



NEVADA NATIVE PLANT SOCIETY

VOLUME 44 NUMBER 1 - JANUARY / FEBRUARY 2018

SOCIETY NEWS

▲ Copper Mountains, Elko County
– Jan Nachlinger

NORTHERN NEVADA EVENTS

February 1 – Our first meeting of the year features **Alison Agneray**, Ph.D. student with the UNR Ecology, Evolution, and Conservation Biology Department and recipient of our Margaret Williams Research Grant. Alison's presentation is entitled ***A summer of seeds: the kickoff to a native plant research project.***

March 1 – **Jan Nachlinger**, botanist and NNPS Program Chairperson will present a program on the **flora and fauna of sub-Antarctic islands**. By the way, it's not just about the penguins.

April 5 – **Shannon Swim** will discuss her work as coordinator for the Nevada **Sagebrush in Prisons Project**. A tour of the greenhouse on Valley Road will follow the presentation.

May 3 – **Annual garden meeting**. If you would like to host this year's meeting and show off your yard or garden, please contact Janel Johnson at president@nvnp.org.

September 6 – **Temitope Israel Borokini**, Ph.D. Candidate with the UNR Department of Biology, will discuss his ***Ivesia webberi*** rare plant research.

October 4 – **Ann Pinzl**, Archives Chair for NNPS and long time member, will give a program on her **travels to Madagascar**. While she hasn't provided a title yet, we suspect it's not just about the lemurs.

November 1 – **Jessica Kindred**, with the State BLM Office, will cap off the year by giving a presentation on the **Seeds of Success program**.

Join our speakers before the meetings for dinner at 5:30 at **Great Full Gardens**, 555 South Virginia Street.

Meetings are in room 300G of the Fleischman Agriculture Building on the UNR campus, north of 9th Street and Evans Avenue. Enter the building under the breezeway on the west side near the street. There's an elevator at the east end of the building. Meet on the third floor and down the hall from the **UNR herbarium**.

Social time starts at 7:00 PM and the program starts at 7:30. The outside door will be automatically locked at 7:30.

Events subject to change.
Visit nvnp.org for updates.

Help wanted – Jan Nachlinger, our **Reno Program Chairperson**, has announced her intention to ‘retire’ from the position in May. Jan has done a wonderful job arranging events and finding speakers for our meetings and we desperately need one of our members to take over this vital role. If you are interested, please contact Janel Johnson at president@nvnp.org.

Newsletter submissions – Please submit photos, essays, tales of your botany field trips, plant-related book reviews, or any other material that would be of interest to Society members for inclusion in future newsletters. Send submissions to newsletters@nvnp.org.

SOUTHERN NEVADA EVENTS

February 5 – Stefanie Ferrazzano, a biologist with the **Clark County Desert Conservation Program**, will discuss the Program’s land reserve units, current conditions, and restoration goals.

March 5 – Laura Eisenberg (topic TBA).

Join us from 6:30-7:30 PM at the U.S. Geological Survey office at 160 North Stephanie Street in Henderson. Our program coordinator is Lesley DeFalco. Contact her at defalco@usgs.gov to receive email updates for Southern Nevada events.

OTHER EVENTS

April 27 to 30, 2018 – American Penstemon Society Meeting. The next **American Penstemon Society** (APS) meeting will be at **Bonnie Springs** west of Las Vegas near Red Rock Canyon National Conservation Area in the Spring Mountains. **Registration is now open.** Details are on the American Penstemon Society website, penstemons.org.

June 12-14 – Great Basin BioBlitz. Join Nevada State Entomologist Jeff Knight and other experts for the beetle bioblitz in Baker at Great Basin National Park. For more details visit nps.gov/grba/learn/nature/great-basin-bioblitz.htm.

June 14-18 – Eriogonum Society annual meeting in Claremont, CA. Details will be posted at eriogonum.org.

GRANTS

NNPS Margaret Williams Research Grant

Applications for the Margaret Williams Research Grant are due on February 1 of each year. More information and application requirements are on the **Grants page** on the NNPS website, nvnp.org.

2018 American Penstemon Society grants

The American Penstemon Society is seeking proposals for their 2018 Grants program. The purpose of the APS Special Projects Program is to stimulate activities that promote knowledge and appreciation of Penstemons. The Society is particularly interested in funding projects that:

- Promote conservation of Penstemon species in the wild, especially rare or sensitive ones, through understanding of factors that affect their survival, or
- Promote appreciation for the diversity and beauty of Penstemons in wild and domestic landscapes through horticultural research, dissemination of information to gardeners, or the construction or enhancement of educational display gardens.

