



Bristlecone Chapter

Dedicated to the Preservation of California Native Flora

The California Native Plant Society

Bristlecone Chapter Newsletter

Volume 40, No. 5
September–October 2019

President's Message, September 2019

With this summer's news—heat waves in Europe and Alaska, burning tundra in Alaska and Siberia and glaciers melting at an unprecedented rate in Greenland—I got a little overwhelmed and discouraged about the state of the planet. But then I read an article in *The Guardian*, by Damian Carrington, titled, "Tree planting 'has mind-blowing potential' to tackle climate crisis."

Recent research indicates that planting billions of trees across the world is by far the biggest and cheapest way to tackle the climate crisis. A worldwide planting program could remove two-thirds of all emissions that have been pumped into the atmosphere by human activities. The scientists specifically excluded all fields used to grow crops and urban areas in their analysis and still found that there are 1.7 billion hectares of treeless land on which 1.2 trillion native tree saplings could naturally grow.

Now, I can't go out and plant a billion trees, but I can plant trees and plants in my garden and near where I live. Led by biologist R. Dave Evans of Washington State University and published in 2014, Evans' study conducted in the Mojave region found that deserts also store carbon in a microorganism-rich layer of soil known as the rhizosphere, which is the soil immediately next to the roots of plants. Deserts aren't as effective at capturing carbon as the forests, but they do sequester it well in the calcium-rich soils called caliche.

Planting plants is a low tech, low cost thing I can do now to help with the global climate crisis. I don't have to wait for politicians to agree that we need to do something, nor do I have to wait for technology to discover a magical solution. I can plant plants and make a small contribution in the right direction.

--Katie Quinlan

September General Meeting & Potluck

**Wednesday, Sept. 18th, potluck begins at 6:00 p.m.,
program begins at 7:00 p.m.**
**US Forest Service Supervisor's Office, 351 Pacu
Lane, Bishop (behind the DMV on W. Line St.)**

 **Speaker: Keir Morse, Rancho Santa Ana
Botanic Garden**
**Program: *Bush-mallows - the genus
Malacothamnus***

Malacothamnus is a genus of fire-following shrubs in the mallow family, many of which are of conservation concern. Confusion between taxa and disagreement on which taxa should be recognized makes managing them for conservation problematic. Keir Morse, PhD student at Rancho Santa Ana Botanic Garden, is trying to sort out the taxonomy. He will give an introduction to the genus *Malacothamnus* and share what he has learned so far about populations across southern CA, including Inyo County.

New Mining Threat in the Bodie Hills

There is a NEW MINING THREAT in the Bodie Hills! Another Canadian company, Radius Gold, is proposing mining exploration in the Bodie Hills adjacent to the Bodie Wilderness Study Area. Mining and exploration in the Hills would have numerous significant impacts on open space, connectivity, water quality in Rough Creek, and sensitive wildlife. The Bi-State Sage Grouse currently proposed for listing by the US Fish and Wildlife Service, the pronghorn, raptors, and several species of lagomorphs (rabbit family) all rely on the remote Bodie Hills for habitat.

Recently, the company submitted a "pre-application" to Mono County for exploration in the Bodie Hills near the Dry Lakes Plateau and Rough Creek drainage. Radius Gold is also proposing another exploratory drilling and mining project in the eastern Bodie Hills on the Nevada side near Bald Peak.

There will be a future public meeting before the Mono County Land Development Technical Advisory Committee (LDTAC). For more information and links to Radius Gold's proposals and the LDTAC, go to www.bodiehills.org.



Photo by Bruce Gordon.

Updated Edition of the CNPS Fire Recovery Guide

The updated California Native Plant Society Fire Recovery Guide is now available for download at www.cnps.org/fire-recovery and in print through participating community partners.

The 92-page wildfire guide is a collaboration between the California Native Plant Society, dozens of scientific and topical experts, and more than 30 state and local organizations.

The guide includes:

- Frequently asked questions about wildfire in California
- A post-fire checklist for property owners
- A decision-flow diagram for post-fire conditions
- Erosion control recommendations
- Tips for tree care and landscaping after fire
- Defensible space updates
- An overview of California's most fire-prone habitats

California is still recovering from the 2018 wildfire season, the most severe and deadliest on record. As communities rebuild, CNPS and partners want to help

Californians steward the post-fire environment and avoid further damage.

