



Bristlecone Chapter

Dedicated to the Preservation of California Native Flora

The California Native Plant Society

Bristlecone Chapter Newsletter

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November–December 2019

President's Message, November 2019

On September 28, 2019 Elon Musk held a press conference talking up his newest innovation, "Space X Vehicle Starship". The goal is a vehicle that can make repeated trips into space and therefore make space travel like air travel. His speech was full of enthusiasm for space travel and he alluded to his ultimate goal of creating a "self-sustaining city on Mars". He said, "While many problems on Earth need solving, becoming a space-faring civilization, being out there among the stars, is one of the things that makes me glad to be alive."

To me, this sounded like he was saying that there are many problems here on Earth that need solving, but I would rather invest my time and money in getting off this planet than trying to fix it. This comment reminded me of an essay a friend of mine, Sean Kearns, wrote in December of 1980.

Earthrise over Moon

There's never been a Christmas so humbling. It started on December 21, 1968 when the Apollo 8 astronauts left for the first manned orbit of the moon. They circled it 10 times without landing, spent Christmas in space and came back to Mothership Earth on December 27th.

..... the crew of Apollo 8 shared the most valuable gift this world and its gardeners, architects, janitors and leaders have ever seen....

.... It was Christmas Eve and we beheld a miracle wrapped in a frail atmosphere that like a bridal veil, obscured some beauty and accentuated some beauty.

The gift was a new perspective – Earth as a spaceship, as a provider, as a victim....

...Unlike any other celestial body obedient to the "laws" of Kepler and Newton this one displayed a livable layer

– a biosphere with and organic and spiritual bounty so blessedly sustaining yet frighteningly fragile.

This distant perspective of Earthrise over Moon focused the urgency and enormity of our tasks as caretakers. That was 12 (51) long years ago. Now we have seen cameras past Saturn, landed probes on Mars and forgotten too much.

Christmas is a time to remember, to get out our old slides from the moon lest we forget what Earth has given to us. It is time to give back....

...To give Earth protection requires a determined and active faith...

...Apollo 8 gave us a humble perspective. If we do indeed learn from the past, this Christmas we will give Earth a future as a present.

No one else can.



Although Sean wrote this in 1980, the problems of our little planet are as grave as ever. While listening to the news, it is easy to get discouraged, but I look at the students who are protesting in the streets and have hope. They say the "iGen" (those born after 1995) are apolitical and don't get involved in movements, but that is not what global protests are showing and that gives me hope.

It will take governments and large-scale change to reverse our course, but we can all do our little part to help. Driving a car 2 miles (which is the distance most of us who live in Bishop drive for errands) makes 1.56 lbs. of CO₂.^{*} An airplane on average produces 0.39 lbs. of carbon per passenger mile. Drying clothes in a dryer creates 2400 lbs. of carbon a year; drying them on the line creates nothing and will help your clothes last longer. ^{**}

As Americans we have enjoyed a high standard of living and grown used to many conveniences. Perhaps now we need to decide which of them we can let go of and give Earth a future for a present.

^{*} This is an average and depends on the efficiency of your car. <http://css.umich.edu/factsheets/carbon-footprint-factsheet>

^{**} www.greenamerica.org/green-living/ditch-your-dryer
--Katie Quinlan

Holiday Potluck & Public Presentation

Wednesday, Dec 4th, potluck with Eastern Sierra Audubon Society at 5:30 p.m. and presentation at 7:00 p.m.

**White Mountain Research Center
3000 E. Line St., Bishop**

 **Speaker: Paul Wilson**
Mosses of the Sierra Nevada

Paul Wilson, professor of biology at California State University, Northridge and a past president of CNPS's Bryophyte Chapter, has done various botanical studies in the Sierra, including studies of the pollination of beards-tongues and the geographic affinities of plants in the Bishop Creek Watershed. He will introduce the ecology of mosses and liverworts, and present work from over the last decade on the niches of Sierran mosses in relation to elevation. The talk promises many photos of these beautiful little plants.

Please join us for a potluck with members of the Eastern Sierra Audubon Society beginning at 5:30 p.m. and the presentation at 7:00 p.m. with desserts. Bring a dish to share if you can.



Clockwise from top left: *Grimmia hamulosa*, *Meiotrichum lyallii*, *Pohlia cruda*, and *Warnstorfia exanulata*.
Photos by Paul Wilson.

