Dedicated to the Preservation of California Native Flora

The California Native Plant Society

Bristlecone Chapter Newsletter

Volume 41, No. 4
July–August 2020

President's Message

You may have noticed that in the last two newsletters the Vice President posted a message rather than me. Michèle gracefully stepped into the role because I was dealing with my husband's health. He contracted a rare and aggressive form of lymphoma and went from health to death within six months. I now need to focus on my family's needs and resign as president. This leaves our chapter in need of a new president. The presidential duties are:

- Preside at all General and Executive Board meetings. (There are six a year. The president often has to bring up issues for the board meeting.)
- Provide general supervision of the affairs of the Chapter and Executive Board.
- Serves as ex officio member of all committees.
- Writes the "President's Message" for the bi-monthly newsletter, this includes a brief synopsis of the Chapter business.
- Prepares and submits the Chapter's Annual Activities Report to the State office in their standard format (due in May).
- Attends or delegates someone to attend the Chapter Council meetings (at least once a year).
- Writes a synopsis of our chapter doings for the Chapter Council meetings (four times a year).
- Handles or delegates Chapter communication (mail, e-mail, telephone etc.).
- Prepares a brief synopsis of Chapter business at meetings of the membership.
- Performs all such other duties as are incidental to the office.

The current board is a great group of people to work with and meetings generally last an hour. If you are feeling the need to contribute to our community and would like to take on the presidential role, contact us.

-- Katie Quinlan

In Appreciation…

The Bristlecone Chapter has benefitted since 2014 from the dedication of our president, Katie Quinlan. Katie has fielded all manner of inquiries, project ideas, State Office requests, and who-knows-what, and guided the Chapter through it all, using the talents at hand of volunteers and other Board members when she could, and taking it on herself to carry things through. The time has come for Katie to pass the torch to a new president. Fortunately for us all, Katie will continue in her role in the native plant program. A big thank you to Katie for everything you've done for the Chapter and our native plants, and for all you continue to do. The Board would also like to offer our sincere condolences to Katie and family on your loss, and the difficult times you've been through.

If you would like to do something to honor Katie's husband, Tim Tiernan, the family has requested that donations be made to Eastern Sierra Cancer Alliance, P.O. Box 1523, Bishop, CA 93514. Please include that your donation is in Tim Tiernan's memory and that Katie Quinlan is the person to be notified of your donation. Donation amounts are kept confidential, but the family will know who donated. The money will go toward helping other people in our area with travel costs related to their cancer treatment.

-- Kathleen Nelson

CNPS Chapter Council Votes to be Carbon Neutral by 2030

At its quarterly meeting on June 6, the state Chapter Council voted to approve a new goal for CNPS to become carbon neutral by 2030. This means that "… our activities will, in net, add no greenhouse gases to the atmosphere every year. This goal encompasses work done by staff and volunteers, in activities, meetings, and events. Methods for reaching this goal

remain to be determined as of the adoption of this goal in 2020, so successful methods, techniques, innovations, and programs will be freely shared within CNPS as a normal function of the society." There was some lively discussion of concerns about the originally proposed "pledge" versus a "goal," and the group finally settled on the more aspirational and less commitment laden term. But hopefully the end result will be the same.

At the previous Chapter Council meeting in March, someone brought up the idea that maybe we shouldn't ding ourselves with "carbon shaming" if we are burning carbon to do conservation work that could, over the long term, reduce carbon emissions. For instance, if a CNPS volunteer is driving somewhere to pull weeds and plant trees, then perhaps the emissions from that car trip should not be included in a chapter or society's total carbon emissions count. But from an atmospheric perspective, carbon emissions are the same whether they are generated from a coal-burning powerplant in Arizona or a Prius driving to the local recycling center. Carbon is carbon, and we all need to do whatever we can to reduce our production of it.

