

VOLUME 50 NUMBER 1 - MARCH 2024

# NEVADA NATIVE PLANT SOCIETY

*Flowers of Bryonia alba. Photo by Jan Nachlinger.*

## GREETINGS FROM THE PRESIDENT, EMMA WYNN!

Happy 2024! With the new year, we have many changes to our Society Officers and Board of Directors. Thank you to Jerry Tiehm for stepping into the role of President last year. Jerry has been a hardworking and invaluable member of Society since its first meeting in April 1975, yet I know being President was not a job he sought. Jerry will remain on the Board in his role as chair of the Publications Committee. Janel Johnson helped launch our original website and was our webmaster for many years, a role she is now leaving, but she will remain on the Board. Gary Reese is stepping down as our treasurer and leaving the Board. Ranae

Sullivan, our newsletter editor has moved to California, so we are looking for a new editor – could it be you? If yes, contact me at [emhwynn@gmail.com](mailto:emhwynn@gmail.com). We are also in need of a Vice-President and an Archivist.

Thank you to Janel, Gary, Ranae, and all who have served and continue to serve on the Board; we would not exist without your service! If you are interested in serving on the Board or on a committee, please contact me!

We have been working on developing a new website for a while, and it will finally happen early this year! Patrick Silbey will be

our webmaster. Anyone who has experience with SquareSpace, has ideas for content, or is interested in developing content for the website, please contact Patrick at webmaster@nvnp.org.

I have good news from Southern Nevada! The UNLV Wesley E. Niles Herbarium has a new home and a new curator, Marcus Hooker. The herbarium was moved to the College of Southern Nevada in Henderson last year; it is a great space and could be a perfect venue for Southern Nevada meetings. We are looking for people to coordinate meetings, field trips, and events in the south, so please contact me if you would like to help.

2024 is our 49 th year in existence; it is a good time to reflect on what the Society has achieved in the past and plan for the next 50 years! We have a new Board Committee this year, the 50 th Anniversary Committee, to help us do just that. If you have any ideas to share, please send them to me. BTW we are still looking for a Southern Nevada member to join the committee.

Our organizer and first President, Margaret Williams, made the following statement in the first newsletter: "It is my hope that this society will bring together people of all walks of life who have a common bond – the love of native plants. Not all of us are interested in plants in the same way, or have the same training or experience, but we can all learn from each other and hopefully pass our feelings for native plants on to others." Please bring your ideas and interests to help make our Society work for all of us and fulfill our purpose of stimulating interest in and appreciation of native Nevada plants and their preservation.

Fun Fact: Nevada has no less than 14 species of native orchids, while Hawaii has only 3!

I look forward to hearing your ideas and welcome all offers of help, it takes a team! My email is emhwynn@gmail.com

Happy Botanizing in 2024! - Emma Wynn

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## ***BRYONIA ALBA IN NEVADA***

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By Arnold Tiehm

We all strive for more knowledge and I would guess that very few days go by when we do not learn something. Sometimes we make mistakes because we do not know enough about a subject and sometimes it is because we think we know the subject. There are certainly lots of cliches about this. "To err is human and to forgive is divine." "You learn from your mistakes." "If you have never made a mistake, you have never done anything." Perhaps "Ignorance is bliss" does not quite belong here. Anyway, I was recently handed my lunch because I simply thought I knew.



*Bryonia alba* vine on willow. Photo by Jan Nachlinger.

