



Bristlecone Chapter

Dedicated to the Preservation of California Native Flora

The California Native Plant Society

Bristlecone Chapter Newsletter

Volume 37, No. 5
September-October 2016

President's Message September 2016

Last week I went for a walk around Lake Sabrina and noticed that the flowers had already set seed and many of them were ready to be collected. Where did the summer go?

Some exciting things are going on in September. Our annual native plant sale is on September 10. The plants have been growing out since January and are looking pretty darn good. On September 22 Brian Smithers, one of our Mary DeDecker grant recipients, will be talking about his research with tree range shifts in the White Mountains. Notice that this talk is on a Thursday night, not the usual Wednesday night meeting time.

The fall is also a time to start thinking about what leadership roles you would like to take on in this organization. At our annual potluck meeting in December we will be nominating new officers for the board. Positions that need to be filled are: Vice President or Newsletter/membership, Treasurer, and Webmaster. Think about how you would like to get involved and which role sounds interesting to take on. This organization can't run unless people are willing to do the business end of things.

I hope you are able to get out and enjoy the fall before the weather starts getting colder.

--Katie Quinlan

Thursday, September 22, 7 PM, General Meeting, White Mountain Research Center, 3000 E. Line Street, Bishop
"Tree species range shifts at and above treeline in the White Mountains and beyond: are we losing our alpine habitat and to what?"
Speaker Brian Smithers

Brian Smithers is a graduate student at UC Davis pursuing his PhD in Ecology. His work focuses on the effects of climate change on forests in the Great Basin using a combination of plot studies, experimental gardens, greenhouse experiments, genetic analysis, dendrochronology, and stable isotope analysis to examine what the winners and losers among mountain plants will be in rapidly changing climate.

His work, supported by a DeDecker Botanical Grant, examines how genetic population structure differs between limber and bristlecone pine at the local and regional scales by examining differences in dispersal ability between the two species — an important aspect in adapting to climate change. His most recent work examines the role of very rare subalpine forest fire disturbance on shifting range limits among pinyon, limber, and bristlecone pines. Using these tools, Brian's work has shown that treelines in the Great Basin are moving upslope and that the species making up that treeline advance aren't what you might think! His work gets him into very photogenic places, so the photos alone should be worth attendance.

--Michèle Slaton

Bristlecone Chapter December Potluck and Celebration of Inyo County's 150th Anniversary.

This year Inyo County celebrates its 150th anniversary as a county. The Bristlecone Chapter of California Native Plant Society will join this celebration on December 7, at 5:30 PM at our annual potluck Bishop United Methodist Church Fellowship Hall, 205 N Fowler, Bishop. This celebration will be a tribute to the diversity of natural resources that have drawn worldwide acclaim from recreationists, explorers, and scientists alike. Our presenter will be Dr. Bruce Baldwin, W. L. Jepson Professor in the Department of Integrative Biology and Curator of the Jepson Herbarium.

Much of what we know about plants has come from investigation of plants here in Inyo County. From salt flats and sand dunes, to ancient bristlecone and alpine wildflowers, the diversity of plants here has attracted a notable array of plant collectors. Their effect continues to be felt in part through the use of specimens they collected in herbaria. These botanists have inspired both young and experienced plant-lovers. Following in the footsteps of renowned Inyo County botanists like Mary DeDecker, Willis Jepson, and Frederick Coville, we can discover the colorful history of innovative explorers. We can also learn about hotspots of diversity and how these places are changing.

Specimens collected by botanists have enhanced value today through their preservation in the Consortium of California Herbaria and the use of digitized collections from more than 35 institutions. One example is a rigorous reassessment of patterns of floristic richness and endemism (plant species that are found only in a local area) across the Californian landscape, identifying hotspots of diversity in the Inyo region that warrant conservation.

Bruce Baldwin is W. L. Jepson Professor in the Department of Integrative Biology and Curator of the Jepson Herbarium. He is Convening Editor of the Jepson Flora Project, which produced *The Jepson Manual: Vascular Plants of California* and *The Jepson Desert Manual: Vascular Plants of Southeastern California*, and which maintains the Jepson eFlora online. The Jepson Herbarium was named for pioneer Californian botanist Willis Linn Jepson (1867–1946), who produced the first comprehensive treatment of the vascular flora of California, in 1925,

and made extensive plant collections across Inyo County from 1900 to 1940.

