



NEVADA NATIVE PLANT SOCIETY

Ash Meadows now officially designated as a Wetland of Distinction

by Larry Lodwick

In August 2024, the Ash Meadows National Wildlife Refuge (NWR) was added to The Society of Wetland Scientist's (SWS) "Wetlands of Distinction" (Wetlands of Distinction Info). This refuge in the Amargosa Valley is the largest remaining oasis in the Mojave Desert and has the highest concentration of endemic species in the United States ([NWR Information](#)).

The "Wetlands of Distinction" is an SWS initiative with three main goals, including: Raising public awareness and appreciation of wetlands and their benefits by creating and promoting a showcase of top-tier wetlands.

- Forming partnerships with state natural resource agencies and nongovernment organizations (NGOs) to identify high-quality, high human-environmental importance, and biologically unique wetlands.
- Engaging the public, including outdoor enthusiasts, academics, educators, and those curious in wetland science and geography.

To meet these goals, the SWS has created a one-stop-shop for information on the biology, ecology, conservation status, and public access for high-functioning wetlands.



Carson Slough, on the western edge of the refuge, is a wide marshland fed by springs from the north, including Roger's Spring, Longstreet Spring, Five Springs, Cold Spring, and numerous smaller springs and seeps. The slough is hydrologically connected to subsurface flows of the Amargosa River and is dominated by *Bolboschoenus robustus*, *Schoenoplectus americanus*, *Juncus balticus*, and other species along its length. ©Larry Lodwick

To be considered as a wetland of distinction, the wetlands must meet two sets of criteria: The first set of SWS criteria has five conditions, any one of which may qualify the wetlands for inclusion:

1. Currently a Ramsar Site, from the 1971 international treaty to create a "List of Wetlands of International Importance"
2. Listed as a "valuable wetland" by more than one natural resource agency or NGO

3. Has rare or unique wetland types within its biogeographical region
4. Protects biologically diverse wetland flora, fauna, and/or their habitat
5. Supports significant numbers of wetland-dependent fauna, such as water birds or fish

While only one of these five criteria is needed for inclusion, Ash Meadows NWR meets all five! The second set of criteria includes



Photo of emergent marsh, dominated by *Juncus balticus*, *Carex praegracilis*, *Triglochin maritima*, *Grindelia fraxinipratensis*, and *Helianthus annuus*. The water is from Jackrabbit Spring, and standing water can be expected from November until June, when the evaporation rate from the summer heat increases evaporation beyond the inflow. Four rare (three of which are threatened species) occur in this area, all flowering during the hot summer months. ©Larry Lodwick



Natural regeneration of the *Fraxinus velutina* forest is occurring in several parts of the Refuge since the area was acquired as a NWR. Emergent wetland in the foreground, dominated by *Juncus balticus* and *Carex praegracilis*. A corridor of *Typha domingensis* along the edge of the tree line, follows a shallow channel from Jackrabbit Spring. Several mature ash-dominated forests occur in various parts of the Refuge. ©Larry Lodwick

functions, services, or values of the wetlands. Of nine of the criteria, Ash Meadows meets at least four: functions as a self-sustaining system that maintains ecological connectivity and cohesion; holds aesthetic and cultural heritage value; serves as a resource for education or research; and offers recreation opportunities.

For those unfamiliar with Ash Meadows NWR, it is a diverse area with dune fields, alkali seeps, and groves of mesquite and ash trees that supports numerous rare plants, fishes, and aquatic invertebrates, including relict species of desert fish that have existed since the Pleistocene.

Wetland types within the Refuge include forested wetlands, seasonally inundated wetland flats, saline seeps, deep blue springs, sedge/rush dominated wetlands, cattail dominated wetlands, and open water reservoirs.

Editor's Note: I am pleased to add that Ash Meadows NWR has been recognized as a Wetland of Distinction thanks to a singular nomination submitted by Larry Lodwick. This honor reflects not only the ecological significance of the site but also the commitment of individuals like Larry, who champion the preservation of our vital natural resources.



