



VOLUME 49 NUMBER 3 - AUGUST 2023

NEVADA NATIVE PLANT SOCIETY



Arabis sparsiflora, sicklepod rockcress from the Whitney Spring area, Washoe County, Nevada. Photo from calphotos.berkeley.edu by Gary A. Monroe.

IN MEMORIAM: HONORING THE LEGACY OF LIFETIME MEMBER, GARY MONROE

It is with great sadness that we inform you of the passing of one of our lifetime members of the Nevada Native Plant Society, Gary Monroe. Gary was a retired NRCS soil scientist, who maybe didn't really retire, as he continued as an Earth Team volunteer to edit official soil series descriptions and enter historic pedon descriptions until his passing. Gary's knowledge of soil science was invaluable as a volunteer, even if using the computer occasionally frustrated him enough to cuss out loud. When he wasn't working

on soils, Gary could be found with a camera in hand taking pictures of wildflowers. In fact, many of you are probably familiar with Gary's photography as he has contributed over 5,000 photos to CalPhotos, CalFlora, and USDA Plants. Gary's love of wildflowers wasn't just for the photos; he also was a gardener, growing many Nevada native plants in his home garden and exchanging them with other NNPS members. Gary loved Subarus (specifically Foresters and knew exactly how much clearance each model

had), Cougar Gold cheese (in a can from WSU that he brought to every potluck), trains, airplanes, and chocolate ice cream. Gary was a funny, kind, and sweet man whose presence at NNPS will be greatly missed.

A PERSONAL RECOLLECTION OF GARY MONROE

By John Weiser

As a travel companion Gary always amazed me with his ability navigate difficult terrain. He suffered from several physical limitations but his positive attitude and determination often led him to rare plant specimens. I often teased him that some of his photos were likely to be considered "artistic." He would, in a humorous manner, state that they were for "identification purposes and in no way artistic."

When we went on long trips across the west Gary was always highly organized. He had maps, GPS coordinates, mileage stats to various gas stations along the route, and even knew gas prices we would pay. I was just along for the ride.



Above, top right, middle right: Gary Monroe identifying and photographing plants in the field. Bottom: Gary Monroe and board members at a Nevada Native Plant Society meeting. Photos shared by Emma Wynn.



A very small selection of photos contributed to Calphotos by Gary Monroe. From left to right, top to bottom: *Lilium pardalinum* ssp. *wigginsii*, *Aquilegia bertolonii*, *Asarum hartwegii*, *Cercis canadensis*, *Cordylanthus tenuis* ssp. *tenuis*, *Populus tremuloides*, *Eriastrum sapphirinum*, *Calochortus clavatus* var. *clavatus*, *Eriogonum ovalifolium* var. *rubidum*, *Hesperocyparis abramsiana*, *Caulanthus glaucus*, and *Mahonia fremontii*.

NATIVE PLANT CONSERVATION NEWS

By Rose Strickland

Invasive plants are threats to biodiversity. So are proposed energy developments in hot spots of biodiversity. Extreme weather events, another manifestation of climate change, may also be impacting the survival of native species.

STINKNET:

How many Nevadans have heard about Stinknet (*Oncosiphon piluliferum*) or common name, globe camomile? The plant is originally from South Africa and resident of Southern California since 1981. Taking advantage of this wet spring, stinknet is reported spreading in the Sonoran Desert in and around Phoenix and south to Tucson. iNaturalist users have also reported two populations near Henderson, NV.

A member of the Asteraceae family, this invasive species has dark green, carrot-like,



Flowers of Stinknet, *Oncosiphon piluliferum*. Photo from Arizona Native Plant Society.

finely divided leaves and round yellow or golden blossoms and can grow up to 2 feet or more. It is highly allergenic, both dermal and respiratory. Its dense clusters or mats can choke out native plants. When the stinknet dries out, it creates highly flammable corridors through the Sonoran desert.

Arizonans are working to control the invasive expansions, including the Arizona Native Plant Society. For more information on stinknet, visit:

<https://aznps.com/wp-content/uploads/Stinknet-Brochure-English-Feb2020.pdf>

ACTION ALERTS, LAWSUITS AND COURT ORDERS AT ASH MEADOWS NATIONAL WILDLIFE REFUGE:

Two months ago, concerned about potential adverse impacts to the Refuge and surrounding public lands and their protected plants and animals, environmental groups and local communities sent a letter to the Debra Haaland, Secretary of the Interior, Tracy Stone-Manning, Director of the Bureau of Land Management, and Martha Williams, Director of the U.S. Fish and Wildlife Service with requests for consultation, public scoping and environmental analysis of a proposed lithium exploration project adjacent to the Refuge. This letter became a Notice of Intent to Sue due to violations of the Endangered Species Act.

