



NEWSLETTER

Vol. 40, No. 4

MAY 2014

NORTHERN NEVADA HAPPENINGS

MEETINGS

MAY 1st - John Weiser, gardener and NNPS Field Trip Coordinator in Reno, will host our annual local garden meeting at his home featuring numerous species of *Eriogonum*, *Penstemon*, and cacti. John's address is 485 O'Brien Way, Sparks, and it starts at 5 pm so come early to enjoy the sunshine. He will have non-alcoholic beverages (iced tea, coffee, water) and there will be an ice cooler available for those who bring sodas, wine or beer. Bring snacks or finger food to share and he will have paper plates, glasses and eating utensils there. Bring a camera for the photography opportunities. Please contact John at johnpweiser@yahoo.com or 775-331-4485 for any questions.

FIELD TRIPS

It is suggested that you check the website before the dates of scheduled field trips to see if changes and updates have been posted. We have several dates open if a member wishes to schedule additional field trips. Please contact John Weiser at johnpweiser@yahoo.com or 775-331-4485 if you should have any questions.

Bring plenty of water, lunch, hiking gear, appropriate clothing, wide brimmed hat, sunscreen and insect repellent.

MAY 2nd-4th Overnight trip to Big Smoky Valley.

The leader for this trip will be **John Dyer**. Big Smoky Valley is located in central Nevada. The valley is about one hundred miles long and stretches through Esmeralda, Nye, and Lander counties. Our destination is toward the southern end of the valley about a 4.5 hour drive from the Carson City/Reno area, a distance of 240 miles.

We will be traveling on Friday morning then have a short field trip Friday afternoon, when we arrive. Later in the afternoon we will get settled in our arranged accommodations. Saturday and Sunday, we will resume our field trips finishing around 1:00pm, returning home.

Members should plan to meet at the U.S. Forest Service Office either in Carson City (1536 South Carson Street) or the Sparks Marina Park (300 Howard Drive, in the parking lot on the west side of the park, next to the offices and playground) by **8:00 am** on Friday the 4th. We will join up at Fox Peak Station 615 East Williams Ave. Fallon at **9:00am**. We will travel east from Fallon on Highway 50 to Austin meeting John at the Toiyabe Cafe around noon. Travel time: 3.5 hours to Austin. After our lunch break and afternoon field trip we will travel south on Highway 376 to the Hadley/Carvers area.

Housing: John has 1 extra furnished rooms and a fold out couch (3 to 4 people) plus a lot of floor space. Call or Email John at John.Dyer@Kinross.com or moondog@gbis.com, Ph# office [775-377-3250](tel:775-377-3250), cell [775-313-4061](tel:775-313-4061), cell [775-420-2197](tel:775-420-2197) to reserve space.

Alternate accommodations can be arranged at the Jumping Jack Motel in Carvers ([775-377-2566](tel:775-377-2566)) There are also motels in Austin, 60 miles to the north west and 55 miles south in Tonopah.

If you prefer to camp there are several camping sites in the area. Pine Creek on the east side of Jefferson Peak, Monitor Valley (est. 40 miles); Kingston (est. 30 miles); Peavine campground (est. 25 miles). If you wish to camp, let John know and he may be able to find out information on cost and facilities.

Services: In the Hadley/Carvers area are two gas/diesel stations with small mini marts and sandwich counters; one bar that serves pizza; one BBQ restaurant; and a decent grocery store. The dominant features of the area include, the Arc Dome Wilderness in the southern Toiyabe Range, Jefferson Peak in the southern Toiyabe Range, the Round Mountain Gold Mine, and several hot springs. Destinations will depend on what is in flower and may be adjusted accordingly. (High clearance vehicles suggested).

For further information contact John Dyer at John.Dyer@Kinross.com or moondog@gbis.com or John Weiser at johnpweiser@yahoo.com.

MAY 9th – 11th Cactus and Succulent Expedition to the Tonopah and Silver Springs areas.

We hope to see *Cylindropuntia echinocarpa*, *Cylindropuntia ramosissima*, *Echinocereus coccineus*, *Echinocereus engelmannii*, *Escobaria vivipara*, *Opuntia basilaris*, *Opuntia erinacea*, *Grusonia pulchella*, and *Yucca brevifolia*. Janel Johnson and Sarah Kulpa will be our leaders for this trip. Email Janel at president@nvnp.org or Sarah at smkulpa@gmail.com.