One of the main changes that the Chapter Council had been considering since greenhouse gas reductions became an important topic was to hold more meetings online. Since California has been under self-quarantine restrictions due to the COVID-19 pandemic since March, the Chapter Council has held its last two quarterly meetings (as it will the next one in September) using Zoom. The meetings now take up much less time, attendance has been greater, and carbon emissions have been reduced significantly. On the other hand, it is more fun to meet in person, go on field trips, and enjoy drinks, dinner, and a program together the way we used to. In the interest of striking a healthy balance between holding all meetings online and interacting in person like the social creatures we are, it is likely that we will hold some meetings in person but continue holding some or most online once the coronavirus pandemic is no longer a threat.

There are many steps that CNPS as a state organization can take, and many steps that CNPS chapters and volunteers can take to reduce our carbon emissions; in many instances, these are the same. For example, chapters and the state office will need to look at their supply chain for the t-shirts, books, and other merchandise we sell and figure out—to the extent possible—if there are vendors providing goods in a less polluting and more sustainable way. Or for practices where it is impractical or impossible to avoid carbon emissions, we can purchase certified carbon offsets. These ideas will be explored further in future Bristlecone newsletters, so please stay tuned and keep engaged!

-- Stephen Ingram

Conservation Water Updates: Summer 2020

Owens Valley Pumping Plan

By April 24 of each year, Los Angeles Department of Water and Power (LADWP) must submit its annual pumping plan for Inyo County for the coming year. The Inyo County Water Department (ICWD) reviews this plan and makes its own recommendations. These are considered by the Technical Committee where staff of LADWP and ICWD meet to reconcile differences. Then in mid-May, the pumping plan goes before the Standing Committee which has elected or appointed representatives from both Los Angeles and Inyo County. No formal action by the Standing Committee is required for LADWP's pumping plan to move forward.

This year, beginning in May, LADWP recommended pumping of approximately 73,000 to 93,000 acre-feet from Owens Valley well fields. ICWD recommended approximately 71,000 acre-feet based on still-recovering groundwater levels and because some vegetation communities are below a baseline set in the 1980s. The coming year must rely on 74% of average run-off and low precipitation in the past year.

The Standing Committee, despite many letters urging lower pumping levels, approved LADWP's pumping plan. Since LADWP typically pumps at the maximum level, pumping for 2020 will approach 93,000 acre-feet or the upper level of average annual pumping over the past thirty years.

The Standing Committee did approve water allocations as recommended by the Technical Committee for the Lower Owens River Project and the Black Rock Wildlife Management Area. The Black Rock Management Area is one project where LADWP has cooperated in preparing a management plan as opposed to just allocating water to mitigation projects.

Pumping Test Results for 385W (Five Bridges Area)

Dr. Aaron Steinwand reports that the ICWD will use the data from well 385W "to revise the groundwater model before predicting what effect 386W could have. In general, what we learned in the 385W test was that the shallow aquifer was affected about what we expected or less. Since 386W is a different though similar well, we can infer that it might behave similarly. However, that assumes the geology at depth is the same and that the well modification works the same (i.e. doesn't leak)…. We required that water levels be pretty shallow before pumping 385W. That gives us some assurance that water levels after the test are still accessible to plant roots (which they are)."

The same starting conditions will be required for 386W as the starting conditions for the pumping test from 385W. Throughout this long process, ICWD has established that LADWP must work with the ICWD staff before any new wells are initiated. LADWP argued that wells 385W and 386W are not new wells. ICWD's position is that the wells, designated as permanently closed, are being reconfigured to tap deeper aquifers and therefore are new wells.

Owens Lake Six-Month Pumping Test

In its May 2020 report "Six-Month Pumping Test of Testing Well East (TW-E) at Owens Lake", LADWP proposes a pumping test in the northern part of Owens Lake. This test must be approved by the California State Lands Commission as administrator of state-owned lands.

The goals of the pumping test are to resolve data gaps associated with groundwater models for Owens Lake, improve the understanding of pumping from deeper aquifers, improve the groundwater model for Owens Lake and assist in developing "more robust measures" to protect groundwater-dependent resources. This includes impacts on vegetative dunes above the ownership boundary of California State Lands Commission.

