IN MEMORIUM

Paul Mitchell passed on recently after a long struggle with cancer.

Paul, along with his wife, Madeleine, was one of the original members of the China Creek Volunteers, starting about 2003, and was a “regular” until very recently. He made it to work parties even after his diagnosis. He worked on virtually all the various Park projects at one time or another, but was most notable as an absolutely determined weed warrior. Once he had identified a patch of thistles that was to be his project for the day, it was very difficult to distract him from it—even to come in for break or at quitting time.

Paul was also a very good botanist, and we often relied on him to identify unfamiliar plants. He pursued the process with the same dogged determination with which he approached digging exotic thistles, working away through the tedious "keying-out" process, but always eventually coming up with a dependable ID.

One might think, with all the solemn focus above, that Paul was a very serious and one-dimensional person. But in fact, Paul was easy-going and funny, and had wide and varying interests, including, but not limited to traveling the country and the world to study and collect agaves and cacti, collecting stamps, and taking a lively interest in human history, as well. A science teacher at Reedley High for many years, Paul was also very involved in the sports program and announced Reedley games even after his retirement.

He left a certain amount of DNA, in the form of sweat and blood, at China Creek Park, and we—and the Park—will miss him.

-Sequoia Chapter, California Native Plant Society board and membership-

SEQUOIA CHAPTER SPECIAL MEETING

Sunday, March 11, 1:00 pm-2:45 pm
Betty Rodriguez Regional Library Meeting Room, Cedar & Shields, Fresno

Please, consider attending a special general meeting to brainstorm ideas about our chapter—2018.
Upcoming Events and Classes in 2018

- **March 6, 8:00am to 3:00pm**
  **Landscaping with Nature**
  Location: Putah Creek Lodge at UC Davis Arboretum
  Target Audience: Suitable for landscape professionals and anyone interested in maximizing habitat values in their landscaping
  Cost: $130 members/$155 non-members/$95 students

To see a more detailed description and register go to https://cnga.wildapricot.org/event-2757535

- **March 21-22, 9:00am to 5:00pm**
  **Rare Plant Survey Protocols**
  Location: Oxnard, CA & Point Mugu State Park
  Target Audience: Professional botanists, ecologists, land managers, resource specialists, academics, and conservationists
  - Will learn how to properly prepare and conduct background research prior to initiating rare plant surveys.
  - Will learn how to design and conduct rare plant surveys focusing on the size and topography of the study area, ecological niches, the importance of reference sites, etc.
  - Will learn relevant botanical field survey protocols.
  - Will learn how to use online databases and resources, how to fill out CNDDB forms correctly, laws pertaining to rare plants, and a brief overview of voucher specimen collecting techniques.
  Cost: $399 members/$429 non-members

To see a more detailed description and register go to http://www.cnps.org/cnps/education/workshops/

- **March 24-25, 9:00am to 5:00pm**
  **Introduction to Plant Morphology for the Botanically Curious**
  Location: UC Berkeley
  - Will learn basic botanical vocabulary and observation skills needed to identify plants by sight and under the microscope.
  - Course provides background necessary to use botanical keys.
  - If time allows, will wrap up with a review walk through the UC Botanical Garden.
  Cost: $145 members/$175 non-members

To see a more detailed description and register go to http://ucjeps.berkeley.edu/workshops/

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**Fall Colors**
--Jane Pritchard

The shorter days of fall don’t provide enough sunlight for photosynthesis. Chlorophyll that gives leaves their green color, and which is necessary for photosynthesis, breaks down (Greek: chloros = green, greenish-yellow + phyllon = leaf). Other pigments which are hidden during summer by the green color begin to show through.

Different species of trees turn different colors because they contain different pigments that become visible as the green fades. Carotenoids turn leaves yellow and orange (Latin: carota = carrot). Brown is produced by tannin, one of the leaf’s waste products. Anthocyanins, not present in all leaves, produce red and purple (Greek: Anthos = flower + kyaneos = dark blue).

