Sego Lily

Newsletter of the Utah Native Plant Society

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The Pack Creek Burn:
Gold Smoke and Aspen Seeds

by Sarah Topp

On June 9, 2021, the Pack Creek fire started at a picnic area just inside the Manti-LaSal Forest boundary along Pack Creek, on the western flank of the La Sal Mountains. The fire burned a total of nearly 9,000 acres on private, BLM and Forest Service land, consuming several homes in the Pack Creek community, expansive slopes of pinyon and juniper woodlands, oak/serviceberry shrublands, aspen groves and old-growth spruce-fir forest. Due to high wind, this fire created a mosaic of burned trees and shrubs, torching only tree tops in some areas while others experienced intense fire, leaving limbless, blackened tree spears and scorched mineral soil in its wake. Some in-between areas remained untouched.

When the forest reopened to the public, early in August of 2021, my first walk through the burn started at about 8900 '. The fire had burned through scrub oak and aspen, then entered an old growth spruce/fir forest at about 9200', ending at a ridgeline around 9300' where the aspect changed from north-facing to southwest-facing. I noticed the soils were not badly burned beneath the oak, but still was surprised to see the oak already re-sprouting from the bases, along with several forbs which were flowering, including lupine. In the young, lightly burned aspens, new sprouts were already two to three feet tall.

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August, 2021. On the north-facing slopes in the middle of the spruce forest, there was very little vegetation. From this photo, you can see the thick ash layer and scorched rocks. Pre-burn, this was an old-growth, densely-shaded forest with many dead and down trees, little to no seedling regeneration and very little understory. I found it interesting how the spruce bark burned in neat oval patterns, presumably where pieces of bark popped off.

Cover photo by Sarah Topp: *Corydalis aurea* revegetating forest after the Pack Creek fire.

Gold Smoke

Corydalis aurea, which goes by several common names, including golden corydalis, fumewort or gold smoke, is a member of the poppy family, Papaveraceae (formerly in the fumitory family, Fumariaceae), and is related to the horticultural species, bleeding hearts and Dutchman's breeches. *Corydalis aurea* is a winter annual or biennial forb with a wide elevational range, from warm desert shrublands up through alpine tundra. It occurs mainly throughout Utah and the other west-central states.

This attractive plant has highly dissected, blue-green leaves and bright golden-yellow, banana-shaped flowers that are attached below the middle, with a spur on one end, held in racemes. Flowers emerge in the spring, and the seed pods resemble those in the pea family.

This plant was not in evidence pre-burn, and yet is forming a near-carpet underneath this severely burned north-facing slope, continuing downslope out of the photo. In conducting some on-line research I found a detailed study approximately one year following the High Park Fire near Ft. Collins, Colorado in which *Corydalis aurea* is described as a "common post-fire colonizer species." In this study, the authors looked at the effect *C. aurea* has on "soil chemistry, microbial biomass, soil enzyme activity and bacterial community structure" following the fire. Their results indicated that in severely burned soils that were colonized by *C. aurea*, there was a "...clear connection between plant colonization and soil bacterial community structure..." and that "...plant colonization significantly increased extractable organic carbon and percent nitrogen, thereby having the effect of amending the soil nutrient status relative to unvegetated soils in severe burns." (1)

Now, compare the photo from August of 2021 with this one looking down the same north-facing slope this year (2022) in June.

It would appear that the *Corydalis*, as a pioneer species, is preparing the soil for ecological succession. What is really cool is that I observed this same plant colonizing burned areas from about 7,000 ' elevation up to nearly 10,000' elevation, almost exclusively on severely burned soils and mostly on north-facing slopes where Engelman spruce and subalpine fir trees once stood. I did not observe masses of *Corydalis* on slopes in burned aspen stands where the aspens were resprouting.

June, 2022. Another severely burned spruce/fir slope, this one more SW facing, and at higher elevation (~10,000').

Engelmann spruce (*Picea engelmannii*) is a moderately long lived, late-successional species which can typically live for 600 years. Any stand-replacing fire that may have occurred in this spruce forest would have had to have been much prior to recorded history. Due to the maturity of this stand, it's age must have been several

hundred years when it burned.

Corydalis seed dispersal is via ants and wind, (2) and seeds lying dormant in the soil can remain viable for decades, or even centuries until disturbance occurs. (3) *C. aurea* does not persist once successional plant communities are established; the plants will subside, having set the new seed bank in place for the next disturbance. I think it's amazing that such a widespread seed bank could have survived so long, just waiting for fire to open up the understory and spurn the seeds into germinating. And, from the afore-mentioned study, their growth will aid soil chemistry and microbes, assisting plant succession.