Action alerts also circulated about this existential threat to the Refuge by the drilling of 30 boreholes, some within 2000 feet of the northern-most spring, to a depth of 250-300 feet. The refuge was established in 1984 to protect federally listed species that depend on the flows of shallow and deep groundwater in this area for their survival.

Ash Meadows is a major point of discharge for the vast carbonate aquifer underlying the greater Death Valley

ecoregion. The refuge contains more than 30 perennial seeps and springs and many more ephemeral waterways. The refuge supports more endemic species than any other area in the U.S. and second greatest in North America, providing habitat for 25 endemic plants and animals and 12 species protected as threatened or endangered under the Endangered Species Act. The Devil's Hole spring, home of the Devil's Hole pupfish, is a part of Death Valley National Park.

The mining boreholes could impact groundwater flows that sustain downgradient springs. If the drilling intersects the carbonate aquifer, an uncontrolled artesian flow could lead to significant dewatering of the Refuge springs and irreparable harm to their endangered species.

Although approving the mining proposal in April, the Bureau of Land Management responded to the outpouring of concern about potential devastating impacts by pausing the lithium drilling outside Ash Meadows. Rover Metals, a Canadian minerals exploration company, will be required by BLM to submit a full plan of development to the federal agency as part of an environmental review of the proposed exploratory lithium drilling project. BLM will also complete consultation requirements with Native American tribal governments.

However, conservation advocates asked a federal judge to prevent the launch in a couple of weeks of exploratory drilling, adjacent to Ash Meadows National Wildlife Refuge, by filing a motion for a preliminary injunction. They acknowledged BLM's intent to require environmental reviews of the mining exploration project, but argued for urgent court action since these requirements have not been made officially by the agency. Larry Lodwick, NNPS member and author of *Plants of Ash Meadows National Wildlife Refuge*, provided an article to the NNPS newsletter in October 2021, entitled Summer

is a Season for Wildflowers at Ash Meadows National Wildlife Refuge. The article provides descriptions and photos of the summer bloomers - *Spiranthes infernalis*, *Mentzelia leucophylla*, *Zeltnera namophila*, *Grindelia frazinipratensis*, *Ivesia kingii* var. *eremica*, *Chloropyron tecopense*, *Fimbristylis thermalis*, *Lythrum californicum*, *Malvella leprosa*, *Castilleja linariifolia*, *Isocoma acradenia*, *Oxytenia acerosa*, *Thelypodium integrifolium* ssp. *affine*, *Almutaster pauciflorus*, *Asclepias erosa*, and *Datura wrightii*.

The *Mentzelia*, *Zeltnera*, *Grindelia*, *Ivesia*, and *chloropyron* are listed as threatened species. The endangered plant species is Amargosa Niterwort (*Nitrophila mohavensis*). Other threatened plant species are *Astragalus phoenix*, *Enceliopsis nudicaulis* var. *corrugata*, and *Spiranthes infernalis*.

MYSTERIOUS DIE-OFFS OF SCREWBEAN MESQUITES:

Scientists are tackling what's killing these hardy desert trees across the West - droughts, groundwater pumping, development, insects, diseases, tamarisk invasions as well as the use of herbicides to eradicate tamarisks? There is no consensus on the causes of the die-offs.

Screwbean Mesquite (*Prosopis pubescens*) has survived in harsh desert conditions for millennia in southern California, Nevada, Arizona, New Mexico and parts of Texas and Mexico. Their roots can reach the water table along riparian corridors creating habitat for birds and other desert denizens as well as food for southwestern tribes. But scientists have found that the tree is absent from more than half of its historic range from both long-term declines and more rapid die-offs recently.

According to an article in the DRI July Bulletin, researchers Dr. Henry Sun and



Above: Iconic fruits of *Prosopis pubescens*, photo from iNaturalist user [chris_earle](#).

graduate student Charlotte van der Nagel, investigated when the screwbean die-offs started. Using historical satellite imagery through Google Earth of dead trees at the Ash Meadows National Wildlife Refuge, they found that the die-offs started between 2010 and 2011. They also identified that an extreme drought cycle ended in a wet year at the same time. Looking at the mesquite's deep roots which were able to access both moisture and oxygen, they found that in order to survive droughts, the trees developed a thick bark-like layer over the tap roots. When the water table rose, it submerged the deeper taproots in oxygen-deprived groundwater. The roots near the ground surface were prevented by their thick layers from producing root hairs to access surface water. Screwbean mesquites died and have not returned.

Dr. Sun suspects that the dead tree roots have created an anaerobic dead zone which is preventing the trees from regenerating. However, new mesquite trees at Ash Meadows have been able to reestablish away from the dead tree zones. Dr. Sun says more research is needed to better guide restoration of the trees as critical parts of desert ecosystems.