Mosaic of *Juncus balticus*/*Carex praegracilis*/*Schoenoplectus americanus* dominated wetland with interspersed higher ground dominated by several species of saltbush, *Atriplex* spp. In the upper left are sand dunes with the Funeral Mountains of Death Valley in the background. ©Larry Lodwick

Featured Plant: *Chamaebatiaria millefolium*

by Emma Wynn

I first saw fernbush (*Chamaebatiaria millefolium*) when visiting the Mammoth Lakes area a few years ago; its beautiful white flowers, bright green fernlike foliage and cinnamon bark appealed to me. When I saw it at the Washoe State Tree Nursery later that year, I had to buy a plant to try in my South Reno yard at an elevation of nearly 6,000 ft. I am thrilled to report that it is happy in my

yard, so I added three more plants this year!

“Fernbush is one of the Southwest's greatest plant treasures. The long bloom period begins in mid-summer and will often last into August. Fernbush also gives the appearance of being an evergreen shrub in the winter, due to having foliate buds. The foliate buds are not encased or hidden by a bud-scale, making next year's leaves visible during the winter months.



Close-up of fernbush flowers (left) and the leaves attached to cinnamon-colored stem (right). ©Wendy McCrady, iNaturalist

Once established in the garden, this is an extremely low water usage plant. In their native habitat these shrubs grow with grasses and cacti. Native Americans would make a tea from the leaves to settle upset stomachs. These plants tolerate shearing and pruning well. If you like, shear them yearly in the early winter (after leaf drop of deciduous trees).

Fernbush gets its name from the deeply cut and lacy textured foliage. The foliage is pleasantly aromatic when you brush against the plant or are cutting it back. The mature stems exhibit a colorful cinnamon colored sheen, adding yet another attractive feature. Showy clusters of white flowers add a pretty effect in early summer.” (Quoted from Plant Select).

Fernbush grows to be 5-6 ft. tall and 5-6 ft. wide when fully mature. It grows in USDA hardiness Zones 4b-8 and tolerates a range of soil types including clay, loam, sandy and gravelly soils. My plants at home are receiving

some drip irrigation until established. They prefer full sun but can grow in part sun. Fernbush is a great pollinator plant attracting a native bees, bumblebees, honeybees, moths and butterflies that love the nectar-rich flowers. Its seeds are eaten by birds.

I was also excited to see fernbush on the cover of the September / October issue of the American Horticulture Society’s magazine, where they had an article about shrubs and small trees that have proven to be resilient in Intermountain gardens. Other “Shrubs with Altitude” mentioned in the article are: *Purshia tridentata* (bitterbrush), *Sambucus cerulea* (blue elderberry), *Rhus aromatica* (fragrant sumac), *Phiadelphus lewisii* (Lewis’ mock orange), *Symphoricarpos oreophilus* (mountain snowberry), *Cornus sericea* (red twig dogwood), and *Amelanchier* spp. (Serviceberries). It is good to see some of our wonderful native trees and shrubs being recognized for their home landscaping value.

Nevada Department of Agriculture's Push to Grow the Native Seed Industry

by Stephen Kielius

The Nevada Department of Agriculture (NDA) has been hard at work to bring new opportunities to those interested in becoming involved with the native seed industry. Everything from nursery tours, seminars, and outdoor activities to programs designed to help farmers get started producing native seed for profit, the NDA has rapidly been expanding our offerings in 2024 and beyond. There are many opportunities, programs and events available for individuals to get involved in the native seed community!

Foundation Seed Program

The NDA's Foundation Seed Program is designed to reduce the barriers of production of native seed by awarding producers with seed at no cost. By providing this seed, the NDA eliminates the often prohibitive costs and availability issues associated with starting native seed production from scratch. The awarded seed is the applicant's responsibility to sow, manage, harvest, and clean while the

NDA provides technical support as needed. The program will receive a small amount of the harvest back to support the program long-term and create a native seed stock. The remainder of the seed production is left for the producer to sell, use to produce further generations, or for their own restoration efforts. It is the hope of the NDA that this ease of access will allow farmers to consider incorporating native seed production into their business and expanding their markets.

