

**DEDICATED TO THE PRESERVATION OF THE CALIFORNIA NATIVE FLORA**

The California Native Plant Society



**Bristlecone Chapter**

---

Volume 30 No. 1  
January-February 2010

---

**2010 Field Trip Planning Meeting**

6:00 pm January 27, 2010, White Mountain Research Station, 3000 E. Line St. Please join the fun planning field trips for the coming year. New field trip leaders welcome! You don't have to be a botanist to lead a field trip. Pizza will be provided.

**January General Meeting**

7:00 pm January 27, 2010, White Mountain Research Station, 3000 E. Line St., following the field trip meeting, is our annual members' slide show. Share your 2009 adventures! Bring up to 15 film or digital images. Contact Steve Ingram if you have any questions. The public is invited.

**January Bristlecone Chapter Board Meeting**

7:00 pm January 20, 2010. USFS/BLM Conference Room, 351 Pacu Lane, Bishop. Members are welcome.

**PRESIDENT'S MESSAGE**

**Here comes the sun ....**

By the end of the next decade California hopes to produce 33% of its electricity using renewable energy sources. The City of Los Angeles goals are more ambitious—40% electricity production through renewable energy and complete elimination of coal-fired generation by 2020. I'm sure most of us would agree that these are worthy goals which represent an important commitment to reducing greenhouse gases. But how, exactly, are utilities going to achieve these goals?

The Los Angeles Department of Water and Power released its vision of renewable power production in a series of meetings in Bishop on November 18 and 19, and in a presentation to the Inyo County Board of Supervisors on December 8, and this vision is focused squarely on the Eastern Sierra Nevada. DWP would like to see a "Solar Park" capable of generating up to 5 gigawatts of power developed on the Owens Dry Lake and on City lands in the Owens Valley. Such a "Solar Park" would require somewhere between 40 and 80 square miles of land. To put this into perspective, 5 gigawatts is equivalent to DWP's current average summer day peak demand. A 5-gigawatt "Solar Park" would be roughly 20 times the size of the Coso Geothermal Plant and 12 times the size of the proposed solar facility in the Mojave Desert near Ivanpah.

It seems that DWP would prefer to put the bulk of its "Solar Park" on the Owens Dry Lake bed. The idea is that solar panels on the lake could control dust, conserve water, generate power, and produce revenue.

This could be a perfect solution to several problems faced by DWP, and a solution which includes provisions to preserve and maintain wildlife habitat around the lake bed. Things seemed to be moving very fast—the Board of Water and Power Commissioners approved a 320-acre, 50-megawatt “Owens Dry Lake Solar Demonstration and Information Collection Study” at its meeting on November 25, 2009. DWP hoped to complete this demonstration project by the end of 2011.

However, DWP faces several obstacles to development of solar power on the lake bed. First of all, DWP does not own the lake bed—that is state land. And solar panels are not an approved method of dust control. DWP would have to obtain a lease from the State Lands Commission as well as permits from the Great Basin Unified Air Pollution Control District and the California Fish and Game Department, and none of these agencies appears at this time to be willing to grant DWP any shortcuts.

My concern is that problems with siting their “Solar Park” on the lake bed will cause DWP to turn its attention to City lands in Owens Valley, where solar-energy development may present fewer obstacles but has the potential to have serious ecological and visual impacts, if not carefully planned and mitigated. The hopeful news is that CNPS has been working regularly with all of the local environmental groups in the Eastern Sierra as part of an informal coalition. The purpose of the coalition is *not* to oppose solar-energy development in our area, but to play a critical role in its planning and implementation. Questions the coalition will address include: where should solar installations be sited to minimize adverse environmental impacts? What is the appropriate scale for solar development in our area? How can solar development in the Eastern Sierra provide net benefits to our environment and our economy?

Renewable energy development in the Eastern Sierra Nevada in the early 21<sup>st</sup> Century has the potential to transform our area to a degree similar to Los Angeles’ appropriation of water in the early 20<sup>th</sup> Century. So far DWP has presented a vision, not a plan. More specific details may be presented in a series of public meetings tentatively planned for early 2010. Watch for announcements in the local press, and attend these meetings if you can. Solar energy production is coming to the Eastern Sierra; let’s do everything we can to make sure it’s done right.

**Steve McLaughlin**

## REPORTS

### **The Ecological Society of America Millennium Conference**

The Bristlecone Chapter helped send Conservation Chair Daniel Pritchett to a first-of-its-kind small group conference organized in part by the Ecological Society of America and held November 9-12, 2009, at the University of Georgia in Athens. The theme for this conference was: Water-Ecosystem Services, Drought, and Environmental Justice. The aim of the organizers was to bring together ecological and social scientists, along with quite a few students, to explore the development of scientifically and socially sound solutions to water allocation in times of drought.

