



Bristlecone Chapter

Dedicated to the Preservation of California Native Flora

The California Native Plant Society

Bristlecone Chapter Newsletter

Volume 37, No. 1

January-February 2016

President's Message, January 2016

In his book "Songbirds, Truffles, and Wolves" Gary Paul Nabhan realized that the forest of Carceri in the Comune of Assisi is a protected climax oak forest. It was protected for so long there was little diversity left. The old trees prevent any sunlight from hitting the forest floor and, therefore, prevent smaller plants from surviving. This limited insect, bird and mammal life.

Nabhan observes, "Wild landscapes survive only as enclaves in a matrix of human dominion. These enclaves are so few, so starkly demarcated, that we label them individually – with names like Yosemite, Bob Marshall, SerengetiIt may be that we need something else as much as we need these postage-stamp enclaves of so-called pristine nature, because they are now too small and too precious to accommodate everyone's need to touch the wild again. For society to know the ultimate value of such land, perhaps we need other places as contact zones – for knowing and healing, for restoring the wild natives and for restoring ourselves. In other words, we need something more than rigorously protected forests and pristine parklands to keep us whole."

We are lucky to live in an area where we have "postage-stamp enclaves" to visit as well as vast stretches of "contact zones." Humans leave their mark, but nature restores itself as best it can, and the landscapes bubble with natural diversity.

Before the January general meeting we have a potluck and field trip planning meeting. Come bring a small salad to share. We will supply the pizza. Most important, bring your ideas of places and topics you would like to explore.

--Katie Quinlan

Wednesday, January 27, White Mountain Research Center, 3000 East Line St., Bishop.

6:00 PM –2016 Field Trip Planning.

Pizza provided. Bring salads and field trip ideas.

7:00 PM General Meeting

"Sagebrush and Pinyon-Juniper Restoration," Heather Stone, Interagency Vegetation Management Planner with the Bishop BLM and Inyo National Forest, will speak about ecosystem restoration techniques. This is an excellent opportunity to learn about the challenges in balancing fire regime, weed invasions, and species persistence in the short and long-term. We encourage you to attend, as this is a highly pertinent topic on our lands today.

--Michèle Slaton

**NEW DEADLINE: January 22, 2016 –
Deadline for Mary DeDecker Botanical
Grant Applications**

Grants for research and projects that increase the understanding and appreciation of native plants and ecosystems in the Eastern Sierra are available to graduate students, college students, primary and secondary students (K-12), and other individuals or organizations. Research projects need not be academic or scholarly but must be relevant to the native plants of the northern Mojave Desert, Sierra Nevada, and Great Basin portions of eastern California. Student applications must include written support from a major adviser or teacher.

Grant recipients each receive up to \$1,000 for expenses and are asked to present their results to the Bristlecone Chapter either at a regular meeting or in the chapter newsletter. The application deadline is January 22, 2016. All applicants will be notified of the committee's decision by early March. More information and application guidelines can be found

at: bristleconecnps.org/dedecker/grant/index.php.
Please direct questions to
grants@bristleconecnps.org.

--Michèle Slaton

September General Meeting Presentation —Alice Piper Monument and Native Plant Garden

The Big Pine Paiute Tribe of the Owens Valley and Big Pine Unified School District (BPUSD) collaborated on a project to create and maintain a monument symbolizing the efforts of Alice Piper and her fellow Owens Valley Paiute classmates to gain entrance to Big Pine High School. Back in 1924, State law prohibited Indian children from attending public schools, if an Indian school existed within a three-mile radius of a public school. Big Pine had both a public school and Indian school so BPUSD did not allow Indian enrollment. Therefore, Alice Piper sued the school district claiming the state law establishing separate schools for Indian children was unconstitutional and the State Supreme Court ruled that the law was in violation of the 14th Amendment of the US. Constitution. As a result, Native American students across California gained opportunities for an equal education and provided the foundation for the eventual Brown v. Board of Education decision which desegregated campuses throughout the United States.