Contracted Seed Grow Out Program

One of the most common pieces of feedback received is that the demand for native seed is too unpredictable for many potential farmers, which leads to uncertainty on whether a farmer will be able to turn a profit each year. To combat this uncertainty, the NDA has designed the Contracted Seed Grow Out Program. The Program is brand new from the NDA, with the first round of applications accepted in August of 2024. The program is



Desert Farming Initiative planting Sulphur-flower Buckwheat awarded through the Foundation Seed Program
©Stephen Kielius

similar to the Foundation Seed Program, offering seed at no cost to those that are selected to participate during the open application period. The difference here is that producers will be paid on a flat, per acre basis in exchange for the entire harvest of seed. The biggest advantage to this being that the selected applicants will be paid regardless of their success in producing a harvest. This allows each applicant the peace of mind that they will receive a guaranteed payout for their effort and can plan accordingly. The NDA hopes this reduced risk will allow the participants to gain critical experience with native seed production and help them to convert their acreage for further native seed production.

Outreach Events

While these two programs are a great way to get started growing seed, it is by no means the only way to engage with the native seed community! The NDA holds regular outreach

events throughout the year to spread the word about our programs and bring the community together to collaborate and share our collective knowledge. The NDA's Native Seed Roadshow series looks to bring smaller events, such as tours, fields visits, workshops and more to rural communities across Nevada that would not typically have the opportunity to engage in these activities. In addition to the Roadshow, our annual Native Seed Forum is a larger, seminar style event that allows attendees the opportunity to meet and share knowledge with other like-minded individuals.

The NDA is fully committed to supporting the native seed community and works tirelessly to bring new events and economic opportunities to producers in Nevada. If you would like more information on any upcoming outreach events, program information, or if you're just looking for advice on how to get started with native seed, reach out to seed@agri.nv.gov.



Walker Basin Conservancy provides a tour of their native seed nursery in Smith Valley, NV. ©Stephen Kielius



Nursery-grown sagebrush seedlings destined for rehabilitation projects. ©Stephen Kielius

Conservation news:

Bureau of Land Management released proposed Western Solar Plan

by Alison Agneray

The Bureau of Land Management (BLM) has released its updated Western Solar Plan for developing solar energy across 11 Western states. Since the 2012 version, the BLM is now proposing adding Idaho, Montana, Oregon, Washington, and Wyoming. This updated plan opens over 31 million acres of public lands across the West to utility-scale solar development (roughly 13% of all BLM land nationally), aiming to help meet the Biden-Harris administration's goal of a 100% clean electricity grid by 2035.