Daniel, with coauthor Sally Manning, submitted a proposal to present some of the Owens Valley water story as a “case study.” The twelve case studies

---

### **From the editor**

If you haven’t already contacted me, please leave a message stating your preference as to whether you would accept an electronic version of this newsletter or would prefer a hard copy. The Bristlecone Chapter Board encourages members to choose the electronic option to save energy, trees, and money. Contact me at: 760-873-8943 or email: [newsletter@bristleconecnps.org](mailto:newsletter@bristleconecnps.org).

**Next Newsletter Deadline: February 23, 2010**

**Send articles to: [newsletter@bristleconecnps.org](mailto:newsletter@bristleconecnps.org)**

---

were available on-line for people to view, and they were presented one evening of the conference. The format we used was new for a conference of this sort: a narrated Power Point show, which could also be viewed as a YouTube video!

Ironically (but not surprising to us!), despite the *drought* theme, we caught some heavy rains from the remnants of Hurricane Ida while we were in Athens. The locals were excited about the filling of their reservoir, Lake Lanier. This happened to be the day of our field trip to Atlanta's large sewage treatment plant: Water Everywhere!

One day was devoted to smaller breakout group discussions. Each group was tasked to address the question: *How should we promote coping and adapting to drought through research, education, and application?* Our group decided to tackle this by formulating a vision statement and accompanying the statement with a diagram conceptualizing the problems (and solutions) confronting people in view of the limits of fresh water on earth. The idea was, once there is a vision or goal, it's easier to make a plan designed to achieve the goal.

The ultimate goal for this millennium conference was for ecologists to develop approaches to water which might reduce conflicts among water users, enhance environmental justice, and more effectively manage public responses to water scarcity. A tall order, but you have to start somewhere!

**Sally Manning**

---

## FEATURES

### **Birch Creek Journal**

As the winter solstice approaches, birches, cottonwoods, and willows along Birch Creek have lost all their leaves. The creek runs black and cold between ledges of white ice that look as though they would not support the weight of a chickadee. To my delight, snow is falling in large, floppy, wet flakes, fitting lopsided caps to all the boulders and filling the interstices of every shrub.

Having lived in the Eastern Sierra for three years now, I am learning to love winter, but I love a good spring even more, and this spring, I hope, will indeed be a good one. We have its promise on every

gravelly flat and rocky slope, where thousands of seedlings germinated after a storm in the middle of October gave us 2.57 inches of rain in less than twenty-four hours. When I reported the total to my husband, he did not believe me until he checked with the neighbors. This storm was literally off the charts, at least for our part of the valley in October. In Bishop, the two biggest October storms in the past seventy years were 1.58 inches and 1.77 inches. Closer to our house, at Tinnemaha Reservoir, there were only twenty-six October days with measurable rain during the sixteen-year period from 1992 through 2007. The largest storms were 1.08 inches, 0.88 inches (over two days), and 0.82 inches.

About a week after our big storm, I noticed seedlings poking above the dirt. By the middle of November, I could recognize at least twelve species of native spring annuals, including white-stemmed stick-leaf (*Mentzelia albicaulis*), chia (*Salvia columbariae*), desert dandelion (*Malacothrix glabrata*), brown-eyed evening primrose (*Camissonia claviformis*), fiddleneck (*Amsinckia tessellata*), and popcorn flower (*Cryptantha nevadensis*). In addition, there were two species of gilia (*Gilia*), one or two things in the Phlox Family (Polemoniaceae), and Lord knows how many species in the Buckwheat Family (Polygonaceae).

Some patches of seedlings were quite dense, so thick in some places that I wondered if any seeds could possibly remain in the ground. Because the cool-season rains that make spring annuals germinate are typically sporadic and patchy, most spring annuals calibrate their germination according to moisture levels. A little rain gets a little response: only a few seedlings emerge, and many ungerminated seeds—the seed bank—remain in the soil. A bigger rain gets a bigger response, and a larger proportion of the seed bank germinates. This is the only sensible way to behave if you are an annual species in a region of scanty and unpredictable rain. If you allow all your seeds to germinate in response to a tiny rain and then no more rain falls, your seedlings will die without setting seed, and you will be extinct.

Given a storm that was off the charts, I suspected that hardly any seeds would be left in the soil, so I undertook a little investigation. I put a

small embroidery hoop over two of the densest seedling patches and with a spoon scooped out everything inside the hoop—seedlings, soil, and all—to a depth of about an inch. Keeping the two samples separate, I counted and identified all seedlings, then took about half the soil from each sample and sorted it under a dissecting scope to find any seeds.

