountains): *Erigeron*, *Draba*
44. Kachinensis (Kachina Natural Bridge): *Erigeron*
45. Monumentalis (Monument Valley): *Astragalus*
46. Navajoa or Navajoense (Navajo Mountain): *Penstemon*, *Trifolium andinum* var.
47. Fumariensis (Smoky Mountain): *Sphaeralcea*
48. Mammilariensis (Nipple Bench): *Phacelia*
49. Wahweapensis (Wahweap): *Astragalus lentiginosus* var.
50. Escalantinus (Escalante): *Astragalus newberryi* var.
51. Tabulaeus (Table Cliff): *Astragalus limnocharis* var.
52. Canaani (Canaan Peak): *Physaria chambersii* var.
53. Panguicense (Panguitch, or Panguitch Lake): *Astragalus argophyllus* var., *Eriogonum*
54. Pariense or Pariensis (Paria): *Iris*, *Pediomelum*
55. Kanabensis (Kanab): *Yucca*
56. Markaguntense (Markagunt Plateau): *Cirsium clavatum* var.
57. Zionis, Zionensis, or Sionis (Zion Canyon or Zion National Park): *Astragalus*, *Chrysopsis* (*Heterotheca*), *Dodecatheon pulchellum* var., *Draba asprella* var., *Erigeron*, *Eriogonum racemosum* var., *Haplopappus* (*Ericameria*), *Jamesia americana* var., *Lathyrus brachycalyx* var.
58. Parunuweapensis (Parunuweap Canyon): *Trifolium variegatum* var.
59. Canaani (Canaan Mountain): *Erigeron*
60. Concordius (New Harmony): *Astragalus*
61. Virginensis or Virginense (Virgin River): *Cirsium*, *Cryptantha*, *Encelia frutescens* var.
62. Georginum (St. George): *Lepidium lasiocarpum* var.
63. Castoreus (Beaver Dam Mountains/Wash): *Astragalus newberryi* var., *Opuntia phaeacantha* var.

Utah Plant Families: The Grapes (Vitaceae)

By Walter Fertig

It is no accident that the words vital, vitality, and *Vitis* all share the same Latin root, *Vita*. According to Webster's Dictionary, vital means to be "necessary or essential to life" and vitality is "to have mental or physical vigor." *Vitis* is Latin for the grape, one of mankind's oldest cultivated fruits and the source of revitalizing food and drink for millennia.

Vita also lends its name to the grape family, or Vitaceae, a group of 11-14 genera and approximately 700 species found throughout the tropics, subtropics, and north temperate zone. Members of the grape family tend to be woody vines with tendrils that help them clamber over other vegetation, buildings, or walls. The tendrils are thought to be modified branches and are usually located opposite the leaves, rather than in their axils or at their tips as in other tendril-bearing plants. Grapes and their relatives are also characterized by small, inconspicuous, 4 or 5-parted flowers with a prominent nectary disk and their signature fleshy berries.

Two genera in the Vitaceae occur in Utah. The creepers or woodbines of the genus *Parthenocissus* are represented by one native species and two introduced ornamentals. The genus name translates as "Virgin" (*Partheno*) "ivy" (*Cissus*, also the name of the largest genus of the grape family, mostly found in the tropics). Colorado botanist Bill Weber says that this name has been corrupted over time to "Virginia creeper." The creepers can be distinguished by their palmately compound leaves that turn vibrant red, scarlet, or purple in the fall (thus making the plants popular in horti-



Above: *Vitis arizonica* in fruit from Loy Canyon, north of Sedona, AZ. Photo © Max Licher.

culture). *Parthenocissus* berries are an important foodstuff for deer and songbirds, but because of their concentration of oxalic acid are inedible to humans.

Virginia creeper (*Parthenocissus quinquefolia*) is native to eastern North America but introduced in Utah for landscaping purposes. It forms woody vines up to 15 feet tall that are supported by unusual tendrils that end in an adhesive disk. These disks fasten so well to wood or masonry surfaces that they can cause damage if forcibly removed.

Thicket creeper (*P. vitacea*) is Utah's only native *Partheno-*

cissus. It occurs in hanging gardens and shady canyons associated with springs and seeps in Garfield, Kane, and San Juan counties. Unlike the Virginia creeper, it lacks adhesive disks and supports itself with branched tendrils. As a result, it tends to spread over the ground and low-growing vegetation, rather than climb.