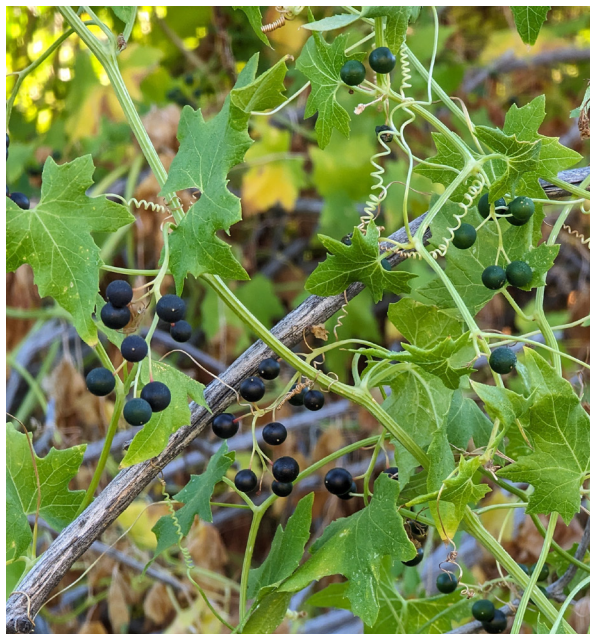
Jan Nachlinger and I spent a lot of time out botanizing this past summer. In June we went north of Wells on Highway 93, headed north and west on the O'Neil Basin Road, and then turned north and headed to Little Devils Table and Salmon Falls Creek. The road was just bad enough that we were unable to make it all the way to Salmon Falls Creek. We did make it to Little Salmon Falls Creek about  $\frac{3}{4}$  of a mile upstream from where it joins Salmon Falls Creek. We had nice botanizing, collected several things, and in three days did not see a person. When we go to new areas in the summer I always like to return in the fall and see what late bloomers pop up. So, in late August we went back to Little Devils Table. Again, we had a nice time botanizing, got some nice plants, and did not see anyone

in the two days we were there. We then retraced our steps to Highway 93, went north to Contact, headed west away and then turned south and west on a dirt road that got progressively worse. About 9 miles later we reached Salmon Falls Creek. It had recently rained, and things were quite damp. This also contributed to a bumper crop of mosquitos. It was getting late, so we camped, shuffled plants, and recharged overnight for an early morning investigation of Salmon Falls Creek. In the morning we drove to the creek, covered ourselves with deet, and dug in (literally).

One of the first things we found was a vine rambling through the willows and roses. It had palmate leaves, tendrils, and berries.



*Above: Salmon Creek Falls. Photo by Jan Nachlinger.*



Top: Berries of *Bryonia alba*. Photo by Jan Nachlinger.

Jan immediately said “Cucurbitaceae” [the Cucurbit or squash Family]. Mistake # 1, I should have just believed Jan. I stared at the vine and was struck by the fruit being berries. So, in my infinite wisdom I said “No, it is a grape because of the berries”. There were some flowers present and the attached image clearly shows an inferior ovary. I did not study the flowers in the field. I know that the Cucurbitaceae has an inferior ovary. I confess I have never looked at a grape flower. Grapes are smooth opposite the stem which tells me it has a superior ovary. So, mistake # 2. I went about collecting the vine and noticed that when I pressed the berries they made a crunchy sound. This should have been a red flag that my thinking was out to lunch. Mistake # 3. Later in the day we headed back to Reno where I put the specimens on the plant dryer without much thought. I mentioned to Beth Leger that we had found a grape “new to Nevada”. She has worked with scientists that study grapes so she contacted Andy Walker at UC Davis. He agreed to look at the images of leaves that Jan had taken.

He was not able to place them and thought it might be Cucurbitaceae. Beth then applied Seek to the images and it spit out *Bryonia alba* in the Cucurbitaceae. In my defense, what little I can muster, the specimens were still in the drying press. Once dry, I examined them and was immediately struck by how little the berries had stained the paper. If it was a grape it would have made big juicy blotches. Mistake # 4.

My knowledge of the Cucurbitaceae is rather limited. I have grown cucumbers, zucchini, watermelon, and cantaloupe. In the Mojave Desert, in southern Nevada, we have three species of *Cucurbita*, two of which, *C. foetidissima* and *C. palmata*, I have seen. We also have *Marah gilensis* [wild cucumber]. These plants have pepos or gourds for fruit. A quick check of Intermountain Flora (where I should have looked upon reaching home, mistake # 5) showed that the Cucurbitaceae can indeed have berries and there I found *Bryonia alba*. The illustration was a dead ringer for our specimens. The distribution is listed as: “native of Europe; introduced in w. U.S., where known from 3 widely spaced locations: se. Wash and adjacent n. Idaho; s. and w. Mont. (Missoula and Sweet Grass Cos.); and n. Utah (Box Elder, Cache, Salt Lake, Utah, Wasatch, and Weber Cos.) and adjacent se. Idaho” (Holmgren & Cronquist, 2005). The Nevada location is over 130 miles from the next closest locations in northern Utah and southeastern Idaho. I should add that Salmon Falls Creek drains from Idaho into Nevada and then back north into Idaho. Thankfully my labels will reflect the correct name, *Bryonia alba* and will not reflect my route to obtaining the correct name. “Live and Learn”.