Aspen Seeds

Quaking aspen (*Populus tremulioides*) is the iconic tree of the Western mountain ranges, and is currently the Utah State tree. They are dioecious, with male and female reproductive parts on separate plants (clones); reproduction is mainly through suckering of underground roots from which new trees (stems) arise, forming genetic and sexual (either male or female) clones. Many aspens perished in the Pack Creek Fire, and underneath these burned trees, aspen re-sprouts are vigorously growing, even as if the above-ground stems are killed, the extensive root system often survives to produce new trees.

However, aspen trees rarely reproduce by seed unless there is abundant bare soil to colonize, followed by sufficient moisture for germination; this phenomenon has been observed following fires in Arizona, Wyoming (4), and the 2017 fire at Brian Head, Utah (5). There is the potential for this to happen in the La Sals too.

July, 2022. *Penstemon whipplianus* covered in aspen seeds

Significant rainfall events occurred in the La Sal Mountains this summer, creating an opportunity for aspen seedling establishment. In July, the aspens were producing seeds like crazy. It was amazing; everyone I heard from said they'd never seen anything like it. It sounds cliché, but it really was like snow in summer, with blankets of fluff covering the understory vegetation.

Theories were tossed around as to why the explosion of aspen seed production this year. Stress related to drought? Smoke? Pheromones? Poor forest health? Communication through underground mycelial networks? Local observations were that aspens in the nearby Abajo Mountains were producing more seeds than usual this year, as well as some aspen stands in the La Sals distant from the fire, however, the most prolific seed production was closest in proximity to the burn scar. Considering that similar phenomena occurred following other western fires, I can't help but think that it may be a direct fire response. The question remains as to the triggering mechanism.

Aspens have been in decline across the west due to several factors, including decades-long fire suppression, grazing, herbivory, and long-term drought. Being wind pollinated, when flowers of a female clone are pollinated by a nearby male clone, the resulting seeds are of a new genetic mix. In the long run, if these new aspen clones emerge following fire through seed production, both aspen as a species and the health of the aspen ecosystem benefit. These new genetic mixes can work to ensure long-term survival of the species as environmental factors shift. In this regard, fire works as an aid to long-term aspen survival. (5)

Perhaps the *Corydalis* is helping to set the stage for new aspen clones to arise. I'm curious if it was observed colonizing severely burned soils in the other western fires that also had abundant aspen seed production.

In conclusion, I can't help but marvel at nature's response to catastrophic natural change, and I look forward to observing the forest's continued transformation in the coming years.

Citations

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2022 Season Update from the Utah Rare Plant Team

The 2022 field season finally wrapped up for us in October, capping off a successful 6 months roaming around Utah surveying for our rare plants. The Utah Rare Plant Program (also known as the Utah Natural Heritage Program) is a Utah State University program that receives support from our federal partners (USFWS, BLM and USFS) as well as the Endangered Species Mitigation Fund administered by the Utah Division of Wildlife Resources. Our responsibilities are many, but our top priority is ensuring rare plant survey data from our team as well as all as from our partners is properly housed and maintained in our rare plant database. From these data, we are charged with executing conservation rankings to prioritize conservation plans and actions for our rare plants most at risk of decline. Our 2022 field season was exciting as we attempted to find new populations of rare plants.

Astragalus ampullarioides

In early April of 2022 with rare plant models on our field devices (ESRI Field Maps), a previously unknown population of *Astragalus ampullarioides* (S. L. Welsh, 1986) was discovered. Shivwits milkvetch is protected as 'Endangered' under the Endangered Species Act, and endemic to Washington County. After several days of searching in suitable habitat, a robust population was located east of Leeds in characteristic gypsiferous substrates of the Chinle formation. The population was estimated to contain 300 individuals, a significant number compared to the speculated total species numbers of 1000-4200 plants (Miller et al., 2007).

Astragalus ampullarioides is a good example of plants being restricted to certain substrates, a concept called edaphic endemism. This preference for soil types is perhaps the most significant reason that Utah has such rich plant diversity and so many rare plants (Welsh & Atwood, 2018). Although it may appear as though these plants prefer harsh, nutrient poor soils, it's often the case that they are able to tolerate these conditions better than others. This gives a competitive advantage over more generalist species, although it is possible that they could perform better elsewhere in more forgiving conditions. Shivwits milkvetch is known from substrates of the Chinle formation, a familiar soil to those well traveled in southern Utah. It is recognizable in many locations, such as Zion National Park and the San Rafael Swell, by the layers of vibrantly colored soils, ranging from rich purples to pastel greens. The layers were deposited in a variety of ways but tend to share the characteristics of being

Astragalus ampullarioides habitat.

very loose and aerated, as well as having a high gypsum content.