"When we look at a burned landscape, our impulse may be to clean it up and re-plant it right away," said Liv O'Keeffe, senior director of communications and engagement for CNPS. "But we've got to be patient when it comes to natural and healthy land recovery. In fact, we can unknowingly do more harm than good without the right information."

Experts worry about factors like erosion, landslides, habitat degradation, and invasive weeds, all of which can destroy the integrity of local ecosystems and make an area more susceptible to future fire. Common mistakes CNPS sees people make after wildfire include:

- Using seed mixes and mulches that include noxious weeds like French broom, cheat grass, and thistles. (These weeds can choke out local plants and quickly grow into what's known as "flashy fuels" for wildfire.)
- Assuming a burned or charred tree is dead. (Large, hardwood trees like oaks can often survive fire as long as their inner tissue is intact.)
- Ripping out vegetation and clearing debris too soon. (Many native plants will resprout from their base or underground structures, or re-seed themselves. Removing them can destabilize property, contribute to erosion, and destroy habitat and food sources for nearby wildlife.)
- "Clear-cutting" property or other extreme landscaping measures in the hopes of protecting homes. (In fact, experts instead advise people start with an emphasis on home-hardening like fire-proof building materials and a 5-foot no fuel zone immediately around structures.)
- Seeding areas with California poppy mixes. (Seeding is rarely recommended in most burn areas, and even native seeds must be carefully vetted for fragile burn landscapes.)

"Now more than ever we need sound, fact-based information to inform our actions as we adapt to California's new wildfire realities," said CNPS Conservation Program Director Greg Suba.

CNPS began work on the guide following California's 2018 wildfire season. The booklet is an expanded and updated edition of the organization's original Fire Recovery Guide for Wine Country, published after the 2017 wildfire season. The Wine Country edition was so popular that CNPS ran out of printed copies, tracked thousands of digital downloads, and received hundreds of requests for information on other areas of the state.

"Trustworthy, helpful information is a healing balm at a time when our communities are trying to put our lives back together and stay safe," said Calli-Jane DeAnda, executive director of Butte Fire Safe Council. Butte County's North Valley Community Foundation helped fund the statewide guide along with the Giles W. And Elise G. Mead Foundation, U.S. Fish and Wildlife Service, Marin and Mount Lassen chapters of CNPS, and individual CNPS donors.

"We're incredibly grateful to the authors, scientists, and funders who gave us the chance to do something helpful for our friends and neighbors in California," CNPS Executive Director Dan Gluesenkamp said. "Thanks to them, we've been able to provide something of great value that should never have a price tag."



Field Trip Report

June 22. Upper Summers Meadow

An enthusiastic group of 10 from far and wide participated in the exploration of this botanically little-known corner of Mono County south of Bridgeport. Upper Summers Meadow Road diverges from Green Creek Road about a mile west of Hwy 395. The territory extending away from the road is a patchwork of private, Bureau of Land Management and Toiyabe National Forest lands, with the latter becoming predominant towards the west. Our first couple stops were roadside viewpoints, the first just before the crossing of Green Creek, which was roaring. The vista included views of the Bodie Hills, distant Sweetwater Mountains, Bridgeport Valley, Hunewill Hills, and, of course, Sierra Nevada, all gorgeous on a beautiful day. Roadside plants included a fine stand of prickly poppy (*Argemone munita*), arrow-leaved balsamroot (*Balsamorhiza sagittata*), and several cryptanthas (*Cryptantha* spp.).

Travelling onward, we made a brief stop overlooking private meadow pastureland (Lower Summers Meadow), with acres of Western blue flag (*Iris missouriensis*), which is not found in Missouri! A "Lewis and Clark" plant, it was first collected on their journey west, near the headwaters of the Missouri River. Also viewed from a distance were Rydberg's penstemon (*Penstemon rydbergii* var. *oreocharis*), a yellow-flowered cinquefoil (likely *Potentilla gracilis* var. *fastigiata*, very common in meadows of this area), and meadow paintbrush (*Castilleja miniata*).