Meet at the Forest Service office (next to Sclaris) at 8am on Saturday morning. We will drive to Silver Peak, then Goldfield, then back to Tonopah, making several stops along the way to look for cacti. Sunday we will drive up Big Smoky Valley to visit a couple more sites on our way home. Early May weather in Tonopah can vary from hot and windy to cold and windy with a possibility of thunderstorms. Watch the weather forecast and bring appropriate clothing and gear.

MAY 16th-18th American Penstemon Society Meeting in Zion, UT. It is still possible to schedule a trip during this week end.

MAY 24th Geiger Grade /Six Mile Canyon, Reno NV. Our leader will be Gary Monroe. Call or Email 775-359-4863 or g.monroe@att.net

MAY 31st Open at this time.

JUNE 7th Long Valley Treasure Hunt, Hallelujah Junction, CA. Our leaders are **Nancy and Bill Harnach**. This field trip will be a treasure hunt of sorts. We will be visiting a site with a historical survey of plants on record. Our goal will be to see how many species still inhabit this site. It will be interesting to see how the plant community has changed with the passage of time. Those traveling from the Carson Area should meet at the U.S. Forest Service Offices located at 1536 South Carson Street, Carson City by 9:00 am. Meet the Reno members at the McDonalds Restaurant located at 120 Lemon Drive in north Reno by 9:45 am. We will continue on to meet our leaders Nancy and Bill Harnach at Hallelujah Junction by 10:00 am. Call or Email [530-994-3464](tel:530-994-3464) billh@psln.com

JUNE 14th Sage Hen Creek/Mason Bog, Nevada County, CA. Our leader will be Tom Schuster. Call or Email 690-2953 or tom-mail@sbcglobal.net

JUNE 20th-22nd Eriogonum Society Meeting, Twin Falls, ID. It is still possible to schedule a trip during this weekend.

JUNE 28th Madora Lake, Plumas County, CA. Our leader will be Gary Monroe. Call or Email 775-359-4863 or g.monroe@att.net

JULY 5th Open at this time.

JULY 12th Grass Lake Meadow, El Dorado County, CA. Our leader will be Tom Schuster. Call or Email 690-2953 or tom-mail@sbcglobal.net

JULY 19th Castle Peak, Nevada County, CA. Our leader will be Tom Schuster. Call or Email 690-2953 or tom-mail@sbcglobal.net

JULY 26th Open at this time.

AUGUST 2nd Open at this time.

AUGUST 9th Slide Mountain, Washoe County, NV. Our leader will be John Weiser. Call or Email 775-331-4485 or johnpweiser@yahoo.com

AUGUST 16th Little Washoe Lake mud flats, Washoe County, NV. Our Leader will be Charlene Duncan. thistledown@sbcglobal.net.

SOUTHERN NEVADA HAPPENINGS

MEETINGS

Meetings are on the first Monday of every month starting at 6:30 pm. They are held at the U.S. Geological Survey office at 160 N. Stephanie Street in Henderson. Contact Cayenne Engel (cpepper3@gmail.com) or Gary Reese (greese@logansimpson.com) if you have any questions or would like to be added to the notification by email list.

IDAHO BOTANICAL FORAY

Please mark your calendars for next summer's Idaho Botanical Foray. We will head to an area that sees few botanists. The foray will be from 26-30 June 2014 to the Jarbidge, Independence and Bull Run Mountains of northern Nevada. We'll camp at a primitive Forest Service campground called Big Bend in the Humboldt-Toiyabe National Forest. The campground is in a nice aspen stand. (<http://www.fs.usda.gov/recarea/htnf/recreation/camping-cabins/recarea/?recid=65628&actid=29>) From there we can gain access to various locations throughout northern Nevada and southern Idaho. Much of that area is in the headwaters of the Owyhee River, so collections will contribute to my ongoing efforts to develop a Flora of the Owyhee region, which extends from northern Nevada into southwestern Idaho and southeastern Oregon. This is a region that will benefit from botanical exploration in the tradition of our Idaho Botanical Forays! For further information, please contact Don Mansfield (dmansfield@collegeofidaho.edu) or Alexa DiNicola (adincola@collegeofidaho.edu).*

PHOTO CONTEST

Remember to take photos for the NNPS Calendar Photo Contest. The online submission forms will be available from mid-July until mid-September with voting in late September.