Submit proposals to Dorothy Tuthill via email (dtuthill@uwyo.edu) or mail no later than March 15, 2018. Visit Penstemons.org for more information.

Graduate student scholarship grant

In addition to the program described above, the American Penstemon Society is pleased to announce a new program for graduate students researching Penstemon-related topics, with a maximum award of \$2,000. Full details of this program, including instructions for proposal submission, are available at penstemons.org/index.php/society/22-grants.

VOLUNTEERS WANTED FOR GLORIA FIELD WORK

*By Jan Nachlinger,
Botany Leader for GLORIA Great Basin*

The **GLORIA** Great Basin (previously GLORIA California) program, which is part of the international Global Observation and Research Initiative in Alpine Environments project, is returning to Death Valley National Park, the White Mountains, and Great Basin National Park this summer to re-survey alpine plant communities on peaks and adjacent upper slopes. GLORIA's objective is to assess global distributional shifts of alpine plants in response to climate change.

We are soliciting volunteers to help with the field work which requires individuals in good physical condition with the ability to hike to alpine areas, spend long days in the field, and, depending on location, camp in dispersed or designated campgrounds or pay for use of a shared room at a research station. We are looking for a cadre of botanically skilled people as well as those willing to set up plots, record data, photograph, and help in other tasks unrelated to plant identification abilities.

The dates are:

June 25-30 – Death Valley National Park

Panamint Range, four peaks up to 10,965 feet.

July 10-14 – White Mountains

Campito Mountain downslope transects up to 11,480 feet)

July 18-24 – Great Basin National Park

Snake Range, four peaks up to 13,058 feet.

If you are interested in volunteering for field work please contact Brian Smithers, GLORIA Great Basin Co-director and Field Leader, at bsmithers@ucdavis.edu. If you would like to make a donation to the project to financially support our field efforts please contact Meagan Oldfather, GLORIA Great Basin Co-director and Treasurer, at meagan_oldfather@berkeley.edu.



▲ *Aquilegia scopulorum*, Great Basin National Park –J. Johnson



Machaeranthera canescens
—Lauren Gonce/Great Basin Institute

A CUP FULL OF SEEDS EQUALS BIG SUCCESS

Story by Dan Hottle

Marcus Tamura and Lauren Gonce, two Great Basin Institute interns and Seeds of Success program crewmembers, may be the only people on the planet who spent their entire summer scouring more than 4,500 miles of Nevada's rugged outback to get their hands on the precious seed of native plants with names like hoary tansyaster. "Unfortunately, we don't have airplanes and drones and teams of hundreds of people on the ground helping us search for these kinds of plants," said Tamura, who traveled up from the San Francisco Bay area. "So, Lauren and

I drove about 1,500 miles each week looking for 12 different species that we hoped we could find growing where we could spot them from our truck." After several hours of driving, searching, walking, bending and picking through acres of rocky, arid land at the end of each arduous day, the two interns considered themselves lucky if they had collected enough seed from native Nevada plants to be able to fill a coffee cup.

The specific seed species being targeted by collection crews are recognized by western botanists and ecologists as part



▲ Globemallow seeds. —Sarah Kulpa/USFWS



► Amy Routt, a Great Basin Institute intern and Seeds of Success team member, identifies a *Peritoma lutea* in central Nevada. —Annie Baker/Great Basin Institute

of the foundation of healthy native plant communities throughout the Great Basin. If enough native seeds are collected, they can be used in large-scale restoration efforts to help increase resilience against invasive species and slow wildfire cycles that imperil the vital sagebrush ecosystem. “Finding large enough native plant communities from which to collect seed from a vast landscape across Nevada is a slow, painstaking process,” said Sarah Kulpa, a U.S. Fish and Wildlife Service botanist based in Reno [and NNPS Vice President! – Ed.]. “The seed collected from those populations can be used for research and development or given to commercial growers so that land managers will be able to start restoring vegetation and wildlife habitat lost in wildfires with the seed from our native plants.”

A cup’s worth of seed hardly sounds like enough to be able to replant thousands of acres of vegetation destroyed by wildfire, but federal land managers in Nevada remain optimistic. They hope that through perseverance the cupful collected by crews today will eventually translate into massive warehouses full of locally adapted native seed that can be used for future rehabilitation and conservation projects.

Seeds of Success, is a national native seed collection program established in 2001 in partnership with a variety of federal agencies and non-federal organizations designed to collect wildland native seed for research, development, germplasm conservation, and ecosystem restoration. The program, led by the Bureau of Land Management, has been collecting native seed for more than a decade as part of a nationwide effort to identify, grow and store a bank of America’s native plants for research and restoration.