Sometimes anthocyanins are manufactured when cells break down in the leaves and the released sugars react with sunlight. Xanthophyll causes yellows (Greek: xanthos = various shades of yellow). Carotene causes orange color, often made by a combination of factors that produce yellows and reds. Fiery red and bronze are produced by anthocyanins combined with carotene. Reds are more dependent on sunlight, so some trees such as maples often are red at the top and yellow on lower branches.

The process that stops chlorophyll production also makes a tree drop its leaves. The end of each leaf stem has a separation layer of cells. Xylem tubes pass through this layer to carry water and minerals to the leaf. Phloem tubes pass through the separation layer to carry glucose back to the tree. In the fall, the cells of the separation layer swell and cut off the xylem and phloem tubes. The layer forms a seal between the leaf and tree, and cells in the separation layer disintegrate. The weakened leaf falls from, or is blown from, the tree.

Source: McGraw Hill Concise Encyclopedia of Science and Technology
Membership
John LuValle

Thanks to new and renewing members.
If you require corrections or additions to your membership information, contact John LuValle at jluvalle@mcn.org.

The Sequoia Chapter serves Fresno, Madera, and Kings counties.

The IRS considers dues in excess of $12 per year and all gifts to CNPS as tax deductible. Renew your CNPS membership online using a credit card. As an option, renew automatically year after year. It is quick, easy, and convenient, and reduces renewal-mailing costs. Visit www.cnps.org and click on the JOIN button.

Next Newsletter: March 2018
Send newsletter suggestions to Laura Castro at lacastror@outlook.com. The deadline for submissions to the next newsletter is Friday, February 23, 2018.

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JOIN THE CALIFORNIA NATIVE PLANT SOCIETY

Membership includes the quarterly CNPS journal, Fromontia; the quarterly Bulletin which gives statewide news and announcements of activities and conservation issues; and our chapter newsletter, Carpenteria.

I wish to affiliate with the Sequoia Chapter.

Name: ___________________________
Address: ___________________________
City: ___________________________
State: __________________ Zip: _______

Make your check payable to “CNPS” and mail with this form to:

California Native Plant Society
2707 K Street, Suite 1
Sacramento, CA 95816-5113

The California Native Plant Society is a statewide nonprofit organization of amateurs and professionals with a common interest in California’s native plants. The mission of the Society is to increase understanding and appreciation of California’s native plants and to preserve them in their natural habitat through scientific activities, education, science, and conservation.
January 2018 Work Party

--Warren Shaw

2018 has been a good year—so far. Saturday, January 20 dawned bright and sunny in Fresno, but by the time we got to the Park, in the Kings River floodplain, it was foggy and chilly. Nonetheless, a nice group of willing workers, including some enthusiastic new folks (hooray) arrived promptly at 9:00 (winter start time). Most went to the southeast sector to hunt for bull thistle rosettes. It’s early for these, but since the weather has been relatively warm and dry, we expected to find a few; and, sure enough, we did. This was great, because, of course, they’re small, seedless, and easy to deal with at this stage.

Another smaller crew went north to continue caging valley oak seedlings. This proved a little problematic because they’re deciduous, and, being dormant, were hard to find. Fortunately, some had been flagged earlier, so could be located and caged.

Some “genius,” as described by Hank, had tagged the kiosk extensively with white spray paint, which took two coats of stain to cover; but Hank, with the help of 12-year-old Eric, took that on and got it done.

At break we took a little time to remember Paul Mitchell (a longtime Chapter member and an original China Creek volunteer from the earliest days of the restoration project, starting in 2003) who had passed away the previous week. An extraordinary weed warrior.

Our February Work Party will be Saturday, February 17, from 9-12 (winter hours). By then, even more bull thistle rosettes should be showing their stickery little heads, inviting annihilation. Please join us for this easy work.

[Oh, and check out (and please “like”) the China Creek Facebook page at https://www.facebook.com/chinacreekproject.]