Bishop Community Demonstration Native Plant Garden

The Bristlecone Chapter has a demonstration native plant garden in the Bishop community garden. In 2011 we started the garden by covering it in plastic and solarizing the soil for a whole summer. In the fall we brought in some decomposed granite because the garden is in a meadow and that soil doesn't drain very well. We planted our first set of plants. The next spring, the garden looked great! The plants had grown a bunch and were blooming and there was no sign of creeping rye or Bermuda grass.

Over the years we have had successes and failures with the plants. We had a fern bush that did great for a few years and then suddenly died. The desert peach, desert willow, desert olive and apricot mallow have all done well. Some plants have done too well and have had to be removed. This is one of the roles of the demonstration garden, to figure out what works in the space and the soil. Another challenge we have faced: rabbits and deer frequent the site so some of our new plants have disappeared because we didn't cage them when we planted them.



The demonstration native plant garden one year after establishment. Photo by Katie Quinlan.

We usually have an annual fall clean-up, but by only taking care of the garden sporadically the rye and Bermuda grasses have been able to come in and reclaim some of their territory. There were two beautiful cactus plants that we took out because the grass had infiltrated them and there is no way to weed it out of the cactus without a lot of pain. If you are putting a garden in an area that had rhizomatous grass, and don't want to use chemicals, be prepared for the need to monitor your garden at least monthly and dig out the grass that shows up.

Doing a fall clean-up of the garden is a good time to evaluate if some of the plants, although growing well, are suited to their location. We decided that we should take out the Great Basin wild rye as it tends to splay out and look scruffy. It took four of us at least a half-hour to dig that bunch grass out! We relocated it to White Mountain Research Station. Although the goldenrod is a great fall flower and the bees love it, in the small space of the demonstration garden, it spreads too easily and gets out of control. Plants that do well, such as the peach, olive, willow and apricot mallow, need a little pruning to also keep them from getting out of control. Once the grass has been weeded out, we can better see what plants have made it and others that need to be replaced. This time we will cage the new plants until they are established.

The biggest challenge we have and continue to deal with is that we don't have a dedicated volunteer to monitor and take care of this garden. If anyone is willing to take on this roll, please contact Katie Quinlan at president@bristleconecnps.org. We would like to thank the nine volunteers from Orange

Lutheran in Orange County and Laura, Jim, Sue, Sally, Rosemary, Jan, Christina and Lynn for donating 29 hours of work on the demonstration garden this fall.
-- Katie Quinlan



Removing Great Basin wild rye (5th graders on a field trip in the background). Photo by Katie Quinlan.

Greenhouse Update

I love fall because of the cooler temperatures that allow one to work outside all day, my garden production begins to drop, and of the joy of processing last harvests of homegrown fruits and vegetables; I can see an end in sight to my efforts. In the fall my greenhouse converts from a growing center to a drying center as I put the cut-herbs and seeds into it to dry. Someone asked me recently if I go out in the fall to collect seeds. Actually, I collect seeds all year long and mostly from my own garden. I need to carefully watch the seeds as they develop and then get them just as the seed pods open. With the native plants, if I postpone collection a day or two when they are ready, I can lose them to the wind. So, I have found that having the plants in my garden makes it easier to keep track and watch their progression.

Additional sales of plants have continued throughout October and I have increased the total number of plants sold at the fall sale by a little over a third. I tried an experiment this summer of direct seeding some plants in the middle of the summer and had some success. So, barring any major rodent damage this winter, I should have purple sage, Mojave aster, winterfat and lupine at the spring sale.

--Katie Quinlan

New Members, Welcome to Bristlecone Chapter!

At our annual August plant sale, new members joined our chapter, as well as a few others joining from elsewhere. We look forward to seeing new faces at all occasions, such as field trips, volunteer events, potlucks, presentations, etc. Warmest welcome as we head into the cold winter season to Heather from Avery; Alison, Ann, Anne, Brian, Gigi, Jen, the Sanderson Family, Wendy, and M. Vasquez from Bishop; Dwight from Lancaster; Sue and Dale from Mammoth Lakes; and Rebecca from San Francisco.

And we always look forward to seeing the faces of current members and those who have rejoined the chapter. Thank you all for your continued support!