The first sample contained eighty-one seedlings of white-stemmed stick-leaf and gilia at a density of 2.0 seedlings per square inch. I found two seeds in this sample: one little gold-poppy (*Eschscholzia minutiflora*) and one rubber rabbitbrush (*Ericameria nauseosa*). The second sample had sixty-nine seedlings at a slightly lower density, 1.7 per square inch. Three species—brown-eyed evening primrose, gilia, and white-stemmed stick-leaf—made up the bulk of the sample. The rest were popcorn flower, sand cress (*Calyptridium monandrum*), and curly bluegrass (*Poa secunda*). The soil from this sample contained two seeds of sand cress, one of small fescue (*Vulpia microstachys*), two of rubber rabbitbrush, and two of Brewer fleabane (*Erigeron breweri*). Rubber rabbitbrush, Brewer fleabane, and curly bluegrass are perennials and for our purpose need not be considered further. Thinking about annuals only, then, we know that the sampled seed bank contained 150 seeds before the October storm (total number of seeds plus total number of seedlings) and only four seeds afterward.

This was in no way a scientific investigation: I deliberately chose the densest patches of seedlings (instead of sampling randomly), and I took only two samples (instead of two dozen). Even so, it looks as though the largest October rain on record essentially emptied the seed bank. As is often the case, this little study raises as many questions as it answers. What did the seed bank look like in bare spots where I did not sample? Exactly how much rain is required for virtually all seeds of annuals in the soil to germinate? We suspect now that 2.57 inches will do it, but what about 2.0 inches, or 1.5 inches? How many times is the seed bank likely to be depleted over the course of a century? Will the seedlings that germinated this year set seed and replenish the seed bank or will they succumb to drought or other hazards? Most of these questions will go begging for answers, but

because we now have at least three inches of snow on the ground and more on the way, I am hopeful that many seedlings will survive long enough to grace Birch Creek with wildflowers this spring.

Thanks to Hal Klieforth and Sally Manning for precipitation data, and to Steve McLaughlin for identifying grass seeds and seedlings.

**Jan Bowers**

---

## CONSERVATION

### The Blackrock Saga Continues

In the previous issue I wrote about the wonderful surprise in the CA Department of Fish and Game (DFG) hatchery/stocking program DEIR/DEIS. DFG accepted scoping comments I had submitted on behalf of the Bristlecone Chapter documenting the degradation of rare alkali meadow in parcel BLK094. DFG also accepted my proposed mitigation: to reduce pumping for the Blackrock Hatchery to 8000 af/yr, the approximate volume of the spring that supplied the hatchery until DWP dried it up in 1971.

I speculated that not everyone would share my excitement and I was correct! The Inyo County Water Department (ICWD) and Planning Department jointly submitted comments questioning DFG's proposed reduction of pumping on the grounds that the pumping impacts had not been thoroughly analyzed.

Think about the implications of that comment. The Technical Group, i.e., ICWD and DWP, have intensively monitored the area since 1987. DFG's proposed pumping reduction is based on these data. The degradation of the parcel has been publicly discussed (including talks at scientific meetings) since 1998. Two-and-a-half years ago we formally requested the Technical Group to modify management because the Technical Group's own monitoring data show serious problems. Yet ICWD still hasn't gotten around to analyzing the data (most of which it gathered) documenting the pumping impacts. One can only wonder what ICWD has been doing all these years.

Meanwhile, independently of Inyo's comments, DWP challenged my possession of the monitoring data I had submitted to DFG! Any bets

DFG will have the backbone to keep the mitigation in the final EIR? The final should be out in early January – Stay tuned!

The Technical Group met on December 11, 2009, and had Blackrock on its agenda. It decided that there were two “tracks.” First, the legal track. DWP has written that it believes it is not required to take any action to modify management at the parcel because whatever happens at BLK094 was already mitigated in the the Inyo-LA Long Term Water Agreement. In other words, in DWP’s legal opinion parcel BLK094 is a sacrifice zone.

The other “track” is Inyo County’s view that the conditions at BLK094 may constitute a significant impact under the the California Environmental Quality Act and that the Technical Group should follow the procedures in the LTWA to determine if mitigation is needed.

The Technical Group decided to pursue the first track. ICWD will seek a legal opinion from Inyo County Counsel to see if Inyo agrees with DWP’s legal position that the impacts at BLK094 which have happened since the LTWA was signed were already mitigated in advance in the LTWA.