The six-month test is proposed to take place "within the dust season for Owens Lake (mid-October through the end of June of the following year) to mimic conditions under which the well might be eventually operated to supply water for Owens Lake dust mitigation."

If approved and executed, a second six-month test would be proposed for Testing Well West. The deadline for responding to the proposal for a six-month test was June 29. The proposal was first sent to stakeholders on June 10, following a long period with no meetings with the Owens Lake Groundwater Committee. California Division of Fish and Wildlife requested a two-week extension, which LADWP has granted. Written comments should be sent to Dr. Saeed Jorat by email at saeed.jorat@ladwp.com. The notice states: LADWP staff will then be available to discuss your comments and suggestions and incorporate the necessary information into the Testing Plan before the final Testing Plan is released. The final Testing Plan will be used as the basis for the preparation of an appropriate environmental documentation for the test.

-- Edie Trimmer

Field Notes

The California Botanical Society puts out a quarterly journal called *Madroño*. The most recent issue (Volume 67, Number 1; January–March 2020) has a paper written by Nancy Morin and Tina Ayers. They describe or circumscribe quite a few new taxa for California in the genus *Nemacladus* (Campanulaceae, bellflower family). These are sometimes called threadplants, as they are tiny annuals with stems often less than one millimeter wide—i.e., threadlike. Part of this paper describes three new species that can be found close to us in Inyo or Mono counties. This is the story of one of those new species.

We begin with a Bristlecone Chapter field trip led by Kathleen Nelson (botanist for Inyo National Forest [NF], at the time) in 2010, June 19 to be precise. We were on a Rare Plant Treasure Hunt on a ridge line south of Badger Flat in the Inyo Mountains east of Independence. It had been a decent year for precipitation, so we were finding a fair number of plants. At some point I noticed this tiny (2") plant that resembled a *Nemacladus*.

I really had no idea what species it was. I photographed it and collected some with Kathleen. I later sent these pressed plants to Nancy Morin who had written the treatment for *Nemacladus* in *The Jepson Manual*. Meanwhile, I attempted to key out this mystery plant with absolutely no luck. One odd

feature of the descriptions of *Nemacladus* species was that none were mentioned as growing at 8,600 ft., which is where we were when we found the plant. Nancy considered that this could be something new, and left it at that.

Badger Flat threadplant, 2010.

Fast-forward nine years to May of 2019. A friend and fellow plant photographer, Aaron Schusteff, was planning on visiting the area. He wanted to find some of this putative new *Nemacladus*. I thought that it was a bit early in the year. (It had continued to rain and snow well into May.) As a counterpoint, Aaron sent me a link to a May 9 iNaturalist observation in the Inyo Mountains made by Martin Purdy, seasonal botanist for Inyo N.F.

Allow me to digress briefly to explain some big changes that have come to the world of botany—really all of biology—and perhaps Science in general. Online databases are changing "everything." Not that long ago— say over 30 years ago—if one were to do research on a plant or a group of plants, or develop a Flora for a region, one would need to visit an herbarium (at a University, for instance) and examine dried plant specimens one by one and take notes from the herbarium label about when and where something had been collected. During the 90s, electronic databases began to catalog data from these specimens . . . and soon these data were available online. Now, with a few keystrokes, you can instantly learn where and when some taxon was collected, with a distribution map as well. The next big change came with data-basing not just collections, but also observations of plants. This may not be quite as good as a physical collection housed in an herbarium. Nevertheless, combined with social media entries, observations of plants can appear almost instantaneously and be available to anyone. CalFlora does an excellent job of this for California plants, and iNaturalist does this for most biological entities across the entire world. You can even receive email updates on favorite species or observations made in a certain area.