Ancient Bristlecone on Blanco Mountain.
Photo by Stephen Fletcher.

Bristlecone in AI-generated Poetry

Editors of *The Archive*, a student-run literary magazine established in 1887 at Duke University, Durham NC, published in their Fall 2011 issue "For the Bristlecone Snag" submitted by, then an undergraduate student, Zachary Scholl. Out of the 26 poems he submitted for publication, this one was chosen. Four years later, Scholl revealed this and many other poems he had submitted to multiple literary journals, was 'written' by a computer algorithm that he wrote.

FOR/THE/BRISTLECONE /SNAG ZACK SCHOLL

A home transformed by the lightning
the balanced alcoves smother
this insatiable earth of a planet, Earth.
They attacked it with mechanical horses
because they love you, love, in fire and wind.
You say, what is the time waiting for in its spring?
I tell you it is waiting for your branch that flows,
because you are a sweet-smelling diamond architecture
that does not know why it grows.



The Archive, Fall 2011. Published on Dec 30, 2011.

Up-Coming Events

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

Wednesday, November 13, 6:00 pm
Bristlecone Chapter Board Meeting
 Eastern Sierra Land Trust, 250 N. Fowler, Bishop
 All members are welcome.

**Wednesday, December 4, 5:30 pm potluck,
 7:00 pm presentation**

Holiday Potluck and Presentation
 White Mountain Research Center
 3000 E. Line St., Bishop

Bring a dish to share at our potluck with Eastern Sierra Audubon Society and enjoy a presentation by Paul Wilson (Cal State Northridge) on mosses in the Sierra Nevada.

Saturday, November 9, 10:00 am – 2:00 pm
California Desert Protection Act Treasure Hunt
 Thousand Palms Oasis Preserve in Thousand Palms, CA.

Join one of CNPS's rare plant treasure hunts and take a late-season hike to celebrate the anniversary of the California Desert Protection Act. Sign up to RSVP and get more information at
www.eventbrite.com/e/ca-desert-protection-act-celebration-registration-73359250493

**December 14, Saturday: Annual Bishop
 Christmas Bird Count, Eastern Sierra Audubon**

The 38th annual Bishop Christmas Bird Count is Saturday, December 14, 2019. Please RSVP to Chris Howard as soon as possible and indicate if you have an area preference. Chris will assign areas in advance to give you a chance to scout. All skill levels are invited to participate. Please ask around if newcomers want to join.

Chris Howard, Bishop CBC compiler:
chris93514@gmail.com or (760) 920-2845 (cell)

Up-Coming Events

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

September 15–17, 2020
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

With this conference the WPEF intends to: (1) bring together scientists, managers, and concerned citizens to exchange information on the ecology, threats, and management of five-needle pines; (2) learn about the threats and current status of pine populations; (3) describe efforts to mitigate threats through restoration techniques and action plans; and, (4) build a foundation for the synthesis of research efforts and management approaches.

Forest managers, researchers, advocates and the public are invited to attend this important event! Visit the conference website at
www.highfivepines.org for details on presenting your paper or poster, becoming a sponsor, volunteering, or attending.

**Please send your articles and other
 information to us by January 15, 2020 for
 the next issue.**

Bristlecone Chapter Directory

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 DeDecker Garden: Peter Anderson

The California Native Plant Society

Bristlecone Chapter

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RETURN SERVICE REQUESTED

Note: If you still receive this newsletter via US Mail, please help the Bristlecone chapter save money, energy, and trees by sending your email address to newsletter@bristleconecnps.org so you can receive the electronic version.

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: _____

Mail To / Make Payable To:

CNPS Membership Coordinator

2707 K Street, Suite 1

Sacramento, CA 95816

Gift Contribution: _____ Wherever needed ☐

Specific Area: _____

Membership Category

<input type="checkbox"/> Student / Limited Income	\$25
<input type="checkbox"/> Individual	\$50
<input type="checkbox"/> Plant Lover	\$120
<input type="checkbox"/> Supporter	\$500
<input type="checkbox"/> Patron	\$1,000
<input type="checkbox"/> Benefactor	\$2,500
<input type="checkbox"/> Steward	\$5,000
<input type="checkbox"/> Guardian	\$10,000
<input type="checkbox"/> Additional Contribution	_____