Kujawska & Svanberg (2019) present a history of the medicinal uses of *Bryonia*. I was struck by the following quote: “This perennial vigorous vine has been mentioned

as a medicinal plant in many herbals in northern Europe since medieval times, was part of pharmacopoeias, could be used for ornamental purposes and was well known in the local folklore. It still had multipurpose uses in the eighteenth century, but its popularity decreased during the nineteenth century, and for the last hundred years, the plant has been mostly forgotten or regarded as a weed in northern and eastern Europe”.

The root of *Bryonia* was used for medicine. However, the berries of the plant are poisonous. *Bryonia* root was used as a laxative, to induce vomiting, for liver disease, infection, and many other conditions, but there is no good scientific evidence to support these uses. These uses go back thousands of years. There is not currently enough scientific information to determine the appropriate dosage of *Bryonia*. Large doses can make you very sick. Taking *Bryonia* in any dose can cause: nausea, vomiting, fatigue, shortness of breath, dizziness, loose stool, and excessive urination (Kujawska & Svanberg, 2019).

Thank goodness I wasn't tempted to eat any of those “grapes”!

#### Literature Cited

- Holmgren, P.K. & A. Cronquist. 2005. Cucurbitaceae, pages 74-81. In: N.H. Holmgren, P.K. Holmgren & A. Cronquist. Intermountain Flora 2B: 1-488. New York Botanical Garden, Bronx, NY.
- Kujawska, M. & I. Svanberg. 2019. From medicinal plant to noxious weed: *Bryonia alba* L.(Cucurbitaceae) in northern and eastern Europe. J. Ethnobiology & Ethnomedicine. 2019: 15(1). 22. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6509761/>

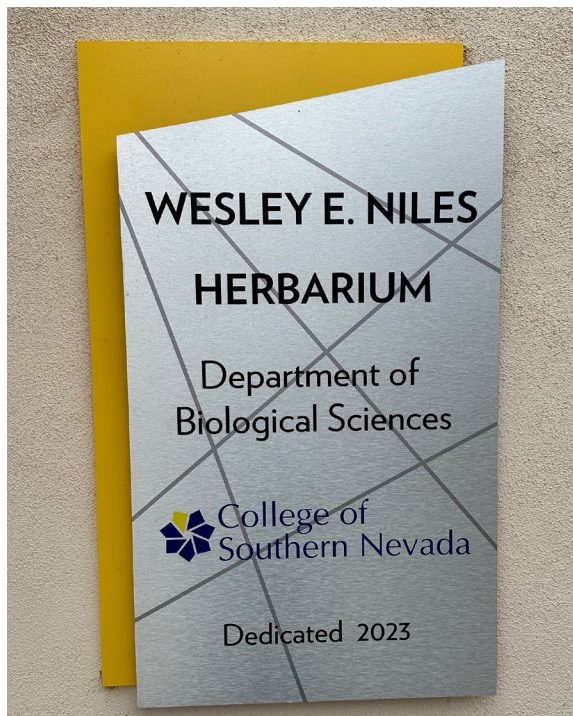
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## WESLEY E. NILES HERBARIUM RELOCATION

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By Marcus Hooker

In January 2023, the Wesley E. Niles Herbarium was officially moved from its former home at the University of Nevada, Las Vegas to the A building at the College of Southern Nevada's Henderson campus. The origins of this herbarium date back to 1970 when Dr. Wesley Niles began curating a collection of dried and pressed plants. In 1974, the collection had grown to the point that the Advisory Committee for the Systematic Resources of America designated it as one of 105 American herbaria (out of 1,200) to be considered “National Resource Collections” that were “of such importance for systematic study that their loss or inaccessibility would seriously



*The Wesley E. Niles Herbarium, now housed at the College of Southern Nevada, was dedicated in 2023.*



*Inside the Wesley E. Niles Herbarium.*

impair our ability to carry on taxonomic research in the United States.” The Wesley E. Niles Herbarium was the only one in the state of Nevada or in the Mojave Desert to be designated so. Today, the collection comprises nearly 70,000 specimens, mostly collected in southern Nevada and the Mojave Desert; it includes flowering plants, conifers, ferns, mosses, and algae and represents an invaluable scientific resource for research, teaching, and public service.