Back to May 2019; Martin Purdy had observed precisely what I had seen in 2010. I was in shock! Aaron and I made contact with Martin. On May 22 we drove to where Martin had made his observation. Hundreds of little threadplants dotted the landscape, an open site with scattered pinyon pine, *Menodora*, *Ericameria*, and other shrubs. I had called Nancy to tell her about going out to find this population. She said to me: "That is outstanding, please photograph it and make a collection. That will become the type specimen." I was honored, and well, gulp, a bit scared. I had never collected a type specimen before. (A **type** is a particular **specimen** of an organism to which the scientific name of that organism is formally attached. In other words, a **type** is an example that serves to anchor or centralize the defining features of that particular taxon). Martin, Aaron, and I spent a few hours photographing, collecting, and talking at the type locality of what would become known as *Nemacladus inyoensis*.

Martin Purdy (left) and Aaron Schusteff at the type locality in 2019.

So far, collections and observations have limited the range of *N. inyoensis* to just the White and Inyo mountains (Late breaking news: also found in the

Panamint Mountains). 2019 was a banner year for this plant. I have not found any so far this year, but there was an observation from the southern Inyos by graduate student (Rancho Santa Ana Botanic Garden) Maria Jesus, who is working on a Flora of the southern Inyo Mountains (Conglomerate Mesa and adjoining areas).

With new images sent off to Nancy, and collections dropped off at the Jepson Herbarium in Berkeley, the real work began. Nancy and Tina had been examining 3500 *Nemacladus* specimens for their *Madroño* paper. This was necessary to provide a better sense of what the actual newly described species were, and where they could be found. To the best of my knowledge, there were no older collections than the one collected in 2010 by Nelson and Matson, followed by those collected by Matson, Purdy, and Schusteff in 2019, as well as Morefield collections in the White Mountains in 2019. Nancy and Tina provided the complete physical description, as well as the distribution, ecology, and phenology of the species. My hat is off to those two. I feel lucky to have been involved and very excited to introduce this new plant to you of the Bristlecone Chapter!

-- Steve Matson

Nemacladus inyoensis Harkless Flat 2019.
Photos by Steve Matson.

Our Annual Plant Sale will be Online

Normally, this is the largest native plant sale of the year located at the White Mountain Research Center (3000 E. Line St in Bishop). In consideration of public health and safety, we are putting a new plan of action in place: an online sale with curbside pickup. The **online sale will be open from the 16th to 21st of August**. Orders are to be picked up on Aug. 22nd. As orders come in, pick-up times will be arranged to avoid too large a group at the WMRC. More details to follow, so check your email and/or our website in the coming month.

Proceeds from the annual native plant sales provide funding for our Mary DeDecker Botanical Grants. The grant program is a fitting way to remember Mary DeDecker's many contributions to the people and plants of the Eastern Sierra.

Thanks for joining!

Thank you for your support in preserving our state's native flora and warm welcome to the new members who recently joined the Bristlecone Chapter: Bridget of Davis, David of Northridge, Heather of the Bronx, Kim of Sonoma, Jacky of Bishop, Jennifer of Oakland, Joanne of Sonoma, Pamela of Swall Meadows, Rose of Berkeley, Sarah of Danville, and Stewart of San Diego.

Up-Coming Events

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

Wednesday, September 16th, 6:00 pm
Bristlecone Chapter Board Meeting

Bristlecone Field Trips

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

ALL FIELD TRIPS ARE CANCELED OR POSTPONED UNTIL FURTHER NOTICE

Other Events

July 7–8, 2020
Rare Plant Survey Protocols, CNPS Workshop
Truckee Town Hall, 10183 Truckee Airport Rd, Truckee, CA 96161
CANCELED

July 28–30, 2020
Intro to Plant Identification, CNPS Workshop
Sierra Nevada Aquatic Research Laboratory(SNARL), 1016 Mt. Morrison Road, Mammoth Lakes, CA
CANCELED

Up-Coming Events

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

August 18–20, 2020
Vegetation Rapid Assessment/Relevé: The CNPS & CDFW Combined Method, CNPS Workshop
Santa Cruz, CA
TBD. Check for updates at
www.cnps.org/education/workshops

For information about this workshop, visit www.cnps.org/education/workshops/vegetation-sampling-august-2020.