Grapes (*Vitis*) differ from the creepers in having simple leaves that are palmately veined and lobed (but not divided into leaflets) and edible berries. The flowers of the grape are distinct in that the petals are fused at their tips into a cap-like structure that is shed at maturity to reveal the sta-

mens or carpels (individual flowers are often of just one sex). Grapes are also strong climbers by means of tendrils, but these never have adhesive disks at the tip.

Among his other scholarly pursuits, Charles Darwin studied the mechanics of tendril growth and motion, and even wrote an entire book on the topic (*On the Movements and Habits of Climbing Plants*, 1865). Grape tendrils initially are straight until they reach something to attach. Tendrils often exhibit negative phototropism, or an attraction to dark places, such as crevices. When contact is made with a surface, the tendril begins to coil (from the middle, rather than the tip) and expand to hold the stem firmly in place. Occasionally tendrils produce leaves or flowers, lending support to the view that they are actually modified inflorescences.

The fruit of the grape, of course, is what interests most people. Grapes can be eaten fresh, dried as raisins or sultanas*, fermented into wine, or pressed into non-alcoholic juice. The seeds and leaves are also edible. Grapes are especially high in flavonoids, such as resveratrol, which are important antioxidants that help prevent damage to blood vessels, prevent blood clots, and reduce so-called "bad" cholesterol. Other kinds of antioxidants found in grape seeds and grape juice help reduce the risk of heart attacks, diabetes, and cataracts.

Archaeologists have recently discovered wine residues in Neolithic crockery from the Republic of Georgia dating to 6000 BC. Researchers believe these earliest wines were derived from wild grapes. Domestication probably

*A fancy word for a raisin derived from a seedless grape.

began about 5000 BC, and was widely established in Egypt and the Middle East by 3000 BC. Egyptian hieroglyphics depict wine-induced drunkenness, while wine-growing (viniculture) is discussed in the ancient Sumerian *Epic of Gilgamesh*.

The most widely grown species is the Wine grape (*Vitis vinifera*). Its origin is as cloudy as an unfiltered Bordeaux, but most authorities believe the wine grape evolved in southwestern Asia or the Middle East. The Phoenicians introduced the culture of grapes throughout the Mediterranean, where it prospered in the warm, dry climates of Greece and Italy. Wine grapes later spread across Europe and on to China and the New World.

About 65 species of wild grapes occur in the northern hemisphere, with the majority of species found in eastern North America and China. Not all of these species are suitable for direct consumption. One exception is the North American fox or Concord grape (*Vitis labrusca*). This species is characterized by a fruit skin that easily slips off the pulpy seed. Concord grapes are edible, but are most commonly used for jams or juicing. This species, and *V. vinifera*, are widely planted in Utah, especially in the warmer portions of the state.

Our only native grape is the Arizona grape (*Vitis arizonica*). This species occurs in moist, shady river canyons and hanging gardens bordering the Virgin River and its tributaries in Washington County. It is especially abundant in Zion Canyon. The fruit of Arizona grape is not particularly tasty to humans because of its leathery skin, but is relished by birds.

Wine grapes are prone to many diseases and insect infestations, especially when grown in monocultures. In the 1800s, the European wine industry was nearly wiped out by an aphid-like insect pest called *Phylloxera vitifoliae* that was accidentally imported with North American grapes. The industry was saved when growers learned to graft the flowering stems of *V. vinifera* on to more hardy rootstocks of North American species which were more naturally resistant to the sap-sucking insects.

Another significant grape malady is Pierce's disease which causes leaf wilting and can kill afflicted plants. The disease is caused by a bacterium *Xylella fastidiosa* (Xf) that clogs the water-transporting xylem tissue of the stem and is spread by leafhoppers. Arizona grape is especially resistant to Xf and has attracted the attention of crop scientists interested in creating hybrids or genetically engineering the wine grape**. Domestic grapes are among the most heavily sprayed commercial crops, so any advance in disease prevention is of economic and health benefit to human consumers of grape products.

