MAY CHAPTER MEETING:

Native Plants and Native People: the Archaeology of Adaption

Presented by S. Joe Griffin

C
ome back to a time when “native plants” were just plants, and human interaction with the environment of California was very different than today. Join archaeologist S. Joe Griffin for an exploration of how people and plants influenced one another through 10,000 dynamic years.

Prior to the arrival of European settlers, prehistoric Native Californians were living in concentrated, sedentary, and socially stratified villages; as were many other native people throughout the western hemisphere. Intriguingly, unlike many other parts of the Americas, Californians were doing this without agriculture. Joe’s talk will explore how this situation seems to have developed, and why agriculture did not achieve a foothold in the state until the influx of Spanish settlers a few hundred years ago.

Chapter meetings are free and open to the public.

Books and Sacramento Valley Chapter T-shirts are available for purchase at meetings. Refreshments provided!

Join or renew today!

CNPS’ success depends on members’ support. To join or renew, go to www.cnps.org/join. Or mail membership dues (individual $45; student or limited income $25) to CNPS, 2707 K Street, Suite 1, Sacramento, CA 95816-5113. Other membership levels are also available.

Send questions or address changes to cnps@cnps.org.

The mission of the California Native Plant Society is to conserve California native plants and their natural habitats, and increase understanding, appreciation, and horticultural use of native plants.

Photo by S. Joe Griffin

Photo by Jamie LeFevre

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Photo by Jamie LeFevre

Mano and Metate

Starting with the earliest known inhabitants of the Americas, Joe will describe what archaeologists know about prehistoric patterns of plant food consumption, and how the use of ecological models is bringing us closer to understanding how environmental and demographic factors influenced these patterns. He will focus especially on the ways in which Native Californians managed biological resources and the ways these management practices may have changed through time.

A Bay Area native, Joe worked as a freelance archaeological technician on four continents and in several states before returning to California five years ago for a Master’s degree at Sac State. He works as an archaeologist with the U.S. Army Corps of Engineers.
With Fond Memories: Debora Popejoy

By Joanne Heraty

When truly unique individuals are suddenly and unexpectedly taken from us, it often results in total disbelief. While the loss of wonderful friends causes incredible sadness, it also allows us to joyfully remember the adventurous lives they led and the incredible footprint they left, both in the communities they were a part of, and in our own lives.

Debora Daily Popejoy led a remarkably rich, adventurous life and had a profound impact on numerous people, as evidenced by the more than 300 people at her memorial on March 23, 2014. The simplest narrative that resonates with most folks who knew her was that Deb was as good as they come -- the greatest.

Deb became my comrade-in-sales at the CNPS Sacramento book table about 2 years ago. Staffing the book table solo is a lonely venture, and Deb quickly became my comic relief. We found in each other kindred spirits, sharing a love of traveling, bicycling, and knitting. I was fascinated by her trips to Kenya and the Canadian Rockies with her husband, Cliff, and their lifelong friends. As avid bicyclists, when I told Deb of my commuting adventures from Sacramento to Davis across the causeway, my jaw dropped when she recounted her bicycle trips across the causeway when there was no bike path and you would bicycle right along the highway with the cars. To me, she was fearless. Earlier this year she was giddy at the idea that she would be a teaching assistant for the field botany course in the Eastern Sierras this coming summer through Sacramento City College. I almost went right home after the CNPS meeting and packed my bags. Her excitement was infectious in that way.

I recruited my partner, Brian, to the book table last year and gave him the title of “carrier of heavy things,” which Deb and I both were happy to pass off. Deb took instantly to Brian and the two of them would pass the time at plant sales trading botany-related puns. Brian will admit that he knows very little about botany, but Deb would be in stitches with his puns. I, like most people who knew her, can still hear her laugh.

That’s the thing about Deb. She was so joyful. There was never a dull moment and she was always happy. She was also insatiable in her quest for knowledge. When the 2nd Edition of the Jepson came out, she promptly went and hand-wrote in all of the new plant names in her version of the book *The Outdoor World of the Sacramento Region*, making it a point to inform interested buyers of the new changes. In that way, she was also a wonderful teacher.

Her generosity and kindness is legendary among her family and friends. Her time scouring the far corners of this earth keying out species to her heart’s content was cut much too short. Her character is something those of us who knew her will always hold dear.

I’m sure that Deb would have loved that I sign off with her favorite book recommendation. To that, I offer you her favorite: *The Digital Jepson Manual*. Deb would have informed you that lugging the 2nd Edition out to the field with you was much too cumbersome. Better to have a digital copy.