Cycladenia humilis var. jonesii

In June, the Rare Plant Team executed a two part mission in Desolation Canyon, searching to confirm previous sightings and discover new populations of *Cycladenia humilis* var. *jonesii*. *Cycladenia* is a monotypic genus of Apocynaceae, the milkweed family. The variety found in Utah is oddly disjunct from the range of the rest of the species, which is primarily known from California. There are several populations of the plant in Utah, though the populations lack continuity in its range. Like milkweeds, *Cycladenia* makes use of windborne seed to propagate, however it is notably missing from large tracts of seemingly suitable habitat between populations. Pollination specialists wish to answer outstanding questions regarding the type and effectiveness of pollinators for this plant. It is suspected to be an obligate gypsophile based on its habitat in Utah and has a robust perennial taproot. (Welsh & Atwood, 2018).

Cycladenia humilis var. jonesii habitat.

The Green River makes its way from the Uinta Basin to the Colorado Plateau by way of Desolation Canyon, which is one of the most remote wilderness areas in the lower 48. Previous reports were made of the plant's presence in the canyon, though there was little known about the exact location or population numbers.

The first half of our plan was a river trip down the Green River, where Blake Wellard and Ben Gibbons were able to explore promising habitats. They succeeded in finding new populations of *Cycladenia*, as well as documenting and collecting other notable species in the remote area. A week later, Meghan McCormick, Zach Coury, and Jesse Gaudet descended into Desolation Canyon, accompanied by pack horses carrying equipment and supplies. This approach allowed for a more thorough search of an area, and on the third day we were rewarded with a new population on a narrow ridge overlooking the river.

Locating these populations is great news for the future of this species, which appears to have been severely impacted by the regional mega-drought at lower elevation and latitude locations. More surveying will be

required to understand its extent in this vast area, but it seems likely that Desolation Canyon is a refuge for this unique plant.

Inclusion of Plants in the State Wildlife Action Plan (SWAP)

As we settle into the winter, the rare plant team will be working closely with the Utah Division of Wildlife Resources (UDWR) as an update to the Utah SWAP is due in 2025. In April of 2021, the UDWR and the USFWS approved a minor amendment to the current SWAP to include 31 plant species. With these plants included, the Utah Rare Plant Program is poised to receive significant additional funding from the federal government should Congress pass the Recovering America's Wildlife Act (RAWA).

Photos by Zachary Coury

Citations

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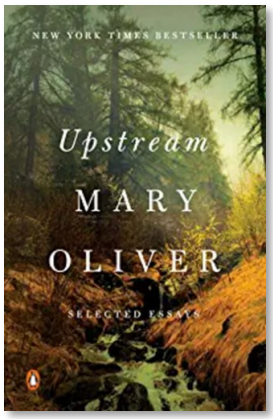
UNPS Book Group

by Morgan Abbott

The November 17th meeting of the UNPS book group discussion of *Tree Story: The History of the World Written in Rings* was a success! We had a great turn out with many new and returning UNPS members.

After introducing ourselves, we began our brief recap of October's *The New Wild* by Fred Pearce which culminated in an agreement that it was a good book with interesting yet controversial ideas about the future of native plants and invasive species ecology. A few book club members expressed some doubt regarding the accuracy of the Utah invasive species examples and management within the text.

We then led into our discussion of this month's text *Tree Story* by Valerie Trouet (See Bill King's review in the Winter 2022 issue of Sego Lily). Many of us made associations and relationships with the text, especially as children exploring the natural world. Many school children are introduced to dendrochronology as it is a tangible piece of scientific evidence that can withstand handling. Another book club member stated that the book had the following excellent qualities:



1) It was a book anyone could read

2) Well based (many citations)

3) 3 or 4 ways to find information within the text, not just by reading the book straight through

4) Could read a single chapter and still glean a lot of information

Interestingly, in some copies of "*Tree Story*" there was a plethora of fascinating tidbits, including a playlist of music that could be listened to (Spotify) while you read.

It has also come to my attention that we need more time to obtain selected titles. At the end of the last meeting, we selected the following titles that we will read for the next 3 months.