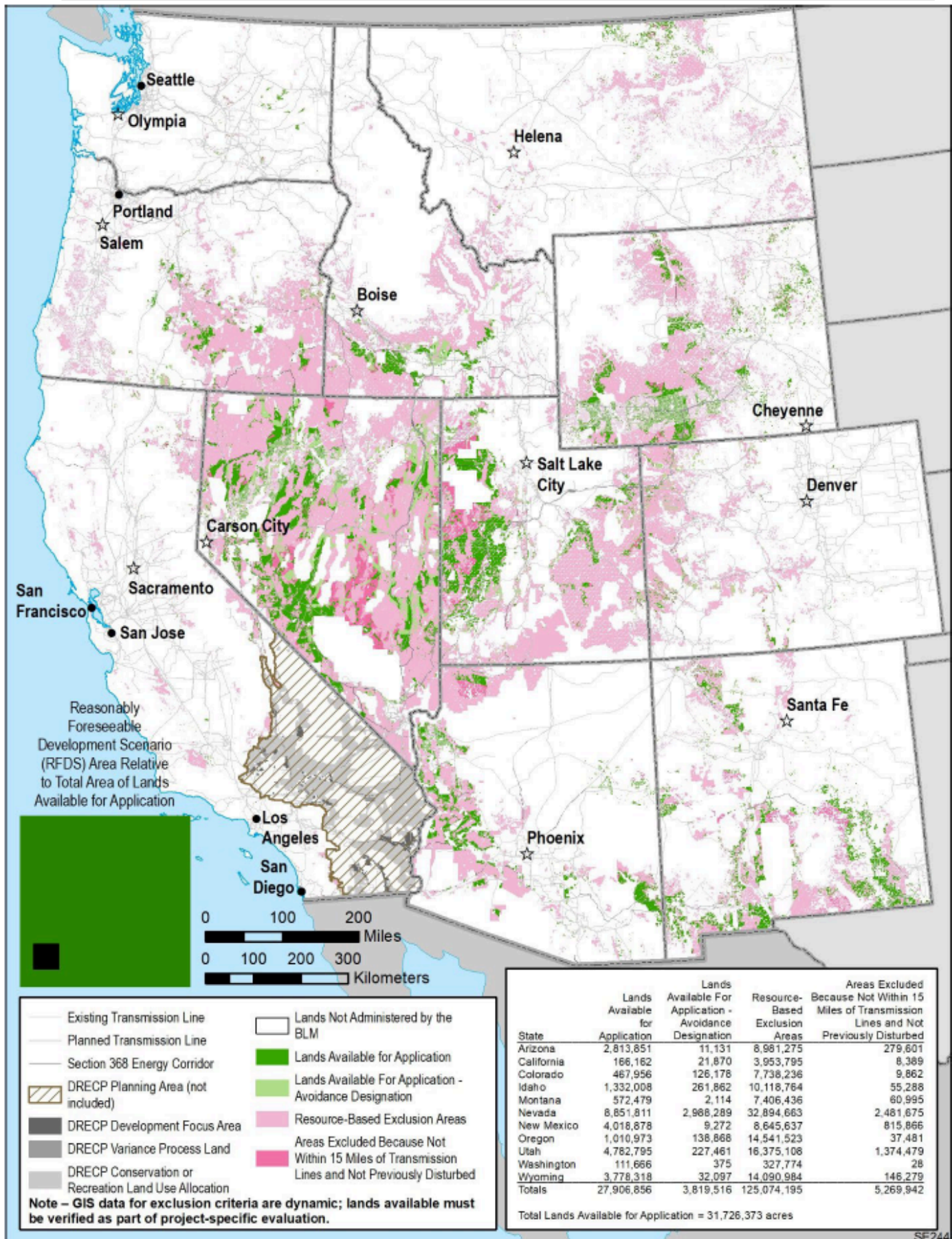
Under this plan in Nevada, about 35 million acres of public land with "high conflict potential" would be excluded from solar development. Examples of areas in Nevada that were still included are 46% of Esmeralda County (1,000,000 acres in this county alone), 220,000 acres across the Amargosa River Basin in Nye County, 7,000 acres of the

Swamp Cedars in Spring Valley in White Pine County, and the deserts surrounding the Black Rock Desert NCA in Washoe County.

While solar energy is crucial, this plan exposes vast, sensitive areas to utility-scale development. Nevada stands to be the most affected, with 12 million acres of public land made available for solar with the finalization of this plan, including land near the planned Greenlink North Transmission Project, which will stretch 235 miles across rural counties. By comparison, Utah, the next most impacted state, will open around 5 million acres. It is important to note that no solar development projects will be authorized through the Western Solar Plan and all proposed projects will still need to undergo site-specific environmental review and public comment. To review the current proposed plan, visit the [ePlanning website](#).