Toad lily (*Montia chamissoi*). Photo by Tim Messick.

Another couple miles up the road, we made a short foray on an old Forest Service road towards Cameron Canyon. This was a very flowery sagebrush area, with Leichtlin's mariposa lily (*Calochortus leichtlinii*) in

abundance, humble phacelia (*Phacelia humilis*), mule's-ears (*Wyethia mollis*), locoweeds (*Astragalus* spp.), Anderson's clover (*Trifolium andersonii*), and hawksbeards (*Crepis occidentalis* and *C. sp.*). We speculated on whether the stands of dark green, short-needled pines we saw on the distant slopes were western white pine (*Pinus monticola*). A beautiful pure stand of this regal tree is found along the Dunderberg Road, so we thought these might be the same. Further exploration needed!

While it was still morning we reached Upper Summers Meadow, a formerly grazed sagebrush-meadow community with huge stands of silver sagebrush (*Artemisia cana* ssp. *bolanderi*) bordering the wetter central portion where wildflowers abound. We saw Anderson's larkspur (*Delphinium andersonii*), Rydberg's penstemon, Brewer's navarettia (*Navarettia breweri*), Western blue flag, rosy pussytoes (*Antennaria rosea*), and long-leaved suncup (*Taraxia subacaulis*), among many others. But this was just a warm-up for the main event.



Castilleja pilosa. Photo by Mary Beth Cook.

Our ultimate destination was a higher unnamed meadow that we christened 'Upper' Upper Summers Meadow, reached after a short but steep climb up a rocky road. The flowers and the views from this secret spot were fantastic. We had lunch, then wandered for several hours through this lovely wet meadow, in early flowering stage, and the "enriched"

sagebrush scrub and shaded aspen groves that surround it. The kinds of flowers we saw were way too numerous to list completely, but a sample includes: paniced and meadow death camas (*Toxicoscordion paniculatum* and *T. venenosum*), toad lily (*Montia chamissoi*), parrothead paintbrush (*Castilleja pilosa*), hairy owl's clover (*Castilleja tenuis*), single-stemmed groundsel (*Senecio integerrimus*), silver lupine (*Lupinus argenteus*), Eaton's erigeron (*Erigeron eatonii* var. *sonnei*), yellow violet (*Viola purpurea* ssp. *aurea*, CNPS 2B.2), mule's ears, and balsamroot, all in abundance.

I want to thank those who travelled so far from home—Davis, Ventura, Los Angeles, Los Altos—as well as Bristlecone members from Lone Pine, Bishop, Lee Vining and Swall Meadows, for sharing your knowledge (and apricots!) and adding so much to a wonderful day.



The group at 'Upper' Upper Summers Meadow. Photo by Mary Beth Cook.

I end this report by mentioning that a portion of the Toiyabe NF land that we visited is the area formerly grazed by sheep where the Toiyabe is now proposing to reinstate grazing—by cattle. I never visited this land in its sheep grazing phase, so I can't comment on its condition at that time. I can say that the area we visited was lush, full of flowers, and visually free from the impacts of grazing, of which we are all aware. I suggest that you visit this area if you haven't been there, to make your own evaluation of the changes that grazing may bring so you can comment on the Toiyabe's proposal.

--Ann Howald

2018 DeDecker Botanical Grant, Progress Report

The genus *Malacothamnus* (the bush-mallows) is a taxonomically controversial group with 16 taxa currently included in the CNPS Rare Plant Ranking system. For my PhD dissertation, I am using morphometric analyses, DNA Sequencing, comparative phenology, and extensive field evaluations to resolve the taxonomy of the genus and evaluate the conservation status of each taxon.



Top: *Malacothamnus orbiculatus* in flower.

Bottom: Abundant *M. orbiculatus* growing along Lone Pine Creek after the 2016 Lone Pine Fire. Photos by Keir Morse.

During the 2018 season, I made significant progress in my research, surveying much of the state. I mapped over 1,600 points of *Malacothamnus* on California, collected over 100 voucher specimens of more than 21 possible taxa for morphometric and DNA analyses, and made 19 seed collections of 15 possible taxa to deposit in the Rancho Santa Ana

Botanic Garden seed bank. My first batch of DNA has been sequenced and the data from this will be used to help clarify where I need to focus my efforts for the coming season.