--Alan Bacock and Big Pine Students Planting

This last October, second and fourth grade students from BPUSD and staff from the Tribe designed and installed a native plant display around the Alice Piper Memorial statue. Students will continue to be involved with the native plant garden by creating signs describing the plants in the display. This native plant garden was funded by the CNPS Bristlecone Chapter. The Big Pine Paiute Tribe was chosen as a recipient for the funding through the Mary DeDecker Botanical Grant Program.

The Alice Piper Memorial stands as a monument to the struggle to end segregation of Native American in California's public schools. Alice Piper's statue memorializes the blooming of a new age of awareness in our country. The statue overlooks the amazing specimens of Owens Valley flora. The garden will provide a fresh interest in the natural resources of the Eastern Sierra and in the history and impact of a great tribe.

--Alan Bacock

November General Meeting Presentation —Sophia Winitsky's Research on Sagebrush Regeneration in the Inyo National Forest

Sophia Winitsky, the CNPS Hudson intern for 2015, presented her observations on patterns in sagebrush regeneration throughout the Inyo National Forest. For the past six months, Sophie has been working alongside the Forest Service's botany team, advised by Michele Slaton and Jeff Holmquist, to study changes over time in sagebrush steppe and to identify where sagebrush recruitment is strongest. She visited vegetation plots set up by the Forest Service throughout the Inyo NF to gather her data and add to an existing database used for management on the Inyo NF. From her dataset, sagebrush recruitment on the Inyo was most prevalent on the northern end of the forest, in lower shrub cover areas, but around older sagebrush stands.

Throughout the six-months internship, Sophie also went on three rare plant monitoring trips, many trips to Yosemite for aquatic insect sampling, and attended many CNPS events. She learned much about native plants, insects, navigation and different agency, academic, and enthusiast approaches to plants and ecology.

--Michèle Slaton



Sophie Winitsky

Greenhouse Update

During the past several years, a first-in-the-USA detection of *Phytophthora tentaculata* occurred in several California native plant nurseries and restoration areas. Follow-up investigations have identified more than 15 *Phytophthora* species in native plant nurseries. Inadvertent planting of *Phytophthora*-infected nursery stock into native habitats has the potential to introduce these pathogens into wild lands. Many of these *Phytophthora* species appear to have wide host ranges, capable of causing disease on plants across many families. There are many unknowns about *P. tentaculata* but with the devastation that *P. ramorum* has had on California oaks, native plant nurseries are working with caution.

Phytophthora tentaculata causes root rot and stem cankers, which may result in collapse and death of infected plants. Infected plants may appear undersized and off-color, with sunken lesions on the stem and discolored leaves. Peeling away the outer tissues of the main stem may reveal a blackened area in the cambium. Depending on the extent of the infection, plants may appear stunted with some dieback or the majority of the above ground parts may be dead with few green leaves. On infected plants, root tissues are damaged and plants may have root systems less than the volume of healthy plants of a similar size and age. The roots may appear soft or darkened, often with sloughing cortex tissue.

The table below is a list of currently known susceptible species. Many of these plants are not native to the Eastern Sierra but are available at nurseries.

Latin name	Common name
<i>Acer macrophyllum</i>	Big leaf or Oregon maple
<i>Achillea millefolium</i>	Yarrow
<i>Aesculus californica</i>	CA Buckeye
<i>Ainus rubra</i>	Alder
<i>Anaphalis margaritacea</i>	Western pearly everlasting
<i>Arbutus menziesii</i>	Pacific Madrone
<i>Arcotostaphylos</i>	Manzanita
<i>Baccharis douglasii</i>	Marsh baccharis
<i>Baccharis pilularis</i>	Coyote brush
<i>Carex barbarae</i>	Santa Barbara sedge
<i>Ceanothus ferrisiae</i>	Coyote ceanothus
<i>Ceanothus rigidus</i>	Snowball Monterey Lilac
<i>Ceanothus thrysiflorus</i>	Blue blossom ceanothus
<i>Cornus sericea</i>	Dogwood
<i>Corylus cornuta</i>	Beaked hazelnut
<i>Cupressus macrocarpa</i>	Monterey cypress
<i>Drymocallis glandulosa</i>	Sticky cinquefoil
<i>Elymus glaucus</i>	Blue wild rye
<i>Eriophyllum stachydifolium</i>	Seaside wooly sunflower
<i>Euthamia occidentalis</i>	Western flat top golden rod
<i>Fragaria vesca</i>	Wild or Alpine strawberry
<i>Fragaria chiloensis</i>	Costal sand strawberry
<i>Frangula</i>	Coffeeberry
<i>Heteromeles arbutifolia</i>	Toyon
<i>Salvia</i>	Common Sage

The California Native Plant Society recommended protocols for nurseries to avoid the spread of *Phytophthora* and other diseases. We have implemented these at the propagation center, where plants are grown for the annual plant sales as well as local restoration projects. They are also good practices to use in the home garden.