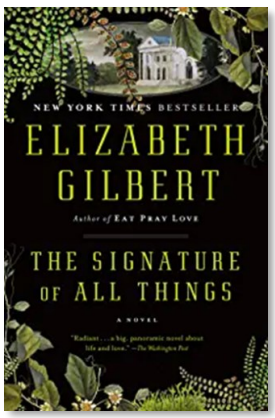
December 22nd, 2022 7pm -- *Upstream* by Mary Oliver

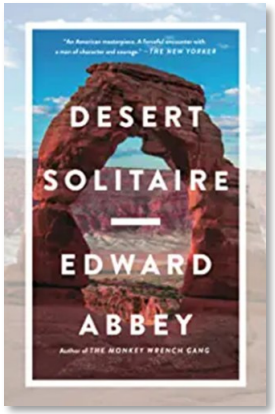
January 2023 (TBD) -- *Desert Solitaire* by Edward Abbey

February 2023 (TBD) -- *The Signature of All Things* by Elizabeth Gilbert

As stated above, our next book club meeting is **December 22nd, 2022 @ 7pm via Zoom.**

We're looking forward to seeing you all at the next meeting. Remember, if you don't end up reading the book, only reading a portion of it, or reading it in its entirety, we still want to see you there! Book club is a great way to socialize with plant enthusiasts across the state, everyone is welcome.





Wetland Rangers Educational Signs

Text and photos by Melissa Inouye

Funded by a grant from the Utah Native Plant Society, on November 12 youth members of the Wetland Rangers group, along with their families and neighbors, installed a total of 16 plant identification signs in the Mehraban

Wetland Park in Draper. They also planted dozens of willows to stabilize the banks of one of the park's ponds.

The Wetland Rangers are mostly elementary and middle school students who live in the neighborhoods around the wetlands. The wetland is their playground. In the summer they fish for catfish and bluegill in the ponds and build huge tree-branch forts under the shade of cottonwoods. In the winter they ice skate and play ice hockey on the big, shallow pond. "The wetlands are peaceful," says Kai McMullin, one of the Rangers, age 14. "You can just chill there."

The wetland habitat is currently threatened by invasive phragmites, whitetop, Russian olives, and an overpopulation of ducks and geese that eat willows and

other native plants stabilizing the pond banks. In recent years the Wetland Rangers have waged a war against invasive species, meeting throughout the summer for working hours spent clearing or spading phragmites.

“When I first started living by the pond, I didn’t know that phragmites were a problem,” said Melissa Inouye, Wetland Rangers coordinator and parent. “Now I see them everywhere! Education is the key to knowing how to be part of solutions!”

In October the Wetland Rangers were fortunate to learn more about native Utah plants from USU researchers Elana Kagan and Jes Braun, two graduate researchers working in the lab of Dr. Karen Kettenring. Kagan and Braun took the Rangers out to their research plots on the northern shore of Utah Lake and taught them about local plants such as hardstem bullrush and redroot flatsedge. They showed the kids how to efficiently collect milkweed seeds without being overwhelmed by an explosion of fluff.

At the November 12 activity, the Wetland Rangers, working with adult volunteers led by Draper City’s Rick Anton, pounded long 1 x 1 wooden stakes into the ground. Then they fixed plywood rectangles to the stakes. Finally, they stapled the plant identification posters to the plywood boards. Each of these posters featured not only a photo of the native or invasive plant, but also original artwork from one of the Rangers.

"These signs are a great addition to the park,” said Rick Anton, Draper City Trails and Open Space Foreman. “They will help educate park users of the wanted and the unwanted plants in the Mehraban Wetlands Park."

The Wetland Rangers hope that these plant signs will help educate members of the community who come to visit the ponds and enlist their help in fighting invasive species and protecting native species. They are very grateful to the Utah Native Plant Society! In the words of young Peter Hurst, age 9, “This was the best Wetland Rangers activity ever!!!”