Given Inyo County’s record of taking fear-based readings of the LTWA, I wouldn’t be at all surprised if Inyo agrees with DWP’s legal position.

**Daniel Pritchett**

---

## CHAPTER BUSINESS

### Election of 2010 Bristlecone Chapter Officers

Congratulations and thanks to our incoming chapter officers for 2010. The vote at our November 2009 meeting was unanimous!

President: Steven McLaughlin  
 Vice President: Stephen Ingram  
 Treasurer: Rosanne Higley  
 Secretary: Connie Spenger

---

### MEMBERSHIP

The Bristlecone Chapter heartily welcomes the following new members:

Dave McCoy - Bishop  
 Ray Showalter - Big Pine  
 Robert Stewart - Ridgecrest

### Membership Application

The California Native Plant Society is an organization of lay persons 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. Varied interests are represented. To join, please see back of newsletter.

To RENEW: please contact Sally Manning or  
**RENEW ONLINE:**

Using a credit card, go to [www.cnps.org](http://www.cnps.org)  
 And click on the JOIN button

# Happy New Year!!

**The California Native Plant Society**  
 Bristlecone Chapter  
 P.O. Box 364  
 Bishop, CA 93515-0364  
 PERMIT NO. 47  
 RETURN SERVICE REQUESTED

Non-Profit Org.  
 U.S. Postage  
 BISHOP, CA  
 93515-0364

Name: \_\_\_\_\_  
 P.O. Box or Street: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_  
 Zip Code: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Email address: \_\_\_\_\_  
 I wish to be affiliated with the Bristlecone Chapter: \_\_\_\_\_  
 Other: \_\_\_\_\_

Membership Category

<input type="checkbox"/> Student, Limited Income	\$25.00
<input type="checkbox"/> Individual	\$45.00
<input type="checkbox"/> International	\$45.00
<input type="checkbox"/> Family, Group, or Library	\$75.00
<input type="checkbox"/> Supporting	\$75.00
<input type="checkbox"/> Plant Lover	\$100.00
<input type="checkbox"/> Patron	\$300.00
<input type="checkbox"/> Benefactor	\$600.00
<input type="checkbox"/> Mariposa Lily	\$1,500.00

Please make membership checks payable to and send to:

**CNPS – Membership Coordinator**  
**2707 K. Street, Suite 1**  
**Sacramento, CA 95816**

**Gift Contribution:** Where most needed \_\_\_\_\_  
 Conservation \_\_\_\_\_

**Bristlecone Chapter Directory**

President: Steve McLaughlin (760) 938-3140  
 Vice President: Stephen Ingram (760) 387-2913  
 Treasurer: Rosanne Higley (760) 387-2803  
 Secretary: Connie Spenger (760) 938-2159  
 Membership: Sally Manning (760) 873-3790  
 Newsletter Editor: Daniel Pritchett (760) 873-8943  
 Conservation: Daniel Pritchett (760) 873-8943  
 Plant Communities: Sally Manning (760) 873-3790  
 Education: Nancy Hadlock (760) 878-2379  
 Programs: Stephen Ingram (760) 387-2913  
 Field Trips: Sue Weis (760) 873-3485  
 Dedecker Native Plant Garden: Jerry Zatorski (760) 872-3818  
 Publicity: Denise Waterbury (760) 873-7639  
 Historian: Ann Fulton (760) 873-9261  
 Librarian: EvelynMae Nikolaus (760) 878-2149  
 Rare Plant Committee Chair: Anne Halford (760) 872-5022  
 Plant Sale Committee: Anne Halford, Diana Pietrasanta,  
 Sherryl Taylor (924-8742), Denise Waterbury (873-4344)  
 Book Sales: Sue Weis (760) 873-3485  
 Posters: Stephen Ingram (760) 387-2913  
 Creosote Ring Sub-Chapter Coordinator:  
 Kathy LaShure (760) 377-4541  
 Webmaster: Maggie Riley [webmaster@bristleconecnps.org](mailto:webmaster@bristleconecnps.org)  
 Dedecker Grant Program: Jan Bowers (760) 938-3140

**THE CALIFORNIA NATIVE PLANT SOCIETY** ([www.bristleconecnps.org](http://www.bristleconecnps.org)) Bristlecone Chapter Newsletter comes out bimonthly. It is free to chapter members. To subscribe to this newsletter without joining CNPS, please send \$5.00 per year to CNPS, P.O. Box 364, Bishop, CA 93515-0364. ATTN: subscriptions. Send newsletter articles (not memberships) to newsletter editor Daniel Pritchett at [newsletter@bristleconecnps.org](mailto:newsletter@bristleconecnps.org).