--Michèle Slaton

Greenhouse Update

I spent last weekend in a workshop learning about composting with Julie Fontaine, a soil scientist and restoration specialist. Although I have gardened for well on 30 years I learned a lot and found out I could have been doing things better.

Julie gave us recipes for three different compost piles. One favors more bacteria, which is good for the early colonizer plants like annual grasses. The second one is a balanced pile, which most garden vegetables and perennial grasses like. The last one is a fungally dominated pile, which vines and woody plants prefer. What percentage of high nitrate, low nitrate and carbon materials you put into your compost pile will determine the type of compost you get.

The piles are thermally driven. You mix the ingredients, pile them up and then watch the temperature closely. The pile gets turned a lot to make sure it doesn't get too hot and that all the material is heated to the ideal temperature. What you get in the end is awesome compost that is full of beneficial microbes that will help the plants access all the nutrients in the soil that they need.

If you are putting in a new native garden and have been solarizing the soil to kill all the weed seeds, then you need to reintroduce the soil microbes because solarization killed them also. You can add compost to the holes you dig for the plants or better yet apply a good compost tea to the area and especially to the new plants.

--Katie Quinlan

Saturday, October 1, 2016, 8:30 to 1:00 National Public Lands Day Volunteer Event—Round Fire Vegetation Planting and Rock Creek Trail Work Paradise Fire Station, 5300 Lower Rock Creek Road

The National Public Lands Day (NPLD) Event with BLM Bishop Field Office along with other partners will involve two different activities which will start and end at the Paradise Fire Station.

One project will plant bitterbrush seedlings into the footprint of the Round Fire which burned in 2015. The Round Fire contained important mule deer

habitat prior to the burn. Planting bitterbrush will help restore native habitat within the burn area.

The second project, the Lower Rock Creek trail will perform work on the trail and lower parking lot in coordination with the private land owner. Participants will help pick up trash, pull weeds, conduct brush removal, and perform minor trail maintenance.

We are planning on meeting at the Paradise Fire Station at 8:30 AM. We will break off to work on the two projects around 9 AM. We will work until about 12 PM, and then the BBQ will ensue at the Fire Station. Contact Info: Martin Oliver, Bureau of Land Management (760) 872-5035 or Jeff Starosta, Bureau of Land Management (760) 872-5034.

--Julie Anne Hopkins

Valentine Reserve Field Trip

On July 16, twelve people walked through the Valentine Reserve in Mammoth Lakes with botanist Ann Howald. The reserve was once a private camp for the Valentine family and was donated to the University of California for preservation, research and educational opportunities.

The variety of habitats on the reserve was amazing. We started on the Meadow Trail that began in unharvested old growth Lodgepole pine forest then proceeded through montane riparian woodlands. Here we saw blooming Kelley's lily (*Lilium kelleyanum*) and Corn lily (*Veratrum californicum*) growing over six feet tall. We then passed through a wet meadow full of native grasses and saw the Meadow larkspur (*Delphinium nuttallianum*).

After discussing native grasses, we headed up a dry moraine slope through sagebrush scrub where we saw *Artemisia tridentata* and *Artemisia cana* ssp. *bolanderi*. We ended up at the highest point in a montane chaparral among Greenleaf manzanita (*Arctostaphylos patula*) and Bitter cherry (*Prunus emarginata*), Red fir and huge old Jeffery pines. Along Mammoth Creek we looked for an American Dipper and noted Glaucous willow herb (*Epilobium glaberrimum*) with its pink flowers.

Lunch was at the education center that is used for summer camps for children. Afterward, we continued on the shorter Forest Trail through a montane forest with many springs and seeps. There were openings of sagebrush including Snowfield sagebrush

CNPS Bristlecone Chapter Newsletter, Volume 37, Number 5, September-October 2016

(*Artemisia spiciformis*). Thank you Ann for sharing one of your favorite places with us.