UNPS Field Trip: Provo River Delta Restoration Project August 17, 2022

by Cathy King and Marc Coles-Ritchie

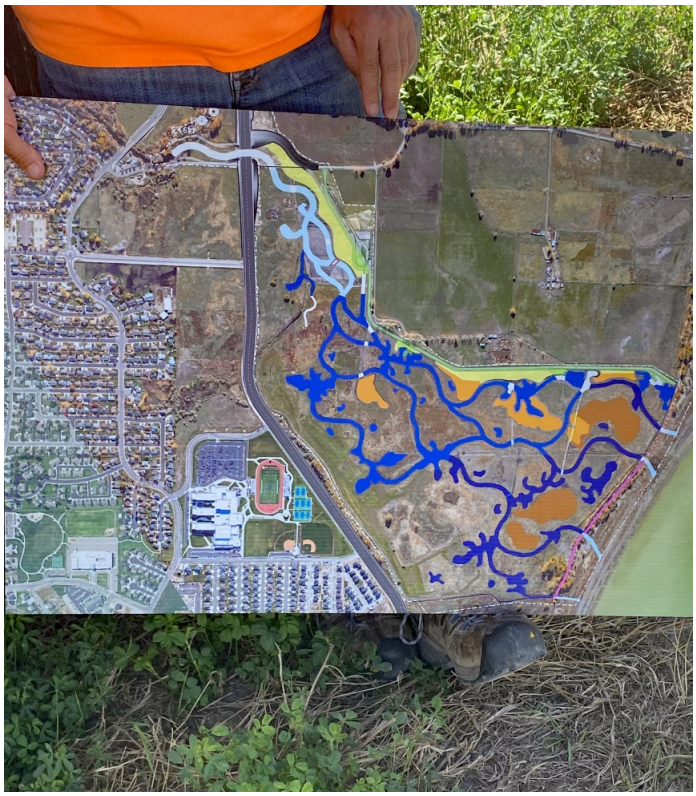
Utah Lake, situated in the center of Utah County, has been in the news a lot lately and with good reason. Fortunately, a proposal to build islands in the middle of Utah Lake has just been canceled by the Utah Division of Forestry, Fire and State Lands. While the Lake has suffered from various impacts including untreated wastewater, algal blooms, non-native phragmites invading the lake margins, and introduced carp harming native fish populations, it is also benefitting from numerous ongoing efforts to improve conditions and foster restoration of this important lake and wetland ecosystem.

One of those efforts is the Provo River Delta Restoration project, which was the focus of a UNPS field trip on August 17, 2022. The project involves re-constructing delta estuary habitat with a variety of wetland habitats where the Provo River meets Utah Lake, for an endangered fish, the June sucker (*Chasmistes liorus*). UNPS members were particularly interested in seeing the rare Ute-ladies' tresses (*Spiranthes diluvialis*) and other wetland plants that this project is attempting to sustain and enhance.

The field trip was led by Darren Olsen who is a senior hydrologist from Bio-West (based in Logan, Utah) and project manager Eric McCulley from the Bureau of Reclamation. Also participating in the trip were Paula Trater of the Utah Reclamation Mitigation & Conservation Commission, Bio-West specialist Travis Taylor, and botany faculty and students from BYU and Utah Valley University.

The mission of the Provo River Delta Restoration Project, as stated on their website https://www.provoriverdelta.us/about-us, is "to restore habitat and ecological function essential for recruitment of juvenile June sucker (*Chasmistes liorus*), a threatened fish that occurs naturally only in Utah Lake and its tributaries. While June sucker still spawn in tributaries of Utah Lake, primarily the Provo River, delta estuary habitat and ecological function have been determined to be the major limiting factors in recruiting juvenile June sucker into the adult population."

Photo by Marc Coles-Ritchie.



Project map. Photo by Cathy King.

This massive project is a collaborative effort by the Utah Reclamation Mitigation and Conservation Committee, the Central Utah Water Conservancy District, the Central Utah Project Completion Act Office of the US Department of the Interior, and the June Sucker Recovery Program.

Previously, Darren Olsen had given a presentation on the Provo River Delta Restoration Project at the Utah Rare Plant Meeting on March 1, 2022 (view on UNPS YouTube channel https://www.youtube.com/watch?

v=qJPUXNvXB3g). He explained that this project is "needed to re-establish a naturally functioning delta marsh ecosystem to recover June sucker at the river-lake interface. Aquatic plant species diversity is currently lacking on the eastern shoreline of Utah Lake compared to shoreline vegetation conditions before carp were introduced and floodplain farming became popular. Multi -year construction and revegetation plans are being implemented for the 260-acre delta restoration project area for the purpose of re-establishing a diversity of native submerged aquatic vegetation (SAV), emergent, wet meadow, and riparian vegetation communities at the mouth of Provo River to provide rearing habitats needed for successful June sucker recruitment at the river-lake

New channel. Photo by Cathy King.

interface. This project will hopefully act as an emergent and aquatic vegetation seed source for the lake to help re -establish a diversity of native aquatic species now that carp populations have been reduced and phragmite controls stepped-up. Additionally, there are several locations where Ute ladies'-tresses [*Spiranthes diluvialis*] are known to occur within the project area. Total avoidance of all occupied habitats was not possible to

Planting *Salix exigua*, coyote willow, in channels . Photo by Marc Coles-Ritchie.

construct delta channels and ponds, and occupied habitat sod relocation plans were implemented fall 2021. The sod and top foot of soil from occupied areas was peeled

Wild teasel *Dipsacus fullonum*. Photo by Cathy King.