In the Bristlecone Chapter area, I found seven populations of *Malacothamnus orbiculatus* from the Chimney Peak area in the south to the Big Pine area in the north. Only one population was found east of Highway 395 on Hunter Mountain. Any observations of additional populations east of Highway 395 or north of Big Pine would be most welcome.

--Keir Morse

Garden Updates

This year's summer of perfect temperatures (I mean really, can you remember a summer when we have had such great temperatures?) has been wonderful for the native plants. Many of them bloomed on the tables and looked lush and green throughout the summer. This year I never had to turn on the automatic watering system and just hand watered all summer. I think this really helped the plants do their best.

Throughout the growing season I didn't have any mice problems until the end of July. Even in the greenhouse during the early part of the season, I had no signs of mice. But by the end of July, two pack rats showed up and start tasting the desert peach and I was trapping 2-3 mice a day. They were very attracted to the Owens Valley checkerbloom and the seedlings of winterfat. Keeping the traps baited and set reduced the potential amount of damage to the plants.

Saturday, August 24th, was a perfect weather day for our annual plant sale. There were 87 customers who together, bought 708 plants. The Eastern Sierra Land Trust had 14 participants for their pollinator garden grant this year. Julie Fontaine was not able to attend the sale but she donated some of her magical compost tea to help get all those new plants off to a good start.

The plant sale could not have happened without a lot of great help. Here are the volunteers who rapidly responded when I put out an email for help with planting and potting up the plants: Steve D., Nick, Pete, Harinam, Rosemary, Margaret, Jim, Elaine, Kay,

Marty, Laura, Charlie, Essra, Tim, Patti, Hilary, Jared, Sue, Jerry, Theresa, Loraine, Gaylene, Jared and Matt.



Plant Sale photo. Photo by Katie Quinlan.

Then there were the sale-day helpers, those wonderful folks who gave up their Saturday morning to make sure the sale went smoothly: Pete, Margaret, Kay, Sue, Steve, Harinam, Scott, Theresa, Rosemary, and Jerry. Many thanks to all of you who made the plant sale such a wonderful success!

--Katie Quinlan

Welcome to the Bristlecone Chapter!

We happily welcome members new to our local Bristlecone Chapter.

Beth in Oakland,
Corie in Bishop,
Lisa in Davis,
and
Meri in Crystal Bay

Thanks to all members, new and old, for supporting the local chapters that make up our big community of the California Native Plant Society!

Up-Coming Events

(For updated information, visit
www.bristleconecnps.org/events)

Wednesday, September 11, 6:00 pm
Bristlecone Chapter Board Meeting
Eastern Sierra Land Trust, 250 N. Fowler, Bishop
All members are welcome.

Up-Coming Events

(For updated information, visit
www.bristleconecnps.org/events)

**Wednesday, September 18, 6:00 pm Potluck,
7:00 Presentation**

Bristlecone Chapter General Meeting

US Forest Service Supervisor's Office, 351 Pacu Lane, Bishop (behind the DMV on W. Line St.)

Keir Morse, a PhD student at Rancho Santa Ana Botanic Garden will present his talk "Bush-mallows - the genus *Malacothamnus*."

Sept 19-22, Jepson Herbarium Workshop, Some Like It Hot: Late Summer Flora of the Eastern Mojave Highlands

Instructors: Jim André and Tasha La Doux
Sweeney Granite Mountains Desert Research Center

This course will introduce botanists with moderate to advanced taxonomic training to the ecology and taxonomy of the diverse late summer/early fall flora in the eastern Mojave Desert, with special emphasis on rare or unique species. Through field-intensive observation, lab identification, and evening presentations, participants will gain a better understanding for the major plant families that comprise the hot-season flora. Field trips will target the mid to higher elevations of the Mojave National Preserve, planned in accordance to optimal blooming conditions.

Accommodations: Shared dormitories with bathrooms. Tent camping will also be available.

Meals: Catering included.

Transportation: Vehicles must have good clearance and sturdy tires (including spare!). Carpooling possible. High clearance 4x4 with extra passenger space preferred.

Hiking: Easy to moderate; short hikes in sometimes rugged terrain.