Herbaria, for those unfamiliar, are museums that house collections of dried, pressed plant specimens and associated collection data. They represent a remarkable and irreplaceable source of information about plants and the environments they inhabit. They provide tangible documentation for the occurrence, distribution, and diversity of a region’s flora as well as comparative material that is essential for studies in plant

taxonomy, systematics, anatomy, orphology, ecology, conservation biology, and ethnobotany. We can use herbarium specimens to see the effects of climate change first- hand, to see how some populations disappear over time. We can see how plants are flowering and setting fruit earlier in the year. We can also track the progress of invasive species as they spread to new areas after being introduced.

At its new home at CSN we hope that this herbarium will continue to be a valuable resource and we hope to expand its influence in the community. We hope to get together a group of Nevada Native Plant Society embers who wish to meet in the Las Vegas Valley area and we hope to form a “Friends of the Wesley Niles Herbarium” group who can meet to learn about the local flora, assist in curatorial duties to support the facility,

and serve as a way for like-minded individuals to meet. Anyone interested in having Southern Nevada Native Plant Society meetings, volunteering in the herbarium, interested in seeing the collection, or those just curious about the flora of southern Nevada can reach out to the Collection Manager, Marcus Hooker, at [marcus.hooker@csn.edu](mailto:marcus.hooker@csn.edu).

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## BUTTERFLIES, PINYON JAYS, AND NATIVE PLANTS

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By Rose Strickland

What do butterflies and pinyon jays have in common? Both depend on native plants for essential habitat. When their habitats are threatened or being destroyed, chances of survival of both species decline. Responding to listing petitions, the U.S. Fish & Wildlife Service (USFWS) recently found that these two species may warrant protection as threatened or endangered under the Endangered Species Act.

The bleached sandhill skipper (*Polites sabuleti sinemaculata*), a butterfly with golden-orange wings, only lives in Humboldt County, Nevada in two of the state's alkali wetlands. Water diversions for agriculture have dried up Gridley Lake, one of the skippers' two habitats. The second habitat, at Baltazor Hot Springs, is threatened by a geothermal energy project that could dry up the hot spring the skippers need to survive.

Baltazor Hot Spring and the surrounding meadow are approximately 2.5 miles long by 0.5 miles wide and support the skipper's presumed larval host plants, salt grass (*Distichlis spicata*), and adult nectar plants,

which are several species of rabbitbrush. The salt desert scrub plant community includes greasewood (*Sarcobatus vermiculatus*) along with yellow, white, and rubber rabbitbrush. The skipper's small geographic range and specific habitat make it highly vulnerable to extinction.

The USFWS found that geothermal energy production and the inadequacy of existing regulatory mechanisms were threats to the butterfly's survival. The listing petition also suggested that grazing, water diversions, and climate change may also be threats to the butterfly. These findings have initiated a 12-month status review and an agency request for information from the public concerning the status of or threats to the bleached sandhill skipper.

On the other hand, Pinyon Jays (*Gymnorhinus cyanocephalus*) are inextricably linked to the Pinyon-Juniper woodlands in western North America (Arizona, California, Colorado, Idaho, Montana, Nebraska, Nevada, New Mexico, Oklahoma, Oregon, South Dakota, Utah, and Wyoming, and Baja California, Mexico). The petitioner, Defenders of Wildlife, provided information that the population of this species has declined over 80% in the last 50 years. The USFWS found that the threats to Pinyon Jays, including adverse habitat treatments in Pinyon-Juniper woodlands, increased wildfire frequency, invasive species, inadequacy of existing regulatory mechanisms and climate change indicate that listing as endangered or threatened may be warranted. The agency will fully evaluate these potential threats during its 12-month status review.