Conserving Western Monarchs
Help Us Map Milkweeds and Monitor Overwintering Sites in the West!

Each fall, monarch butterflies in the western states migrate to overwintering sites along the California coast. These monarchs represent a small proportion of the total North American population, yet some overwintering sites may host more than 30,000 monarchs in a given season. Like their eastern counterparts, western monarchs face many threats, including loss and degradation of overwintering and breeding sites. A volunteer citizen monitoring effort in California reveals that since 1997, there has been a decline of over 80 percent in the abundance of overwintering monarchs at many sites.

The Xerces Society, in partnership with the Monarch Joint Venture, has been working to conserve western monarchs by developing a comprehensive database of overwintering sites, monitoring and protecting these places, developing management guidelines, and providing trainings and other resources.

There is a critical need to conserve existing stands of milkweed across the western monarch’s breeding range. To work toward this, the Xerces Society has created a database of over 7,000 milkweed locations in seven western states to identify potential monarch breeding grounds and prioritize conservation efforts. You can add to this by reporting any milkweed patches via our milkweed survey.

For more information about this effort, to report observations of milkweed stands, and more, please visit: Conserving Western Monarchs or [www.xerces.org/monarchs](http://www.xerces.org/monarchs)
Wildflower Wonders!
Saturday, May 3, 2014, 10:00 a.m. - 5:00 p.m.
2140 Chase Drive, Rancho Cordova, CA 95670 at Soil Born Farms’ American River Ranch

This year’s Wildflower Wonders will showcase native plants in their natural habitats of our greater Sacramento region. Come early to see the speakers, seating is limited.

Special Guest Speakers:

10:30 a.m.–11:30 a.m. Establishing Monarch Butterfly Waystations. Speaker Tom Landis.

Tom is a retired National Nursery Specialist for the USDA Forest Service, who is now a champion in establishing Monarch Waystations. He also consults on propagating milkweeds and other Native Plants for restoration of monarch butterfly habitat.

12:30 p.m.–1:30 p.m Gardening in the Wild: How California’s Native Peoples Use and Care for our Native Wildflowers. Speaker Kat Anderson

Kat has had the privilege of working with and learning from Native Americans about how they use and steward nature since 1986. She brings this knowledge, wisdom, and practice to the attention of people through writing and talks. She is an ethnoecologist with the USDA Natural Resources Conservation Service, affiliated with the Department of Plant Sciences at U.C. Davis, and is the author of Tending the Wild.

2:30 p.m.–3:30 p.m. What’s growing on with California’s native plants: the past, our present, and prospects for the future. Speaker Daniel Gluesenkamp.

Dan is Executive Director of the California Native Plant Society (CNPS) and works with CNPS staff and chapters to protect, understand, and celebrate California’s native flora. He first fell in love with California plants (and CNPS) as a student at UC Santa Cruz. Dan earned his Ph.D. at UC Berkeley studying the ecology of native and invasive thistles. He previously worked as Executive Director of The Calflora Database, and as Director of Habitat Protection and Restoration for Audubon Canyon Ranch’s 30 preserves. Dan is a co-founder and past president of the California Invasive Plant Council, co-founder of the Bay Area Early Detection Network (BAEDN), and in 2009 discovered a presumed-extinct Franciscan manzanita plant growing on a traffic island at the Golden Gate Bridge.

Plant Community Expert Naturalists and Exhibitors

- Riparian Woodlands- Bonnie Ross
- Vernal Pools- Tara Collins
- California Prairie- Glen Holstein, Ph.D
- Chaparral- John Hunter, Ph.D
- Oak Woodlands- Shannon Datwyler, Ph.D and students
- Hawks, Honkers, & Hoots - wildlife education organization
- Living Wild with author Alicia Funk-the Living Wild Project
- Soil Born Farms (with food as well as information!)

For details about Wildflower Wonders, please see our webpage: sacvalleycnps.org / Events / Wildflower Wonders

Walks... Talks... and Fun!

Gardens Gone Native
Saturday, May 10, 2014!

The 2014 Gardens Gone Native Tour is almost here! To register and receive this year’s tour brochure with garden descriptions and maps, as well as other helpful tour information, go to: gardensgonenative.eventbrite.com. Half of this year’s gardens have never been on tour before and those that have continue to evolve and mature. So register soon, get your brochure and start planning your 2014 tour. See you at the gardens!