1. Ensure good drainage, don't allow plants to sit in standing water.
2. Be careful what you buy. Plants grown from seed are less likely to be infected than ones propagated from cuttings (all our plants for the plant sale are grown from locally collected seed). If you buy plants susceptible to *Phytophthora*, buy from reputable nurseries.
3. Keep propagation areas clean as possible. Get rid of any weeds, sick or dead plants and leafy debris. Use clean tools, clean container media and clean water.
4. Sanitize your pots. Any pots that are being reused need to have all the soil scrubbed out of them and then they need to be soaked in a disinfectant (for

example, 1 part bleach to 9 parts water) for 30 minutes.

5. Never put pots on bare soil. *Phytophthora* moves easily from soil to pots by swimming through films of water or being splashed onto plants by irrigation water. You should assume all soil is contaminated. Place a gravel layer of 3-4 inches between soil and containers.

6. Don't let containers tip over. Plants can become infested by leaf contact with infested ground.

7. Don't keep sick plants. Don't keep them hoping they will get better. Dispose of them.

8. Be alert for disease symptoms, so scout your plants frequently.

Our propagation center is set up well. Our soil mixing area has a cement floor so it doesn't come into contact with the ground. All our plants spend their lives on tables. Every pot that comes back now gets washed and soaked in disinfectant before it is reused. Because of the extra time it takes, we only recycle the narrow deep pots that the plants are grown in and we sell at the plant sale. We don't use gallon pots from nurseries.

The California Native Plant Society is offering a workshop on *Phytophthora* in conjunction with their next chapter council meeting in Long Beach on March 12. Check the CNPS Chapter Council website for updated information on these workshops and how to register.

--Katie Quinlan

Conservation Update

Desert Renewable Energy Conservation Plan

On November 10, 2015, Federal and State officials released revisions to the proposed Desert Renewable Energy Conservation Plan in an FEIS and Proposed Land Use Amendment. Following the comment period that ended on December 6, the plan will be finalized. We expect the Record of Decision (ROD) to be released in early 2016. This is Phase I and covers only BLM public lands in the planning area. The plan designates areas where concentration of renewable energy projects is encouraged as well as those areas to be protected from renewable energy development.

Owens Valley Solar Study Area

As part of the Renewable Energy General Plan Amendment (REGPA) process Inyo County is evaluating the Owens Valley Study Area (OVSA) for

appropriate solar photovoltaic facility development. To review updated mapping for this project: Under <http://databasin.org/> search for the "Owens Valley Solar Energy Study (OVSES)" Gallery.

Forest Planning on Three Forests in the Southern Sierra

The Forest Service continues to develop revised plans for the Inyo, Sequoia and Sierra National Forests. We have been told that draft forest plans and a draft environmental impact statement may be available for public comments as early as February 2016. The Forest Service has invited comments from stakeholders on its approach to addressing at-risk species and monitoring of the future plans. The Bristlecone Chapter, along with state CNPS, continues to work with the Forest Legacy to help guide the Forest Service in their planning.

Conservation for at-risk species, under the national planning rule adopted in 2012, is addressed in part by the identification of "species of conservation concern" (SCC). These are a subset of at-risk species on a given national forest for which the Regional Forester judges that there is substantial concern about their persistence. At this point in the process, the Forest Service has provided a draft of list of SCC, but has yet to provide a rationale for why a species was included or excluded from this list. To ensure that these and other imperiled species are conserved in the new forest plans, they must first be named as SCC and then standards and guidelines need to be included in the forest plan.