This was the first year the Nevada BLM partnered their resources with botanists and ecologists from the U.S. Fish and Wildlife Service, the U.S. Forest Service, and Nevada state agencies such as the Departments of Wildlife and Agriculture and the Nevada

Jess Kindred, a Seeds of Success team member from Great Basin Institute, collects native squirreltail grass. —Sarah Kulpa/USFWS



Division of Forestry, to hire teams to start seeking and collecting genetically-diverse, Great Basin native plants on a larger scale. “Botanists and ecologists in each of our respective agencies have, for years, championed native plants as the key to protecting the sagebrush sea from invasive annual species that promote large-scale wildfires,” said Dirk Netz, U.S. Forest Service botanist. “But no one agency alone has the personnel and resources to identify and locate all the species we’re after in Nevada, go out and collect them, and then convince growers to help them mass produce them for us in the quantities we need. By pooling our collective resources in this partnership, we can move beyond the ‘what-if’ presentations on why native plants are important and move toward growing them and getting them planted in the ground.”

The science of why the right seed is needed in the right place at the right time, according to botanists and ecologists,



Machaeranthera canescens seeds. –Marcus Tamura/Great Basin Institute

is well-documented. Readily-available commercial seed sourced from outside the Great Basin in areas that receive much higher precipitation that get planted in Nevada – the current status quo – has an unlikely chance to take hold and thrive. Locally-adapted seed has a better chance of surviving after being planted because it has been sourced from the exact elevation, climate and precipitation zones from which it's going back into the ground.

"Out of the 4,500 species of native plants we have in Nevada, less than a tenth of those are available commercially," said Nevada BLM ecologist Fred Edwards. "So, this year we focused on targeting our collections on six grass species and six forb species, to start. This included such species as hoary tansyaster, basin wildrye, bluebunch wheatgrass, Sandberg bluegrass, yellow bee plant and globemallow. "It has been difficult because we have lost a number of our low-elevation sites to wildfire in the past few years, so collecting from areas that have already been re-seeded with other cultivars or non-native species seriously compromises the genetics of our natives," he said.

Federal land managers know the clock is ticking when it comes to identifying stop-gap measures to beat back invasive species and protect the sagebrush ecosystem from fire. In Nevada alone in 2015, 12,233 acres of Greater sage-grouse habitat were destroyed by fire. In 2016, that number increased to 215,000 acres burned, and in 2017 almost a million acres were lost. "We've moved past the point for making a case for using native plants for restoration," added Edwards. "We know they're the backbone of a healthy ecosystem; they're the key component of healthy wildlife habitats and provide essential food and cover for more than 350 different species in the sagebrush ecosystem as well as for humans. And if native plant communities are ecologically functional, livestock producers and hunters as well as the lifestyles and livelihoods of rural western communities will also benefit from them."

"The seed market in the Great Basin has historically been volatile with demand fluctuating related to wildfire restoration," said Kulpa. "In years with extreme demand, seed gets used regardless of its source or anticipated success. Seed is a critical natural resource that has been largely unrecognized,



Service biologist Lauren Gonce displays a native *M. canescens* growing in central Nevada.
—Dan Hottle/USFWS

unprotected and undermanaged, and our partnerships in Nevada and across the Great Basin are working to improve this.”

Netz continued, “Now is the time for our partnership to engage our collection teams on the ground, the growers in the agricultural community, western firefighting management as well special interest groups and private citizens who understand the critical need for the large-scale production and storage of native seed and give it the voice it deserves.”

At ground level, seed collectors like Tamura and Gonce are far removed from the management of landscape-level conservation. They’re focused on things like

repairing flat tires on their trucks and what to pack for lunch as they wander across Nevada lands in search of native plant populations that have sometimes only been identified from scientific records dating back to the 1930s. But they still feel connected to the larger picture of what they’re accomplishing. “I’m going to keep coming back to collect seed as long as they need me,” said Gonce. “The Great Basin is a world you can’t describe to anyone unless they’ve actually been there and seen it for themselves. It’s a wild, beautiful place that catches your breath around every corner, and at its heart are the native plants that make it so.”

Dan Hottle is a public affairs officer for the Reno, Nevada Fish and Wildlife Office and writes frequently about conservation issues in the Nevada’s Great Basin.

This article originally appeared on the Pacific Southwest Region Newsroom of the U.S. Fish & Wildlife Service and is reprinted with permission.
fws.gov/cno/newsroom/featured/2017/seeds_of_success/



A Seeds of Success collection team comprised of Great Basin Institute interns Lauren Gonce (left) and Marcus Tamura collect *Machaeranthera canescens* seeds in central Nevada. —Dan Hottle/USFWS

Nevada Native Plant Society
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