Mojave desert solar array at Red Rock Canyon National Conservation Area. ©Getty Images;



BLM-administered lands excluded and available in the 11-state planning area under the Proposed Plan. ©BLM

NNPS Elections on November 7th

It's that time of year again! We will be holding Elections for the NNPS Board of Directors during our November 7th meeting. Alison Agneray has volunteered to lead the Nominating Committee to prepare the ballot for us to vote on. If you are interested in running for any position or if you need an absentee ballot (i.e., not able to attend the November meeting), please reach out to her at

aagneray@gmail.com. We are planning to vote on the following roles:

- President
- Vice President
- Recording Secretary
- Treasurer
- Corresponding Secretary
- Members-at-Large (2 positions with three-year terms)

Featured research: Global change impacts on cacti

by Alison Agneray

Cacti (Cactaceae) are a diverse group of succulent plants, but the IUCN shows they are among the most threatened taxonomic groups in the world, with over 30% of all cacti species listed as either threatened or endangered (Goettsch et al., 2015). Their extreme risk of extinction is attributed to a wide range of factors, including habitat loss, invasive species, climate change and the illegal horticultural trade.

A review paper by Hultine et al. (2023) explored these threats and offers creative approaches for cacti conservation. For instance, the authors recommend curbing the illegal horticultural trade of plants and seed through multinational cooperation and using 'next-generation' approaches to track individual plants removed from the wild (e.g., barcoding systems developed from genetic markers to code specific species). Additionally, they promote protecting and creating nurse plant refugia to help cacti re-establish after disturbances such as fire (i.e., having woody shrubs and trees near young cactus is known to help their establishment). Finally, they encourage a focus on managing non-native, fire-adapted grasses and a focus on increasing monitoring networks to track the impacts of climate change to help identify species and populations at highest risk. Further, it goes into great detail discussing the

key adaptive traits of cacti and how these can help predict the effects of climate change on different species.

Literature cited:

- Hultine, K.R., Hernández-Hernández, T., Williams, D.G., et al. (September 2023). Global change impacts on cacti (Cactaceae): current threats, challenges and conservation solutions, *Annals of Botany* doi.org/10.1093/aob/mcad040
- Goettsch, B., Hilton-Taylor, C., Cruz-Piñón, G., et al. (2015). High proportion of cactus species threatened with extinction. *Nature Plants* doi.org/10.1038/nplants.2015.142



Spiny Star (*Escobaria vivipara*) spotted northeast of Panaca, NV © JD Flores, iNaturalist

Field trip report:

August 24th Doyle Field Trip

by Emma Wynn

Our last field trip of the summer took place on Saturday August 24th, when nine hardy plant lovers joined Mike Hagebusch in unseasonably cold, wet weather to travel to the Doyle area to see the narrow endemic *Eriogonum microtheca* var. *schoolcraftii* and its habitat. This yellow-flowered buckwheat is only known from a 14-mile stretch along the east face of the Sierra Nevada and from the Fort Sage Range in California; and from one collection on Seven Lakes Mountain in Nevada! It is found on decomposed granite soil, typically sheltered among tall sagebrush.

The drive to the field trip location was marked by rain and low clouds, with the greyness making familiar landmarks appear different. As a result, we overshot the turnoff to the little-used track on our first pass. Once we arrived, we piled out of the cars, pulled on our rain gear, and admired the beautiful *Eriogonums*, their bright yellow flowers standing out. The rain soon eased off and the plants lit up the roadside, looking more luminous than they would have on a blue-sky day. Several of us remarked that this would be a great garden plant if only one could find it, or its seeds, for purchase.

The *E. microtheca* var. *schoolcraftii* were not the only plants to catch our eye; we admired the abundant *Eriogonum elatum* in peak bloom and remarked on how unusual it is to see oaks growing next to bitterbrush. This area is the closest *Quercus kelloggii*, California black oak, gets to Nevada. Other plants I added to my observations on iNaturalist that day include *Dieteria canescens*, *Eriogonum baileyi*, *Eriastrum* sp., *Gayophytum diffusum* ssp. *parviflora*, *Ericoma hymenoides*, *Pleiocanthus spinosus* and *Heterotheca orovillosa*. Thank you, Mike, for leading us to this interesting location, I look forward to returning if I can find the correct turn off!



NNPS members admiring Schoolcraft's slender buckwheat ©Michael Hagebusch



Close-up view of *E. microtheca* var. *schoolcraftii* ©Emma Wynn

Description from Flora of North America ([link](#)):
Eriogonum microtheca var. *schoolcraftii*
(James L. Reveal, Phytologia 86: 138. 2004.)