August 16–21, Online Sale
August 22, Pick-up Day at WMRC
Bristlecone Chapter Annual Plant Sale
More details TBA.

September 1–3, 2020: CEQA Impact Assessment, CNPS Workshop
Sacramento Splash Education Center,
4426 Excelsior Road, Mather, CA
TBD. Check for updates at
www.cnps.org/education/workshops

Visit www.cnps.org/education/workshops/ceqa-september-2020 for workshop details.

September 24–27, 2020
***Some Like It Hot: Late Summer Flora of the Eastern Mojave Highlands*, Jim André and Tasha La Doux, Jepson Herbarium Workshop**
Sweeney Granite Mountains Desert Research Center, Kelso, CA

A botanist's introduction to the ecology and taxonomy of the diverse late summer/early fall flora of the eastern Mojave Desert, with special emphasis on rare or unique species. Through field observation, lab identification, and evening presentations, participants will gain a better understanding of the major plant families that comprise the hot-season flora. This field-intensive workshop is intended for botanists with moderate to advanced taxonomic training, but also for those with an interest in learning more about this seldom-seen component of California's flora. Course Fee: $570/600. To register, go to: www.ucjeps.berkeley.edu/workshops/

Up-Coming Events

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

October 19 – 21, 2020
Wetland Delineation: Identification and Delineation of Federal and State Aquatic Resources, Terry Huffman
Rush Ranch, Solano County, CA

Wetlands are essential for maintaining the biological, chemical, and physical integrity of an aquatic ecosystem. Federal and state programs regulate impacts to wetlands and other aquatic habitats as part of their overall water quality protection strategy. These agencies differ in how wetlands and other waters are defined and how they are geographically delineated.

This three-day workshop will emphasize the definitions and delineation methods for wetlands and other aquatic habitats used by multiple state and federal agencies. The course offers clear and concise explanations and comparisons of the wetland definitions and methods used by these agencies, including the latest changes in methodology and approaches for delineating jurisdictional boundaries; explanations of key terminology; and practical hands-on field experience for private consultants, agency personnel, attorneys, academics, and the general public who are involved with resource protection, impact assessment, environmental restoration, and/or seeking project authorization from regulatory agencies. Course Fee: $475/$505.

Check for Covid-19-related updates at
www.cnps.org/education/workshops

October 27–29, 2020
Mitigation Measures & Monitoring, CNPS Workshop
Tijuana Estuary Visitor Center, located at 301 Caspian Way, Imperial Beach, CA 91932
TBD. Check for updates at
www.cnps.org/education/workshops

More workshop information at
www.cnps.org/education/workshops/mitigation-monitoring-october-2020

Up-Coming Events

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

October 17, 2020
***Spatial phylogenetics: A "big data" approach integrating ecology, evolution, and conservation*, Brent Mishler, Jepson Herbarium Workshop**
UC Berkeley, CA

Advances in digitization of natural history collections, broad-scale DNA sequencing of many taxa represented in pubic databases, and scaling-up of methods for building phylogenies have made it possible to apply a phylogenetic approach to assessment of biodiversity and endemism that can be termed "spatial phylogenetics." Learn new methods that can identify hotspots of diversity and endemism, assess their make-up, and characterize similarities and differences among them. These new phylogenetic methods are also useful in conservation assessments by identifying complementary areas of biodiversity that have unique evolutionary histories.