Eutrochium maculatum var. *bruneri*. Photo by Cathy King.

back by an excavator, placed in a dump truck, dumped on created peat mounds roots down, and spread on created peat mounds at suitable elevations for when site hydrology is restored in 2023."

Here is a link to map of project.

Darren Olsen led our group down into and across the broad channels that had been recently dug to access an area that has not yet been disturbed by construction to view the native and natural flora of the area, specifically to see the threatened Ute-ladies' tresses (*Spiranthes diluvialis*) in flower. On our walk we encountered large patches of Joe Pye weed (*Eutrochium maculatum* var. *bruneri*) and Canada goldenrod (*Solidago lepida* var. *salebrosa*) along with tall stands of native Indian paintbrush (*Castilleja minor* var. *exilis*) emerging above the grasses. There were a number of weedy plants here as well, including curly dock (*Rumex crispus*) and wild teasel (*Dipsacus fullonum*). Some of this soil will be dug up and placed on the islands between the channels of the newly designed delta. The hope is that the population of Ute ladies'-tresses will survive the relocation.

We also observed some of the channel islands that had been filled with soil deposited in bucket loads the previous year. At this point it is a tangle of weeds, dominated by giant ragweed (*Ambrosia trifida*), growing so tall it concealed all of us walking between it. The consensus of the project team was this was a temporary situation that would improve with time. However, it appeared rather daunting.

Paula Trater explained along the way how many volunteers have worked to help remove invasive weeds and trees, especially Russian olive (*Eleagnus angustifolia)*. In addition, volunteers also are assisting with the planting of native seedlings.

Spiranthes diluvialis. Photo by Marc Coles-Ritchie.

The $51 million Provo River Delta Restoration Project is over half-way through its four year plan with the bulk of work behind it. Diversion of the water through the new channels will begin in the next few months. There is much at stake here, the main purpose is to restore habitat for the June sucker fish, but it is a chain reaction. If the fish recovers, Utah Lake has a better chance to recover. If the revegetation of the Provo River Delta itself is able to recover, including its native plants and habitat, the lake will have a better chance to recover. Along the way, we would very much like to see the threatened Ute ladies'-tresses orchids survive the project. Let's hope these human efforts can undo some of the human harm from the past.

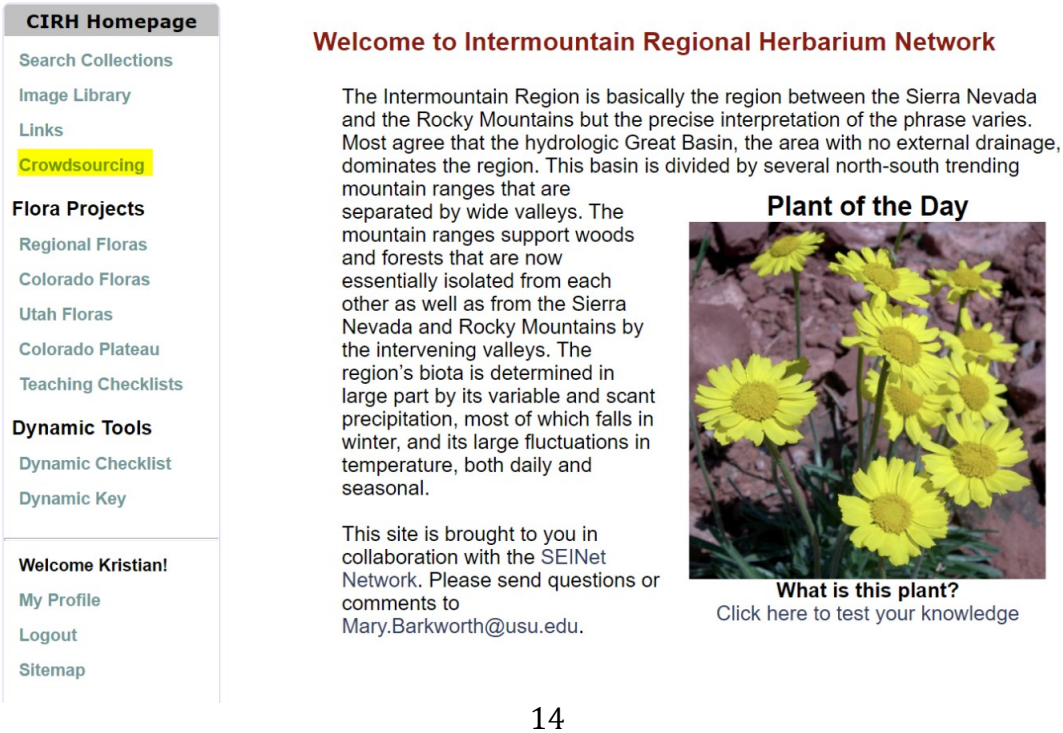
UNPS field trip group. Photo by Cathy King.