Although Pinyon-Juniper woodlands cover more than 75,000 square miles in the United States, the jays do not use every woodland uniformly, but travel seasonally to woodlands



*Above: Pinyon jay in pinyon pine tree (with previous year's cone, bottom-left) in central Nevada's Shoshone Mountains. Photo taken in June 2023 by Dennis Ghiglieri.*

with a good fall crop of pine nuts. The jays also essentially plant the next generation of trees by caching pine nuts throughout the woodlands.

Unfortunately, Pinyon Jay habitat, the Pinyon-Juniper woodlands, are also declining. In the listing petition, clearing or reducing density of Pinyon-Juniper woodland stands by federal and state agencies is commonly used to improve habitat for wildlife species of conservation concern (Greater Sage Grouse) or economic importance, increase forage for livestock, improve watershed function and reduce soil erosion, reduce fuels under fire mitigation plans and/or increase plant community heterogeneity. Also, unfortunately, the agencies have been using categorical exclusions instead of full analyses under the National Environmental Policy Act of project impacts on the environment, including on species of conservation concern.

Petitioners point out that Pinyon-Juniper woodlands are rich in biodiversity, and threats to this habitat may also be affecting the status of other species, dependent on these woodlands. The petitioners cite studies by the National Park Service that document hundreds of plant species in these woodlands. At Mesa Verde National Park, 256 vascular plant species, including several endemics have been documented in old-growth woodlands, along with approximately 100 species of fungi, 65 known species of lichen, and 25 species of bryophytes. Soil microorganisms and over 10,000 insect species, 64 species of mammals, and at least 113 species of birds have been documented in Mesa Verde's Pinyon-Juniper woodlands. These woodlands also make significant contributions to carbon sequestration. Because of the role of the Pinyon Jay as a long-distance seed disperser for Pinyon Pines, the jay is crucial for the establishment and maintenance of these woodlands and is therefore key to the conservation of the other birds, plants, and wildlife of these habitats.

Potential adverse impacts of woodland removal projects have generated much concern. In March, 2023, a lawsuit was filed against the Bureau of Land Management on an approved project to remove Pinyon-Juniper woodlands and sagebrush on up to 380,000 acres in eastern Nevada next to the Great Basin National Park, including critical habitat for Sage Grouse and Pinyon Jays. And in mid-April, 2023, several environmental groups reached a court-approved settlement agreement from a prior lawsuit with BLM to abandon its use of categorical exclusions. These had been used to authorize Pinyon-Juniper woodland removal projects without requiring prior analysis and public disclosure of environmental impacts, especially on Pinyon Jays. These birds have experienced

population declines of 83.5% since the late 1960's. The pinyon jay is a BLM-designated sensitive species under the Migratory Bird Treaty Act. The settlement agreement also required BLM to issue a new decision on the Pinyon-Juniper Categorical Exclusion Rule by September 30, 2024.

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## PLANT CONSERVATION NEWS

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By Rose Strickland

### GOOD NEWS ON OLD GROWTH FOREST PROTECTION

On December 19, 2023, the U.S. Forest Service announced protections for nearly 25 million acres in national forests of old-growth from commercial logging, enacting a ban on old growth logging. These new management requirements would also protect the habitats of old growth-dependent birds and wildlife and preserve forest capabilities to absorb carbon dioxide equivalent to more than 10% of our nation's annual greenhouse gas emissions, according to the USDA press release. See: <https://www.fs.usda.gov/about-agency/newsroom/releases/usda-proposes-first-its-kind-national-forest-plan-amendment-conserve>

The Forest Service will revise all 128 of its forest management plans to include these protections. It will be interesting for the Nevada Native Plant Society to participate in the plan revision process by the Humboldt-Toiyabe National Forest in Nevada and the eastern Sierra to learn about our old-growth forests and the best ways to manage them and to support USFS efforts to protect these old growth trees.