- Common name: Schoolcraft's wild buckwheat
- Shrubs, 3–8 × (4–) 5–10 (–12) dm, floccose.
- Stems: caudex absent; aerial flowering-stems 0.5–1.5 dm, floccose.
- Leaves: blade 1.5–3.5 × 0.5–1.2 cm, densely reddish-brown-tomentose abaxially, floccose adaxially, margins not revolute.
- Inflorescences 1–8 cm; branches floccose. Involucres 2.5–4 mm, floccose.
- Flowers 2.5–3 mm; perianth yellow.
- Achenes 2.5–3 mm.
- Phenology: Flowering Jul–Sep.
- Habitat: Sandy to rocky soil, sagebrush communities, pinyon-juniper woodlands
- Elevation: 1400–2200 m



California Black Oak (*Quercus kelloggii*) acorns close-up ©Emma Wynn

Society updates

Monthly meetings have now resumed on the first Thursday of every month (upcoming meetings are on October 3 and November 7) with in-person options at UNR in Reno and at the College of Southern Nevada in Henderson, plus the option to join remotely. For the latest updates, you can either check the calendar on the website nvnps.org/events; reach out to events@nvnps.org; or follow us on Facebook. We do not have any field trips currently planned, but if you are interested in leading any efforts for NNPS, please reach out to Emma Wynn, president@nvnps.org or Shannon Swim, shannonswim@gmail.com.

During our September 5th meeting, we had a lovely talk from guest speaker, Dr. James Cane, Emeritus, USDA Bee Lab titled “Beware the Brunch at a Death Camas Cafe” discussing the complex relationship between death camas (*Toxicoscordion venesoum*) and its pollinator, the specialized bee *Andrena*

astragali. Dr. Cane was a delightful speaker with beautiful photographs and stories from the field. Thank you again to Dr. Cane for the wonderful talk and to everyone who was able to attend.

We want to extend a special welcome to our four new members!

- Chloe Novak, Berkeley CA
- Janna Champagne, Medford OR
- Wendy McBride, Flagstaff AZ
- Esther Hwang, Reno NV

If you are interested in having your work featured in the newsletter or if you have any comments, please reach out to Alison Agneray, Newsletter Editor, at aagneray@gmail.com. Newsletters are published six times per year in even-numbered months and distributed only to active NNPS members.

Board of Directors

Officers

- President: Emma Wynn, emhwynn@gmail.com or president@nvnp.org
- Vice President: Vacant
- Recording Secretary: Kris Kuyper, kristinkuyper@gmail.com or secretary@nvnp.org
- Treasurer: Patrick Cassady, treasurer@nvnp.org
- Corresponding Secretary: Vacant

Members-at-Large

- Alison Agneray
- Sarah Harrelson
- Hermi Hiatt
- Janel Johnson
- Janette Perry
- John Weiser

Chairpersons

- Archivist: Connie Douglas
- Conservation: Rose Strickland, rosenreno@sbcglobal.net
- Events, Northern Nevada: Shannon Swim, events@nvnp.org
- 50th Anniversary: Sarah Kulpa
- Field Trips, N. Nevada: Christopher Mackessy
- Grants: Jim Morefield, grants@nvnp.org
- Horticulture: John Weiser
- Membership Coordinator: Gail Durham, membership@nvnp.org
- Newsletter Editor: Alison Agneray, aagneray@gmail.com
- Photography: Larry Lodwick
- Programs: Charlene Duncan (North), cirsium.down@gmail.com & Marcus Hooker (South) Marcus.Hooker@csn.edu
- Publications: Arnold (Jerry) Tiehm
- Rare Plants: Joshua Lovera, rareplants@nvnp.org
- Social media: Emma Wynn & Sarah Kulpa, social@nvnp.org
- Webmaster: Patrick Silbey, psilbey@gmail.com
- Scribes: Vacant
- Hospitality: Vacant