Filling in the Blank Spots: Citizen Science Activities with Herbaria Collections

Come on an expedition with the Intermountain Herbarium, from your own living room!

Is winter making you miss the summer field season? Do you want to be part of the latest sensation sweeping the nation, and have a valuable scientific and conservation impact while doing so? If so, the Intermountain Herbarium has an opportunity for you! Through the Intermountain Region Herbarium Network data portal (intermountainbiota.org), members of the public can contribute to our ongoing efforts to make the biodiversity data of our collection broadly accessible, by participating in our specimen digitization "expeditions." Each expedition consists of a set of specimen images that are just waiting to be used for diverse research applications, if only their collection data were available online. And here is where you come in: from the comfort of your living room (or anywhere else with an internet connection), you can pull up the expedition images, and enter the corresponding collection data in an easy-to-use interface, and watch yourself climb the digitization leaderboard. After a quick review by collections staff, your data will be available to researchers, conservation decision-makers, and many others who use and value Utah botanical diversity. The citizen scientist who digitizes the most specimens in our first expedition (ending June 30th) will receive a framed Henry Mockel botanical serigraph (a form of silk printing)—these serigraphs were generously donated to the Intermountain Herbarium by Pat and Noel Holmgren, from their personal collection. As additional encouragement, everyone who digitizes 100 specimens will receive a set of postal cards illustrated with gorgeous grasses from the Flora of North America grass volumes.

To help everyone get started, we will host a zoom digitization tutorial in January, and are always available to answer questions. If you are interested in getting involved or would like some more information, please reach out to the Intermountain Herbarium Manager, Kris Valles, at kristian.valles@usu.edu.



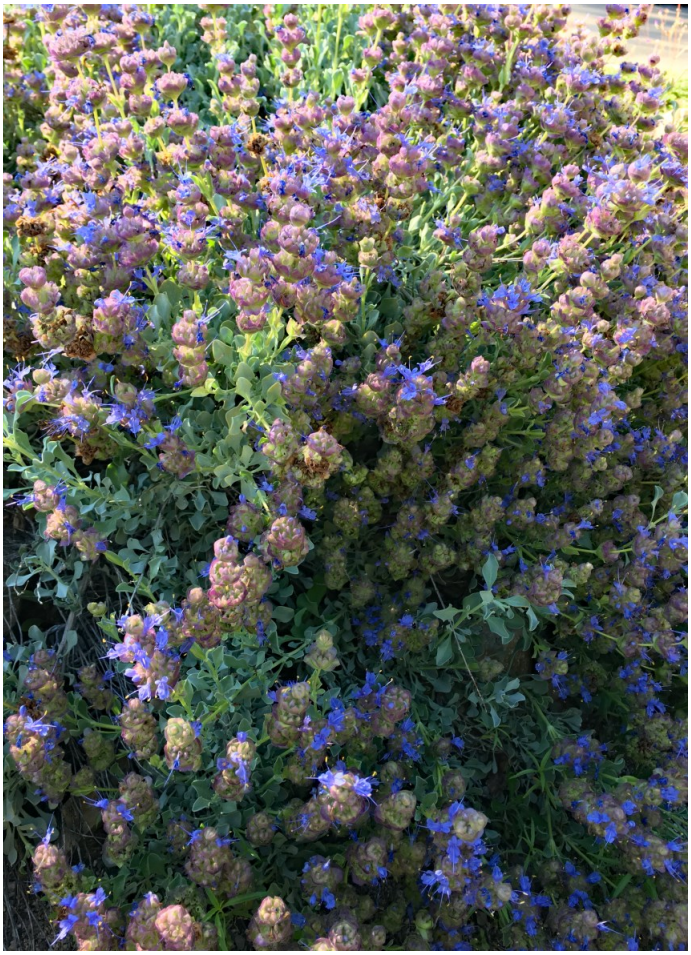
Grow Native: Purple Sage

by John Stireman

Salvia dorrii (Kellogg) Abrams, Lamiaceae, Dorr's Sage

Salvia dorrii is a common dryland shrub in the American West, occurring from the lower edge of Canada and southward into Mexico. It grows in the western half of Utah and throughout Nevada and in large parts of Washington, Oregon, Idaho, Arizona and California. It is a variable species through its range, typically 12 to 18 inches in height but often to three feet in the Northwest. And it can spread itself out to a similar dimension. The plant tolerates judicious pruning well.