The Arizona grape is also noteworthy for being the only plant host of a species of seed beetle (*Amblycerus vitis*). Female beetles lay their sticky eggs on the surface of mature grapes. After they hatch, the larvae bore into the fruit and consume one of the four seeds inside. Each larva then pupates inside the seed before emerging as an adult. So, apparently appreciation of *Vitis* is not limited to humans after all.

** In 2007, scientists mapped the entire genome of *Vitis vinifera*, making the wine grape just the fourth plant species to have all of its genetic tea leaves read.

Escalante River Watershed Partnership: Working Cooperatively to Restore a Drainage

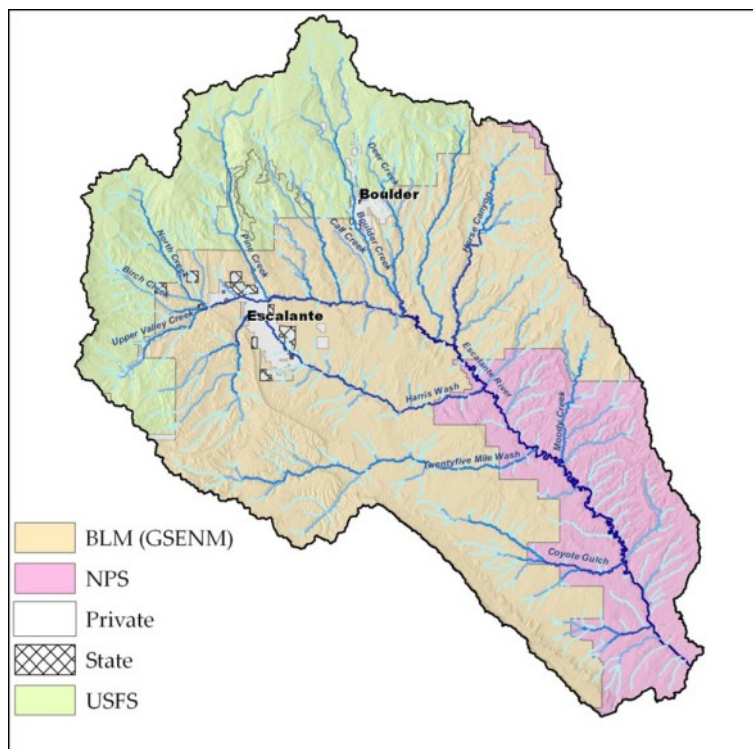
By Kris Pack (adapted from the Escalante River Watershed Restoration newsletter, Summer 2011)

The Escalante watershed includes more than 15,000 acres of riparian and canyon vegetation, with a total area of 1.6 million acres. Russian olive (*Elaeagnus angustifolia*) and Tamarisk (*Tamarix* sp.) are very aggressive invaders that were brought into the area for erosion control after the 1930s Dust Bowl. Over the past 30 years these plants have spread, replacing native vegetation in Escalante and Boulder, and along the Escalante River.

These invasive trees generally create imbalances with broad implications. Russian olive causes river channelization, eventually transforming a riparian site to a relatively dry upland. Studies are showing that Russian olive is shading the river corridor, cooling the water temperature, and changing the habitat of native warm water aquatic species of the Escalante River.

Russian olive also interferes with farming operations and wildlife management efforts by forming dense, monospecific stands. By removing Russian olive, both private and public lands could see decreased fire danger, easier access to the river, and increased private property values.

Created in 2009, the Escalante River Watershed Partnership (ERWP) brought together a diverse group of private and federal agencies (including The Nature Conservancy [TNC], Grand Staircase-Escalante National Monument, Glen Canyon National Recreation Area, and Dixie National Forest) to achieve restoration goals for the Escalante River. A major impetus for forming the



Above: The Escalante River Watershed in south-central Utah (between Boulder Mountain and Lake Powell)

ERWP was to control Russian olive and other woody invasive species. The ERWP has grown over the past two years to include federal and state agencies, local government representatives, nonprofit organizations, businesses, local landowners, and citizens. ERWP is in the final stages of completing a strategic action plan which will serve as a road map for restoration projects along the entire watershed, from the headwaters in the aspen forests of the Aquarius Plateau to the confluence of the Escalante River with Lake Powell.