### NYE COUNTY COMMISSIONERS VOTE FOR PERMANENT PROTECTION FOR ASH MEADOWS NWR

The Nye County Commission approved a draft letter to the Bureau of Land Management seeking permanent protection for Ash Meadows National Wildlife Refuge and its 25 rare plant and animal species, some of which are protected under the Endangered Species Act, through an administrative or Congressional mining withdrawal. The Commissioners opposed exploratory lithium drilling proposed by Rover Metals near the refuge which threatens the status of the ecosystem and water levels at the refuge. See: <https://www.nyecountynv.gov/DocumentCenter/View/45586/Item22> The Commission also raised concerns about the amount of solar development on public lands shared by Nye and Clark Counties in Amargosa Valley which local residents fear will impact Pahrump water supplies in the most over-appropriated basin in Nevada.

### LISTING PETITION FILED WITH THE USFWS FOR CARSON VALLEY MONKEYFLOWER

On January 8, 2024, the Center for Biological Diversity petitioned the USFWS to protect a rare plant, *Erythranthe carsonensis*, under the Endangered Species Act. See: <https://www.documentcloud.org/documents/24254286-erca-petition-final>. Protection is needed because the monkeyflowers face extinction due to a variety of threats, including urban sprawl and road construction, off-highway vehicles, invasive species, wildfire and wildfire prevention activities, utility corridor development and climate change. The small annual wildflower grows on granitic soils in sagebrush habitat, primarily within Carson City and Douglas County, NV, with

small populations in Washoe County, NV and Alpine County, CA. CBC says that the small yellow flowered plant prefers open, sandy flats and gentle slopes, a habitat that's highly vulnerable to destruction. It occurs in approximately 16 populations primarily located on the margins of these valleys. A 2018 status report prepared by the Nevada Division of Natural Heritage found that 42% of the monkeyflower's habitat had already been lost to residential and industrial sprawl and agriculture.

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## **SOCIETY NEWS**

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### **UPCOMING EVENTS**

March 7, 2024: Dan McClure of Walker Basin Conservancy will talk about the WBC native plant propagation, the growing facility in Yerington and their new website for retail GB native plants.

Our April speaker will be Marcus Hooker, the Wesley E. Niles Herbarium curator.

Our May speaker will be Jamey McClinton from the Nevada Natural Heritage Program.

### **TRANSITION TO EMAIL-ONLY NEWSLETTER**

We have an exciting update to share regarding the delivery of our newsletter. In an effort to embrace sustainability and enhance accessibility, we are transitioning from print to an email-only format for future newsletters.

This will be our last printed newsletter. You can look forward to receiving our newsletter directly in your inbox! This move not only reduces our environmental impact but also ensures that our content reaches you in

a more timely and efficient manner. We appreciate your understanding and support as we make this eco-friendly shift.

### **CALL FOR NEWSLETTER EDITOR**

As we embrace the changing seasons and the vibrant new growth of native flora, we are also actively seeking a new newsletter editor to join our team! We bid a fond farewell to our newsletter editor, Ranae Sullivan, who has moved to California. Our heartfelt thanks go out to Ranae for her outstanding contributions.

Interested candidates can reach out to Emma Wynn (emhwynn@gmail.com) for more information.



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## CURRENT OFFICE AND BOARD MEMBERS

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### OFFICERS

President: Emma Wynn,  
emhwynn@gmail.com, or  
president@nvmps.org

Vice President: Vacant

Recording Secretary: Kris Kuyper,  
kristinkuyper@gmail.com, or  
secretary@nvmps.org

Treasurer: Patrick Cassady  
treasurer@nvmps.org

Corresponding Secretary: Vacant

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Janel Johnson

Sarah Harrelson

Janette Perry

Alison Agneray

Hermi Hiatt

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events@nvmps.org

50 Year Anniversary: Sarah Kulpa

Field Trips, N. Nevada: Christopher Mackessy

Grants: Jim Morefield, grants@nvmps.org

Horticulture : John Weiser

Mailing: Connie Douglas (newsletters)

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Newsletter Editor: Vacant,  
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Programs: Charlene Duncan & Marcus Hooker

Publications: Arnold Tiehm

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| • Individual, family or group for three years ..... | \$50.00  |                                                                                                          |
| • Student or senior citizen, each year .....        | \$15.00  |                                                                                                          |
| • Life membership .....                             | \$500.00 |                                                                                                          |

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