Elderberry Farms Native Plant Nursery
2140 Chase Drive, Rancho Cordova, CA 95670 on the American River Parkway
Suggested donation: $5 (no one will be turned away)

- Ethnobotany- Michelle Stevens, Ph.D and students
- Cordova Creek Project - The Water Forum will give you updates on this important project.

For details about Wildflower Wonders, please see our webpage: sacvalleycnps.org / Events / Wildflower Wonders

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Rare Plant Treasure Hunt News – Spring 2014

Call for trip leaders; RPTH Training; Central Coast Treasure Hunts

Spring is already here, and we’re looking forward to a great season of rare plant hunting in 2014. The drought may take its toll on some of the annuals this year, but there are still many plants to look for. Although 2013 was also a very dry year we were able to document a record-breaking 700 rare plant occurrences. We have some great trips that you can join this year, or even lead on your own. Read on to find out more about them.

Critical Rare Plant Survey Needs – A Call for Trip Leaders

This winter the CNPS Rare Plant Program made an effort to identify some of the plants most in danger of extinction or extirpation from the state. We identified 68 plants that have not been seen in California in over 20 years, most of which are only known from 1 or 2 populations. We need the help of volunteers to search for and relocate many of these plants. It’s possible that some of them are already extinct. Locating some of these plants requires the ability to access remote areas. We encourage all volunteers with previous botanical experience and the ability to travel to help us search for these extreme rarities. Those with some botanical experience but no rare plant survey experience should attend a RPTH training or staff-led trip prior to leading their own trips. Email dslakey@cnps.org for more information on becoming a trip leader.

RPTH Training for Trip Leaders

Want to help us relocate some very rare plants, but need to hone your rare plant survey skills? Join us for one of several training events geared toward people who want to lead their own rare plant searches. Participants should have some previous plant identification experience and outdoor skills. The next training will be held in Arcata on June 14th. We will also have a training in the Los Padres National Forest in San Luis Obispo County in late April or early May, at a TBD date and location. For details, see the RPTH Calendar at http://cnps.org/cnps/rareplants/treasurehunt/calendar.php. Space for these events is limited, so sign up early!

Central Coast Treasure Hunts

If you can’t make it to a training event, joining a staff-led trip is another great way to get up-to-speed on rare plant survey techniques. We’re teaming up with the Ventana Wilderness Alliance and U.S. Forest Service to continue our trips in the Ventana and Silver Peak Wilderness Areas of the Los Padres National Forest in Monterey County. We’re also adding in several trips in the San Luis Obispo County portions of the Los Padres: the Santa Lucia, Machesna Mountain, and Garcia Wilderness Areas. Come explore this rugged and beautiful country with us as we look at trails, peaks, rivers, new roads, and, of course, swimming holes, in search of rare plants. We’ll shift our survey targets throughout the season, from early-season fritillaries to cryptic bedstraws, to some stunning serpentine endemics that bloom in the heat of summer. Check out the RPTH Calendar for details on these trips, and check back for details on many other exciting trips to come.

For additional information contact Danny Slakey at dslakey@cnps.org

California Naturalist Course Offered by Sagehen Creek Field Station in Truckee

UC Berkeley Sagehen Creek Field Station in Truckee is offering a course for anyone interested in learning more about ecology and natural systems, as well as in volunteering with local nature-based or natural-resource focused organizations to benefit their community. This course, which leads to Certification as a California Naturalist through the UC Ag and Natural Resources Program, was developed by the University of California Cooperative Extension to foster a committed corps of volunteer naturalists and citizen scientists trained and ready to take an active role in natural resource conservation, education, and restoration. Subjects covered include: geology, water systems, plant communities, forest and woodland resources, wildlife ecology, energy and global environmental issues, interpretation and community outreach.

Sagehen Creek California Naturalist is offering three versions of the course this summer: a Six Week Adult Course, a One Week Adult Residential, and a One Week Youth Residential for High School students. The six week course, running June 6 until July 19, includes an introduction to natural history, scientific skills, and community outreach. The one week residential course, running June 6 until July 19, includes an introduction to natural history, scientific skills, and community outreach. The one week youth course, running June 22 to 28 for high school youth entering grades 11 and 12.