The Forest Service also released a draft monitoring program for public comment in October. A monitoring program, as directed by the planning rule adopted in 2012, is required for each national forest. The monitoring program is meant to evaluate the progress of the revised forest plans and to detect when, in the future, the forest plan should be revised or amended. The preliminary draft program that was circulated did not adequately address key resource issues. The Forest Legacy submitted detailed comments to the Planning Team and will be talking to the agency in the coming months about necessary improvements.

We expect that a report on monitoring of at-risk species developed by an independent team of scientists will be finalized before the end of the year. This team of experts, commissioned by Sierra Forest

Legacy, the Forest Service and several other parties, was charged with providing a set of recommendations for monitoring wildlife that may be affected by forest management. One of the recommendations in the draft report is to create a bioregional monitoring strategy before developing forest-level or local-level sampling designs. Developing the bioregional strategy first is important because it allows for a systematic sampling approach to occur across the entire bioregion. For more information: www.sierraclub.org/toiyabe/range-light.

Owens Lake Master Project

The Bristlecone Chapter submitted scoping comments (Notice of Preparation—NOP) in August 2015, providing LADWP with our environmental concerns regarding the development of the DEIR for the implementation of the Owens Lake Master Project (OLMP). The proposed OLMP modifies dust control methods to reduce emissions, while also reducing the amount of water used for dust suppression on the lakebed, in compliance with agreements with the Great Basin Unified Air Pollution Control District. LADWP is evaluating the use of groundwater from beneath Owens Lake for dust suppression, which CNPS does not support. Expect the OLMP DEIR to be released soon in fall 2016. The Bristlecone Chapter will try to host a comment letter writing workshop during the comment period once the DEIR is released. Check our website for background information—<http://bristleconecnps.org>

Bodie Hills

The Bodie Hills Conservation Partnership is seeking a new organizer. More: <http://bodiehills.org/latest-news-updates/>.

--Julie Anne Hopkins

Botany Is: *Ericameria paniculata*

A number of weather-related events this fall have resulted in mud and debris flows large enough to close highways. These occurred both locally in Chalfant Valley and on the Death Valley Road east of Big Pine. I visited the latter site and was amazed at the depth of the flows and at the quantity of sand and gravel that was eroded and deposited. Walking the washes post-storm revealed how episodic these events are, and how the plant communities that grow in them adapt and survive.

There are many shrubs and perennials that persist in these washes, but one in particular stands out. While the typical Rabbitbrush (*Ericameria nauseosa*) nearly smothers the entire Owens Valley, there is another one that persists in the gravel washes at the base of the White and Inyo Mountains. This is black banded rabbitbrush, or *Ericameria paniculata*. Another common name is Mojave or punctate rabbitbrush, referring to its presence in the Mojave Desert and to the tiny punctate or recessed pockets or glands on the leaves, which are also common on the locally abundant *Ericameria teretifolia*, green rabbitbrush.

Fortunately, the black bands from which the common name is derived are easily seen on young stems throughout the year. These are caused by a smut fungus (*Puccinia splendens*), which causes the stems to blister and turn black. These hardy shrubs have stout root systems that penetrate deeply into the sands and gravels of many of the ravines, bajadas, and washes of the Mojave Desert and along the east side of the Owens Valley. This plant can also be found in Nevada, Utah and New Mexico. Smashed by rocks, mud and sand, they resprout from exposed roots and bloom especially well after summer or fall rains, attracting a robust cloud of insects, including bees and butterflies. Nearby *Atriplex polycarpa* or *Ambrosia dumosa*, can't hold a candle to these brightly 'lit' "Sunflowers."

This plant was first described in 1873 by Asa Gray as *Bigelovia paniculata*, from a collection made by Arthur Schott, during the Mexican Boundary survey somewhere in southeastern California. This is the same Schott for whom *Loeseliastrum schotti* and *Peucephyllum schotti* are named. This taxon has been moved to *Chrysothamnus* and more recently to *Ericameria*, where we can hope it may stay for a while. As of this writing I am not sure why Gray named a genus after John Milton Bigelow, however Bigelow was on the same boundary survey and had a more precise role as a botanist than Schott, whose primary position was that of assistant surveyor.