Start/End: Thursday afternoon – Sunday 12:00 pm.
Course Fee: \$570/600

This workshop has been approved for seven Professional Development Credits by the California Consulting Botanist Board of Certification

Register for the wait list at
ucjeps.berkeley.edu/workshops/regform.html

Up-Coming Events

(For updated information, visit
www.bristleconecnps.org/events)

Oct 15–18, Cal-IPC Symposium, Riverside Convention Center, CA

Cal-IPC provides science-based tools and information to help land managers and others make the best choices for California. The symposium is the annual gathering of colleagues from across the state to network, learn, and celebrate everyone's hard work.

Online registration is open until Oct. 1st! More information at www.cal-ipc.org/resources/symposium/

Oct 19, Friends of the Inyo, Panamint Valley & Surprise Canyon Wilderness Hike, 8:00 am–7:00 pm

In celebration of the 25th anniversary of the California Desert Protection Act (CDPA), join Friends of the Inyo on a hike into Panamint Valley and Surprise Canyon Wilderness! We will highlight how the CDPA protects places the desert places we love and how recent legislation secured additional protections for the Surprise Canyon Wilderness. For more details, please visit the FOI website at www.friendsoftheinyo.org/event/panamint and RSVP with trip leader Bryan at bryan@friendsoftheinyo.org

Please send your articles and other information to us by October 15, 2019 for the next issue.

Bristlecone Chapter Directory

President: Katie Quinlan 760-873-8023

Vice President: Michèle Slaton 760-920-8693

Secretary: Kathleen Nelson goatheads@aol.com

Treasurer: Sue Weis 760-873-3485

Chapter Council Rep: Stephen Ingram 760-937-9918

Conservation/Partnerships: **OPEN**

Programs: Michèle Slaton 760-920-8693

DeDecker Grants: Michèle Slaton 760-920-8693

Field Trips: Sue Weis 760-873-3485

Historian: **OPEN**

Bishop Plant Sales: Katie Quinlan 760-873-8023

Mammoth Plant Sales: **OPEN**

Publicity: Gaylene Kinzy

Newsletter: Elaine Chow newsletter@bristlconecnps.org

Membership: Elaine Chow membership@bristlconecnps.org

Website: webmaster@bristlconecnps.org

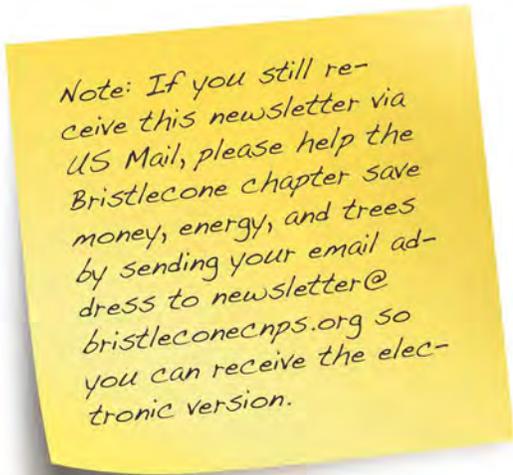
Hospitality: **OPEN**

T-shirt Sales: Stephen Ingram

DeDecker Garden: Peter Anderson

The California Native Plant Society

Bristlecone Chapter
P.O. Box 364
Bishop, CA 93515-0364
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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 www.cnps.org and click on the JOIN/renew button at the top of the page, or mail in the form below:

Name: _____
Address: _____
City: _____ State: _____
Zip Code: _____ Phone: _____
Email: _____
I wish to be affiliated with the Bristlecone Chapter: _____
Other: _____

Mail To / Make Payable To:
CNPS Membership Coordinator
2707 K Street, Suite 1
Sacramento, CA 95816

Gift Contribution: _____ Wherever needed
Specific Area: _____

Membership Category

- | | |
|----------------------------|----------|
| _ Student / Limited Income | \$25 |
| _ Individual | \$50 |
| _ Plant Lover | \$120 |
| _ Supporter | \$500 |
| _ Patron | \$1,000 |
| _ Benefactor | \$2,500 |
| _ Steward | \$5,000 |
| _ Guardian | \$10,000 |
| _ Additional Contribution | _____ |