MAY ARBORETUM PLANT SALE

Saturday, June 7, 2014 from 8am - 12 noon at Rancho San Rafael Park, 1595 N. Sierra St, Reno. Shop a nice selection of perennials, annuals, vines, and vegetables, and benefit the May Arboretum at the same time. Additional sale days will be June 9-13, 10am to 3pm, or until sold out. Sponsored by the May Arboretum Society. If you would like to volunteer to help at the NNPS information table, please email Janel at president@nvnp.org*

CLASSES

Western Nevada College Specialty Crop Institute offers a Native Plant and Seed Production workshop, Saturday, May 17, 9 a.m. - 3 p.m., at WNC Carson Campus, 2201 W. College Parkway in Carson City. The workshop includes a tour of Comstock Seed farm and seed cleaning operation in Gardnerville. Cost is \$35. Lunch is included. Online registration is available at www.wnc.edu/sci. Information: Ann Louhela -775-423-7565 Ext. 2260 or ann.louhela@wnc.edu.

This introductory workshop provides an overview of the native plant and seed industry for producers interested in farm diversification. Topics include an overview of the market; challenges of native seed propagation; seeding techniques including transplanting, collection, cleaning and testing; state and federal seed laws, and more.

Featured speaker Ed Kleiner of Comstock Seed has specialized in native seed acquisition and consultation for more than 30 years. His projects have ranged from forest and range fire reseeding to highway corridors, ski resorts and urban development. Kleiner has been developing his 43-acre seed farm in Gardnerville for more than a decade, including drought tolerant plants and an enhanced nine-acre wetland.

WILDFLOWER REPORTS

Carson Valley monkeyflower (*Erythranthe carsonensis*) and Steamboat monkeyflower (*Diplacus ovatus*) are currently blooming in Carson City and Douglas County. If you find these plants, please send photos and GPS points to Janel at jdjohnson@heritage.nv.gov.

GLOBAL FAIR AND WORKSHOP ON LONG-TERM OBSERVATORIES OF MOUNTAIN SOCIAL-ECOLOGICAL SYSTEMS

July 16-19 2014, University of Nevada, Reno, USA

This four-day fair and workshop is for all who gather data on mountain social, biological, or abiotic systems as well as those generally interested in measurements of mountain systems throughout the world. Presentations, ateliers, and the exposition will describe the work in mountain systems, explore questions and phenomena driving observations, explain sensors and protocols, discuss data management and user access and visualization, compare strategies for communicating data from remote locales, visit exemplary transects and observatories in the area, and create new collaborations. A number of field trips are offered before, during, and after the fair and workshop in the Reno/Lake Tahoe, Great Basin National Park, and eastside Sierra Nevada regions. Of particular interest to plant society members will be the large international participation by botanists and ecologists involved in the GLORIA project—the Global Observation Research Initiative in Alpine Environments, which monitors alpine plants at risk from climate change at the tops of the world's highest mountains.

For more information on the Fair and Workshop go to: <http://mri.scnatweb.ch/en/homepage>

Joshua Trees Rendezvous in Tikaboo Valley by Rose Strickland

The February, 2014 NNPS Newsletter posted a "citizen science" trip on the population ecology of Joshua Trees to a remote valley in eastern Nevada in mid-March. When we checked with the sponsor, the Desert Institute at Joshua Tree National Park, we found that field course participants were still welcome and promptly signed up. It seemed like an intriguing opportunity to learn more about one of our favorite desert "trees," as well as to learn about how current scientific expeditions are carried out. We would be spending several days in late winter/early spring in the northernmost Mojave Desert in Tikaboo Valley which is between Rachel and Alamo, bisected by Hwy. 375 - the famous Extraterrestrial Highway.



Did you know that there are at least two species of Joshua Trees? Most NNPS members are familiar with *yucca brevifolia* in the Mojave Desert. We learned that there is a subspecies which some botanists consider a separate species, ***Yucca jaegeriana*** (named for Edmund Jaeger, renowned biologist and ecologist of the southwestern deserts of the United States). ***Yucca brevifolia***, the taller Joshua tree, lives in the western Mojave Desert while the shorter and many-branched



Yucca jaegeriana

Researchers from Willamette University in Oregon and elsewhere have been studying these populations for several years. The warming climate is changing the ability of Joshua trees to continue in the southern portion of its range, including the trees at Joshua Tree National Park. Could Joshua trees survive in and expand to the north? And which species, including

hybrids, would most likely be able to expand their range northward? The researchers intended to collect scientific data on the trees to track spatial patterns in plant demography to predict which Joshua trees, if any, will win what was called "the Great Race North."



First day orientation.

Scientists, including Dr. Chris Smith, evolutionary ecologist, biology professor at Willamette University and winner of a National Science Foundation grant, undergraduate and graduate students, professional conservation biologists and others from Willamette U, National Park staff, and a number of citizens - all came together to this rural area to study the Joshua trees.