TRIP REPORTS

GARY MONROE MEMORIAL FIELD TRIP TO MADORA LAKE. JULY 15TH, 2023

One of Gary Monroe's favorite NNPS field trips was to Madora Lake in Plumas County, CA. This is his trip description from 2017:

"Buckaroo Chocolates and Ice Cream Parlor in Graeagle. As summer's heat bears down upon us, our priorities shift and we visit this excellent ice cream shop. We'll also take a side trip to Madora Lake in Plumas County, CA to see *Chimaphila umbellata*, *Lilium washingtonianum*, *Pterospora andromedea*, *Platanthera dilatata* var. *leucostachys*, *Lilium pardalinum*, and other forest gems."

Summer's heat was certainly bearing down when 15 people gathered to walk the Madora Lake trail and say goodbye to Gary in one of his favorite places. The group, headed by John Weiser, included three generations of the Dyer family; John Dyer and his wife, Lynn, their son Cameron, who attend many NNPS trips as a child, and Cameron's daughter Matilda. Long standing NNPS member Tina Nappe brought two international guests with her. Other participants were Charlie Duncan, Bonnie Larsen, Connie Douglas, Janel Johnson, Sarah Kulpa, Emma Wynn and Joanne Weiser.

We headed toward the site where lots of *Lilium washingtonianum* can be found passing *Lilium pardalinum*, *Erythranthe cardinalis*, *Platanthera dilatata* var. *leucostachys* and more on our way. We stepped off the trail to sit on fallen trees, among the white lilies and a nice stand of *Chimaphila umbellata* and share stories about Gary. John lead the



Top: From left to right. Sitting: Joanne Weiser, John Weiser, Bonnie Larsen. Standing: Charlie Duncan, Connie Douglas, Lynn Dyer, John Dyer, Cameron and Matilda Dyer, Janel Johnson and Sarah Kulpa. Middle: View of Madora Lake. Bottom: *Lilium pardalinum*. Photos provided by Emma Wynn.



View of Frazier Falls.

way with anecdotes about their many plant hunting trips, Gary's choice of music for the road and his route planning. Others shared their stories of Gary, he will be missed.

We completed the trail and gathered to eat some of Gary's delicious Cougar Gold Cheese with apples. Gary ordered the cheese, in a can, every year and would share it at NNPS meetings. Our next stop was Millie's Ice cream and Coffee Co. (formerly Buckaroo's) in Grayeagle. During our ice cream break a bonus trip was suggested and several of us headed up to Frazier Falls Trail for some additional plant hunting. This paved mile long trail passes through glacially carved granite terraces to a viewpoint across the canyon from Frazier Falls and features plants such as *Eriogonum ursinum*, *Myriopteris gracillima*, *Penstemon newberryi* and *P. deustus*.

SOCIETY NEWS

PREORDER YOUR NNPS 2024 WILDFLOWER CALENDAR

We are taking pre-orders for Nevada Native Plant Society 2024 Wildflower Calendars. The 11x 8.5" calendars will be printed on matte, heavy weight paper by Mixbook. The calendars will feature photos taken by NNPS friends and members around the state.

The 2024 calendars cost \$14. Calendars can be picked up at the November monthly meeting. In addition, there will be pick up locations in Reno, the Las Vegas area, and Carson City. We will also mail calendars; shipping will be around \$6 for 1 calendar and \$8.75 for more than 1 calendar.

To preorder calendars, email emhwynn@gmail.com. No need to pay at this time, you will be contacted in mid-October to arrange payment and distribution.

Note: we sold out last year, so if you want to make sure you get a calendar, preorder one before the deadline of September 22nd.

CALL FOR SOUTHERN NEVADA EVENTS COORDINATOR

NNPS is looking for an Events Coordinator down South! If you are in the Las Vegas area and are interested in spreading the native plant joy, please reach out to Shannon (Northern Events Coordinator) at events@nnps.org.

UPCOMING EVENTS

Stay tuned for the 2023 fall meeting schedule. Find the Nevada Native Plant Society on Facebook for the latest society news!

Note: meeting times have been changed. Social time will be held at 6:30 pm in room 300-G in the Fleishman Agriculture Building, University of Nevada, Reno. The Zoom meeting time will begin at 6:50 pm. Official meeting start time will be 7:00 pm.

NEWSLETTER

Have something to share? We would love to consider your recent trip reports, phenology updates, or Nevada botanical musings for the Nevada Native Plant Society newsletter.

Have another idea for an article? We would love to talk about that too! Contact the editor, Ranae Sullivan, for additional details. She is best reached at ranae.sullivan@gmail.com.



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