--Steve Matson



*Black banded rabbitbrush
--Photos by Steve Matson*

Up-Coming Events

January 22, 2016 – Deadline for Mary DeDecker Botanical Grant Applications

<http://bristleconecnps.org/dedecker/grant/index.php>. Please direct questions to grants@bristleconecnps.org.

January Board Meeting

Wednesday, January 20, 6 PM Conference Room, 351 Pacu Lane, Bishop.

All members are welcome.

January Bristlecone Chapter Meeting and Program

Wednesday, January 27, White Mountain Research Center, 3000 East Line St., Bishop. 6:00 PM 2016

Field Trip Planning. Pizza provided. Bring salads and field trip ideas.

7:00 PM General Meeting

Sagebrush and Pinyon-Juniper Restoration.

Heather Stone, Interagency Vegetation

Management Planner with the Bishop BLM and Inyo National Forest, will speak about ecosystem restoration techniques.

Events of Interest

January-April 2016 Erika Perloff will be showing her pastel landscape paintings at the San Francisco Botanical Garden. The show is the culmination of a year spent following California's native flora through the season, from the coast to the White Mountains.

August 2016-January 2017. Erika Perloff will also be showing work specific to the Sierra and Eastern Sierra at the Mono Lake Committee Information Center & Bookstore.

Contact erika@erikaperloff.com.

April 2-3, 2016 CNPS native garden tour in eastern San Diego and the El Cajon valley. These gardens have been established in a climate a bit more variable than the pampered gardens near the coast. For more information, see our Garden Native website, gardennative.org

Up-Coming Events

April 22-24, Owens Lake Bird Festival

Join Friends of the Inyo and our partners for the second annual Owens Lake Bird Festival in Lone Pine.. The festival will celebrate migrating shorebirds as they move between hemispheres at Owens Lake Important Bird Area and highlight the significance of the Owens Lake story and the return of a threatened habitat. For more information, visit friendsoftheinyo.org.

University of California Naturalist Classes in 2016 in the Truckee- Lake Tahoe area.

May 5 - June 16, Classes will be held at the UC Davis Tahoe Center for Environmental Research (TERC) in Incline Village.

June 20-26. This is a residential course and participants will receive lodging at the station. Both classes qualify for UC credits through UC Davis. For detailed information <http://sagehen.ucnrs.org/events.htm#calnat>

Next Issue

Please have your articles or information to us by February 15, 2016.

Bristlecone Chapter Directory

President: Katie Quinlan 760-873-8023

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Creosote Ring Sub-chapter: Kathy LaShure 760-377-4541

Chapter Council Rep: Stephen Ingram 760-937-9918

Conservation/Partnerships: Julie Anne Hopkins
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DeDecker Grants: Michèle Slaton 760-938-3258

Field Trips: Sue Weis 760-873-3485

Historian: Kathy Duvall 760-387-2122

Bishop Plant Sales: Katie Quinlan 760-873-8023

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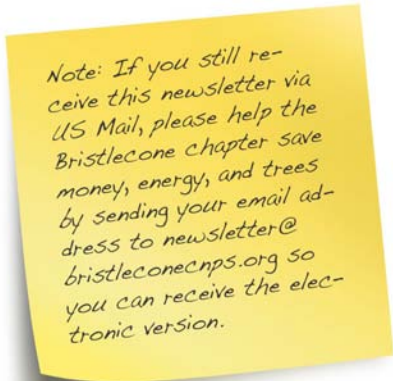
Book Sales: Sue Weis 760-873-3485

T-shirt Sales: Scott Hetzler 760-873-8392

DeDecker Garden: Richard Potashin 760-263-5022

The California Native Plant Society

Bristlecone Chapter
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Membership

The California Native Plant Society is an organization of laypersons and professionals united by an interest in the plants of California. It is open to all. The society, working through its local chapters, seeks to increase the understanding of California's native flora and to preserve this rich resource for future generations.

To Join or Renew Online: Go to cnps.org and click on the JOIN/renew button at the top of the page, or mail in the form below:

Name: _____
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I wish to be affiliated with the Bristlecone Chapter: _____
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__ Patron \$300
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