This workshop will be a combination of lecture, classroom activities, and discussion and will cover the basic principles of the methods described above. Examples will be given from the several floras from around the world including Australia, Chile, Norway, and Florida. The cost of this workshop also includes an evening event and reception where the instructor will give a presentation focused on recently published applications of these methods to the California flora. Course Fee: $75

NEW DATES: October 5–7, 2021
Whitebark Pine Ecosystem Foundation (WPEF) International Conference on the "Research and Management of High Elevation Five Needle Pines in Western North America"
Hilton Garden Inn, Missoula Montana

The 2020 H5II Conference has been rescheduled for 2021 due to the uncertainty of the COVID-19 pandemic. Registration and Abstract Submission remain open. Also, please continue to submit abstracts for posters and presentations. Visit the conference website at www.highfivepines.org for details.

Send your articles and other information by August 15, 2020 for the next issue.

Bristlecone Chapter Directory
President: **OPEN**
Vice President: Michèle Slaton 760-920-8693
Secretary: Kathleen Nelson goatheads@aol.com
Treasurer: Sue Weis treasurer@bristleconecnps.org
Chapter Council Rep: Stephen Ingram
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Conservation/Partnerships: **OPEN**
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DeDecker Grants: Michèle Slaton 760-920-8693
Field Trips: Sue Weis treasurer@bristleconecnps.org
Historian: **OPEN**
Bishop Plant Sales: Katie Quinlan
Mammoth Plant Sales: **OPEN**
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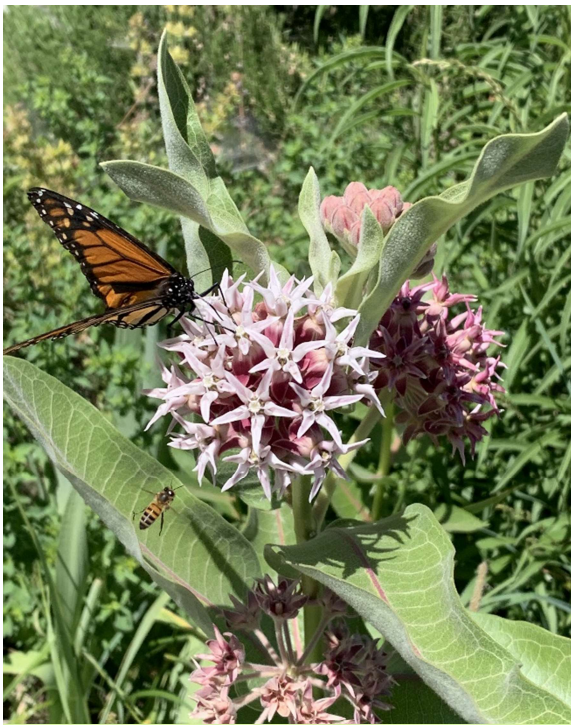
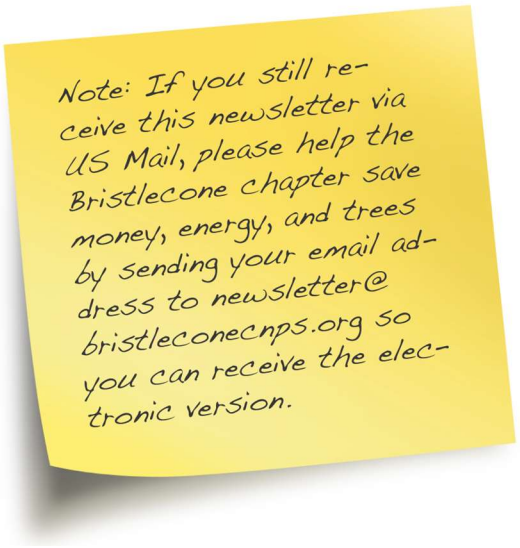
Website: webmaster@bristleconecnps.org
Hospitality: **OPEN**
T-shirt Sales: Stephen Ingram stephen@ingramphoto.com
DeDecker Garden: **OPEN**



The monarchs are about in Bishop, June 8, 2020.
Photo by Kim Cash.

The California Native Plant Society
Bristlecone Chapter
P.O. Box 364
Bishop, CA 93515-0364
RETURN SERVICE REQUESTED



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

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	_____

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

Gift Contribution: _____Wherever needed ☐
Specific Area: _____