--Kathy Duvall

East Mono Basin Field Trip

On August 8 for our East Mono Basin trip, we were joined by Arnold (Jerry) Tiehm, the botanist who originally collected the *Astragalus kentrophyta* var. *ungulatus* and *Physaria ludoviciana* at the site. Ann Howald, Kathy Duvall, and four others also joined us. Although the rare plants were past blooming, the halogeton, which had been dense in the *Eriogonum alexandrae* population last year, had apparently been significantly reduced by our weed work last year and lack of rain this year, and only a few small plants were found. We also found *Oxytropis oreophila* var. *juniperina*, a taxon new to California, currently known from Nevada.

--Sue Weis



Michael Uhler photographing the cliff-dwelling *Petrophytum caespitosum* in Symmes Creek canyon, July 30. Although the plants were not in bloom, a later visit revealed acuminate petals, so the subspecies is *acuminatum*.

--Photo by Sue Weis

“The Wishbone Bush: Of hubris, turkey bones and John Coltrane”

Coming back down the wash after a long day with the Gravel Ghosts, I chanced upon an unfamiliar shrub with small white flowers. It might have been the leaves, but in a misbegotten moment, I thought, potato family. This will be easy, I thought, a cake walk, a slam-dunk identification. Arriving at camp, I grabbed the first flower manual and dove in. Immediately apparent was that this was emphatically not a Solanaceae. I grabbed another manual and ended up deep into Euphorbia, lost among the Spurges, and surfaced with the familiar sneaking suspicion that I am just a moron with a manual. Identification Denied!

No chance.

No way. No dice!

I was about to table the matter for another time and watch the sunset for spiritual solace when I picked up the least likely of ten manuals, and there in the "white" section, staring directly into my unsound mind was my subject, unquestionably the very shrub: *Mirabilis bigelovii*. The Wishbone Bush. Nyctaginacea. The rain stopped, the sun shone, the mind quieted, all was well with the world.

I grabbed the Desert Manual, and sure enough it all keyed out.

Well, maybe it was a californica, but what the hell. I frothed at the mouth; I smelled blood. Victory was close at hand. In a fit of unbridled enthusiasm, I rummaged under the front seat of the truck and dug out the New Testament. The Real deal. The Word. The Decider (No, not that Bush): Willis Linn Jepson, The Jepson Manual. A tomb, a shrine, an evangelical's worst nightmare, ten pounds of indisputable botanical science!

Excited, I lifted the manual over my head few times to get pumped and opened it to the *Mirabilis* section. There I stared with disbelief. Christ on a bicycle! I paged forward; I paged back; I turned the manual sideways, upside down. I shook it!

Where is the good Dr Bigelow?

Where has he gone?

WHAT have they done with Dr Bigelow?

My friend, my mentor, my all-time favorite botanist. Species, subspecies, variation: nowhere to be found! And then... the dreaded parentheses. The also-rans. The once known-as. Landscape of the poser, the wannabe, the sub sub sub librarian. There he was. As a former president of the BWWAT (*Bigelovii* Wine, Wishbone and Aroma Therapy club), I was outraged. The good Dr. Jacob Bigelow, eminent Harvard physician, Botanical master, Herbal wizard, Turkey Bone specialist. The original Dr Wishbone had been relegated to a mere footnote. Oh, the disrespect, the unfairness, the arrogance, the pure hubris of the editors. Dr. Bigelow has been replaced by *laevis*.

Who or what the hell is a *laevis*!?!??

A quick check in Wikipedia says *laevis* comes from Sanskrit meaning smooth or smoothly. "As in, for instance," it read, "a modern example: supermarket Muzak??" WHAT?!?! The John Coltrane of botanical science has been replaced by shopping mall Muzak!! OH, the inhumanity of it all!

This has me steaming now, hot, frothing, bordering on apoplectic, ready to kill. I have been sober for sixteen years, but times like this try a man's soul. I need something to calm me down. I rummage deep in the larder and come up with something from my last BWWAT club meeting. A nice, soothing, comforting, quieting (you guessed it) Bigelow Herbal Tea.

Hayduke lives!!!

The New Testament has spoken and the Word is: *Mirabilis laevis* var. *retorsa* or *villosa* or *crassifolia*. Probably *retorsa*. Well, maybe.

The sun sets in a flash of red; the good Doctor rolls over in his grave.