Closeup of flowers. Photo by Cathy King.



A vigorous specimen of *Salvia dorrii* growing in a loam soil in the garden of Bill and Cathy King. Photo by Cathy King.

Dorr's salvia bears evergreen, silvery leaves, making it an attractive standout in a home landscape, especially when the gardener is seeking to include plants for pollinators. Like other species in the family Lamiaceae, it is beloved by bees and attracts butterflies and even hummingbirds. Leaves are strongly aromatic – a light brush-by lets you know it's there. Flowering stems terminate with crowded clusters of large, rose-purple bracts from which display corollas of light blue, dark blue or purple.

It is unfortunate that Dorr's sage is most commonly known as purple sage, a name applied to just about any species of *Salvia* with purple flowers.* Although not difficult to find, one does not ask for purple sage at a nursery and expect to be shown *Salvia dorrii*. Ask for precisely that species. You might have to look around a number of nurseries. As drought in the West becomes the norm, local nurseries will be forced to offer a greater diversity of xeric or dry-mesic plants. The Internet is another source. *Salvia dorrii* is tolerant of

Three photos of a form of *Salvia dorrii* found in Utah's west desert, specifically, the Dugway area. These are photos of plants in the author's garden, growing on meager sandy soil.

most all except very clayey soils. If in doubt, take a gamble. This shrub is worth it. Locate your plants in full sun and away from excess water, though a plant will need good water to establish.

Additional information can be found in this USDA plant guide: https://plants.usda.gov/DocumentLibrary/plantguide/pdf/pg_sado4.pdf

*For anyone familiar with writer Zane Grey's *Riders of the Purple Sage*: No, *Salvia dorrii* is not the purple sage he intended. Rather, it was *Poliomintha incana*.

UNPS YouTube Channel

UNPS presentations at regular meetings, the annual meeting and the rare plant meeting are recorded and posted to the UNPS YouTube channel. Since there is some editing to be done by a volunteer, there is a delay before the video becomes available. Click the image below for the latest.

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Thank You

Thank you to the contributors to this and all issues of the Sego Lily newsletter. Without them, there would be no UNPS newsletter.

Your Membership

Your membership is vital to the Utah Native Plant Society. It is important that your information is correct and up to date for notifications and the delivery of The Sego Lily newsletter.

Any questions about your membership, Contact Tony Stireman, *tstireman@gmail.com*.

Winter is here… It is time to consider another issue of the Utah Native Plant Society *Sego Lily* which relies mostly upon articles from the society's membership. Please submit articles of your native plant stories and photos from hikes and field trips, conservation activities… whatever might be informative and interesting to fellow members.

The *Sego Lily* editors can use most any text format for articles (**PDFs can be troublesome**). Photos are always best submitted in original resolution and as individual files separate from text. You can indicate desired positioning within a document. We are looking forward to hearing from you. For submissions and/or questions: newsletter@unps.org or cathy.king@gmail.com.

Utah Native Plant Society

Utah Native Plant Society
PO Box 520041
Salt Lake City, UT, 84152-0041.

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Webmaster inquiries at unps@unps.org

Many thanks to Xmission.com for sponsoring our web-site.

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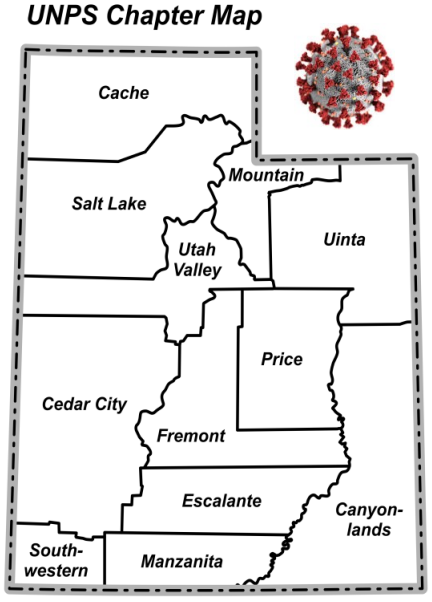
UNPS Chapter Map



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