The logistics were daunting. Where does one find lodging for almost 3 dozen people on the ET highway? Some field course participants camped out and others stayed in Alamo, depending on a couple of stores and restaurants for supplies and meals. The field course headquartered at the Windmill Ridge Lodge, where both the orientation and wrap-up dinners were held.

After a course orientation by Dr. Smith, the nearly 3 dozen participants were divided into 6 teams which would collect data on the Joshua trees in 6 transects from 3000 to 5250 meters long over 2 and 1/2 days. Then each team member was designated/volunteered for specific job categories for which detailed instructions were given in the field. Dennis and I were lucky enough to be selected for Dr. Smith's team. I was one of two data recorders, using forms for the detailed data at each study site. Dennis was a data collector counting the branches, having a



Our team at work

clicker for the many-branched trees. Other jobs were the GPS/compass operator responsible for finding and keeping us on the transects and in the study plots as well as providing the latitude and longitude for each tree studied; the tree height and height to first branch measurer; the photo taker; the tree tagger of its unique number; the leaf length and width measurer; the leaf sampler (for DNA analysis); the storer and labeler of each leaf tissue collected; the installer of insect monitoring traps; the collector of flower samples from trees with flowers. Some team members, necessarily, performed multiple tasks.

The results? Each night, the students and professors entered the data from the day's forms into laptops and began analyzing the results. Dr. Smith and Dr. Todd Esque of the USGS presented some of the quickly calculated results of the field data collection at the closing banquet. It appeared that the majority of the one-branch (younger) Joshua trees were in the northernmost study plots - heading north? Each day's data helped in the mapping of the distribution of the 2 species in Tikaboo Valley, as well as the locations of the hybrids. Future results will be posted on Dr. Smith's website:

<http://www.willamette.edu/~csmith/ChrisSmith.htm>



Coral fossils in limestone

On the last afternoon, many participants had free time to explore nearby natural treasures - the Mt. Irish petroglyphs, Ordovician fossils, or Pahrnagat National Wildlife Refuge. Dennis and I chose to visit Fossil Hill and happily found the rocky remains of corals bedded in

limestone from a 450 million year old sea. We also reconnoitered for native plants on the limestone site and found a dormant sunray (*Enceliopsis nudicalis*) as well as blooming



Astragalus purshii

Astragalus, desert marigold (*Baileya multiradiata*), a paintbrush, possibly Coulter's globe mallow, and purple filaree (*Erodium cicutarium*). Shrubs sharing the Tikaboo Valley site with the Joshua trees include blackbrush (*Coleogyne ramosissima*), a pale gray-green ephedra, and spiny menadora (*Menodora spinescens*) with its perfumed flowers. Of special note were the great variety and numbers of cacti in the area, including *Coryphantha* or *Escobaria vivipara*. Other plants included desert grasses, which were being munched by the resident cattle, and *Yucca baccata*.

On the long drive home to Reno, we reflected on how much we had learned about desert plants in a few short days and how we had gotten a first-hand look into the world of science. Not only was the course a lot of fun, but we also made a contribution to scientific research on Joshua trees and their responses to global warming challenges. We enjoyed meeting very interesting people, including other citizens from California, Utah, Nevada, and as far away as Pennsylvania. Spending sunny days on the ground in Nevada's gorgeous desert landscapes was also a big payoff.



Escobaria vivipara

A whole list of intriguing questions began to percolate through our minds as the miles rolled on: Why do both Joshua trees live in Tikaboo Valley and how did they both get there? Why would Scott's Oriole, a nectarivore, depend on Joshua trees as a major part of its habitat when Joshua trees don't produce much or any nectar? Hum, how much nectar do Joshua trees produce and how in the world is that measured? Did Nevada ichthyosaurs swim in the same



Crossing the ET highway in Tickaboo Valley

seas in which the Ordovician corals lived? (That was an easy NO). How did Native Americans in the northeastern Mojave Desert use Joshua trees and did they manage the trees? If so, how could this have influenced the tree's distribution in the last 10,000 years? Did Joshua trees experience expansions and contractions in their range over the millennia due to past drastic climate changes, similar to the ones that affected pinyon-juniper distribution changes in Nevada? And, why didn't we take classes in college on evolution and natural selection processes? The mental stack of research got very high before Reno came into view 6 and 1/2 hours later.*

Nevada Native Plant Society
PO Box 8965
Reno NV 89507-8965

RETURN SERVICE REQUESTED



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Gifts, and bequests are tax deductible.

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