And please, please, quit messing with my *Mimulus bigelovii*. I can't take it!

*--Stephen Fletcher
Hunt and Peck Artist
Dirt Bag Botanist
Death Valley. May 2016*

Reprinted from onefabric blog by permission of author

Up-Coming Events
Bristlecone CNPS Events (for updated information, visit bristleconecnps.org)
Wednesday September 7, 6 PM, Conference Room, 351 Pacu Lane, Bishop. Bristlecone Board meeting. All members welcome.
Saturday, September 10, 9-11AM. Bishop Plant Sale at White Mountain Research Center, 3001 E Line St, Bishop. Contact Katie Quinlan 760-873-8023.
Thursday, September 22, 7 PM, General Meeting, White Mountain Research Center, 3000 E. Line Street, Bishop "Tree species range shifts at and above treeline in the White Mountains and beyond: are we losing our alpine habitat and to what?" Speaker Brian Smithers
Wednesday, December 7. 5:30 PM Bristlecone Chapter Annual potluck, followed by elections and general meeting at 7pm. Note NEW LOCATION: Bishop United Methodist Church Fellowship Hall, 205 N Fowler, Bishop. In celebration of Inyo County's 150th anniversary, Dr. Bruce Baldwin from UC Berkeley will present "150 Years of Botany and Botanists in the Inyo Region".
Other Events of Interest
Saturday, October 1, 2016, 8:30 to 1:00 National Public Lands Day Volunteer Event— Round Fire Vegetation Planting and Rock Creek Trail Work Paradise Fire Station, 5300 Lower Rock Creek Road

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

Bristlecone Chapter Directory

President: Katie Quinlan 760-873-8023
 Vice President: Michèle Slaton 760-938-3258
 Secretary: Sue Weis 760-873-3485
 Treasurer: Nancy Hadlock 760-263-5022
 Creosote Ring Sub-chapter: Kathy LaShure 760-377-4541
 Chapter Council Rep: Stephen Ingram 760-937-9918
 Conservation/Partnerships: Julie Anne Hopkins 831-566-6012
 Programs: Michèle Slaton 760-938-3258
 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
 Mammoth Plant Sales: Sherry Taylor 760-934-2338
 Publicity: Karen Ferrell-Ingram 760-937-0620
 Newsletter: Edie Trimmer/Thomas Brill 760-920-3702
 Membership: Edie Trimmer/Thomas Brill 760-920-3702
 Website: webmaster@bristleconecnps.org
 Posters: Nancy Hadlock 760-263-5022
 Book Sales: Sue Weis 760-873-3485
 T-shirt Sales: Scott Hetzler 760-873-8392
 DeDecker Garden: Richard Potashin 760-263-5022

O Wind!

You run your fingers through the willows and make them shiver with delight!

You will carry their seed in your arms to new fertile ground.

The stroke of your hand smooths the grassy coat of the meadow.

Your caress gives the cottonwood her song of flowing water!

Dragonflies dance to stay aloft in your breath, in the lee of the swaying willows,

While swallows circle and swirl and dip in an aerial tarantella over rippling water.

As the light dims, bats take the dance floor, with a dance, though perhaps less graceful, more

... acro-bat-ic!

O Wind!

You make the Earth dance and sing!

(And so does my heart!)

--Maggie Riley

Bristlecone Chapter
 P.O. Box 364
 Bishop, CA 93515-0364
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: _____	<input type="checkbox"/> Patron	\$300
Address: _____	<input type="checkbox"/> Benefactor	\$600
City: _____ State: _____	<input type="checkbox"/> Mariposa Lily	\$1500
Zip Code: _____ Phone: _____	<input type="checkbox"/> Additional Contribution	_____
Email: _____	Mail To / Make Payable To:	
I wish to be affiliated with the Bristlecone Chapter: _____	CNPS Membership Coordinator	
Other: _____	2707 K Street, Suite 1	
	Sacramento, CA 95816	
Membership Category	Gift Contribution: _____	Wherever needed <input type="checkbox"/>
<input type="checkbox"/> Student / Limited Income		Specific Area: _____
<input type="checkbox"/> Individual		
<input type="checkbox"/> Family		
<input type="checkbox"/> Plant Lover		