In the fall of 2010, ERWP completed three demonstration pro-

jects on woody invasive plant removal in the Escalante watershed. These projects were funded through a combination of private and federal grants and contracted through TNC's office in Moab.

The first project was 12 acres of private land in Boulder. The area was an old pasture that had been taken over by Russian olive. Boulder Community Alliance and TNC worked together to organize the project in cooperation with the landowner. Canyon Country Youth Corps was awarded the contract for removal. The crew used hand saws and chainsaws and treated all cut stumps with herbicide. Burn piles were created with most of the debris.

The second project was on Hwy 12 at the confluence of Calf Creek and the Escalante River. Russian olive and tamarisk were removed

from 11 acres upstream from the bridge. Utah Conservation Corps was awarded the contract for removal.

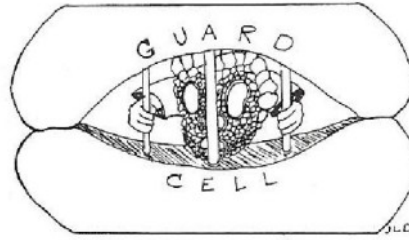
The last project was at the headwaters, 5 miles west of Escalante. The project was 46 acres of private, state, and BLM land. Wildland Scapes based in Moab was awarded the removal contract. Because of the density and size of this project, a timber axe and wood chipper were used for removal in addition to chainsaw crews. Local landowners were invited to a demonstration to see how this type of equipment works.



This pair of photos show how successful the project has been so far. The top photo is a typical section of the Escalante River dominated by Russian olive. The lower photo shows the same reach two weeks after crews removed the invasive trees.



The Funny Pages



Botanical Dragnet

By John "Barney" Baxter
Reprinted from the newsletter of
the Wyoming Native Plant
Society, February 1991

My name is Joe Friday. I was born in Raceme, Wisconsin. My buddy Spike and I are just umbel cops, but we can go anywhere a catkin, and we always get our man.

It was warm in Los Angeles. It was so warm that Spike and I were beginning to drupe, and we were about to go to Abies bar and get plastid when a call came in that a supermarket had been held up. We drove down there and talked to a checker. She was palea and nervous. "Don't panic, Ma'am," I said, "I just want the FAX."

"Well, lemme see," she said, "this guy came in with a pistil, and I knew he meant to stigma up, so I gave him all the cash. Then I watched him pedicel away on his pericycle. It had one petal missing."

I could tell by the style of caper that it was the work of Pericycle Pete, the notorious supermarket bandit. We spent a week looking for apetalous pericycle, with no success. We were deep in glume. Then one day there was a knock awn the door.

"Come in," I said, and who should walk in but Sadie the Shoplifter, a gal whose favorite

trick was to Caryophyllaceae bit of feminine apparel from some display counter.

"Boys," said Sadie, "I've stolon my last bit of lingerie— I'm going straight. And to prove I'm Cereus, I'm going to lead you to Pericycle Pete's hangout."

We hoped that Sadie's change of heartwood mean that she wouldn't stele anymore. She took us to Pete's hideout, a sleazy apartment that he had rented from those notorious slumlords, Phil O. Dendron and his wife, Rhoda Dendron. "Culm awn out, Pete," I yelled, "You ought to see the nice nucellus fellows have for you. Yew won't pine away— yew'll spruce up fir a change when you cedar cell."

His only anther was to fire a pistil from a window. We let him rachis with fire for a while, then we broke down the door. He had exhausted his ammunition, and the floor was littered with Brassicaceae. "Boys," he said, "I'm glad it's over. I lost my shoes, and mitosis cold."

Sadie warned us that the sapwood try to escape, so we took him to the station and locked him up in a guard cell. Later she cracked up, so we sent her to the insane xylem. Then our Irish police chief, Luke O'Plast, gave me a raise* so now I have a funiculus to jingle in my pocket. I also have my name over my office door inflorescence lights, and I feel quite superior ovary the whole thing.

— Ament —

Editor's Note: The late Dr. John Baxter, in addition to being a celebrated mycologist, was the botanical "Poet Lariat" of Wyoming. Drawing by Jane Dorn.

*Later, the chief was talking promotions. I thought, "Is he Cereus, or is epigynous a curve?"

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