For more information and to register for the course, go to: http://sagehen.ucnrs.org/events.htm#calnat. Or contact Coordinator Leslie Smith by at sagehen-calnat@berkeley.edu
Upcoming

**Wildflower Wonders**  
Saturday, May 3  
See page 3 for details.

**Gardens Gone Native**  
Saturday, May 10  
See page 3 for details.

**Pine Hill Preserve—Cameron Park Unit**  
Saturday, May 10  
Join preserve experts to explore the various preserves on Gabbro soils. For details, locations, contact information, etc. please visit the website sacvalley.cnps.org

**Pine Hill Preserve—Pine Hill Unit**  
Saturday, May 17  
Join preserve experts to explore the various preserves on Gabbro soils. For details, locations, contact information, etc. please visit the website sacvalley.cnps.org

**Pine Hill Preserve— Kanaka Valley/ Salmon Falls Unit**  
Saturday, May 24  
Join preserve experts to explore the various preserves on Gabbro soils. For details, locations, contact information, etc. please visit the website sacvalley.cnps.org

**Lake Clementine Area, Placer County**  
Saturday, June 7  
Join Diane Cornwall and El Dorado Chapter members to go exploring for spring wildflowers and have the chance to see a rare shrub, Oval-Leaved Viburnum (*Viburnum ellipticum*) in bloom. This is an easy to moderate hike. For directions and additional information contact Diane Cornwall, (530) 888-1404 dancingwildflowers@me.com,

Ongoing

**Habitat 2020**  
Day and Time TBD  
For information contact Glen Holstein, holstein@cal.net; (530) 758-6787.
Opinion:

Plants and Climate Change

By Glen Holstein

Greenhouse gases in the atmosphere act like greenhouse glass. They let in the sun’s light and warmth while keeping heat from escaping to space. They’re also like blankets. One may keep you warm and cozy but too many make you uncomfortably hot.

The most important greenhouse gas is carbon dioxide (CO2). We now know it was low when glaciers covered continents and increased when they shrank. Living things are made of carbon, and most, including all plants and animals, get energy by combining it with oxygen in a process called respiration that releases CO2 to the atmosphere. Green plants respire but they take in twice the CO2 they release because they can do photosynthesis, which, with light energy, combines CO2 and water to make carbon plant material and releases oxygen in the process. The green in plants is where photosynthesis happens, so those like the snow plant, that aren’t green, can’t do it.

People once got most of their energy by burning plant material, a process much like respiration only faster and hotter. That didn’t change CO2 in the atmosphere because when one plant burned and released it, another grew and took it in through photosynthesis. Then in the industrial revolution people learned more energy could be had by burning coal, oil, and natural gas. But all this carbon was made either directly or indirectly by plants that grew millions of years ago. Modern plants can’t photosynthesize fast enough to keep up with this new source of CO2, causing it to reach atmospheric levels greater than any since human evolution began. As expected, this caused the earth to warm and its ice to shrink. The only mystery is why this process hasn’t happened faster.

Plants store carbon made by photosynthesis many ways: in wood of stems and roots and by making humus that darkens soil. Recent research at UC Riverside

Get Your eNews Here!
The Sacramento Valley Chapter CNPS emails announcements about upcoming events. The eNewsletter is another way to get your information about what’s happening in our Chapter. Don’t worry, signing up for the eNewsletter does not interrupt your Hibiscus newsletter service. Sign up at sacvalleycnps.org or contact Chris at cnpschris@gmail.com.

Continued on page 7

Elderberry Farms Native Plant Nursery

2140 Chase Drive, Rancho Cordova, on the American River Parkway at Soil Born Farms

By Chris Lewis, Nursery Leader
cnpschris@gmail.com

The mission of Elderberry Farms Native Plant Nursery is to promote awareness of the benefits of native plant habitat, encourage community involvement, and provide a source of local native plants for restoration projects as well as gardeners

Nursery Projects

Nursery Leaders Chris Lewis, Robin Rietz, and Betsy Weiland want to thank these volunteers for their help and dedication:
Leticia Morris - Inventory Control
Dana Henderson - American River Parkway Weed Warrior
Jim Wadsworth - Photographer and Nursery handyman
John Schmidt - Friday Walks - each week he scouts the potential places we’ll walk, compiles plant lists for those places, and then leads Friday Walks!
Danny McClure - Facebook, Plant Description Handouts
Tom Pimenta and Irene Chung - Plant Fact Sheet. This database is being created for the Sacramento Valley Chapter listing local plants of the region.

Yvonne Ellis - Plant Description ID Cards

Hibiscus Reporter of Nursery News...

(Contact Chris to apply at cnpschris@gmail.com)

Every Wednesday Propagation Workday 10:00 a.m. - 2:00 p.m. Each week we pot up seedlings and learn various propagating techniques under the direction of Robin Rietz, Propagation Director. Every Workday CNPS treats volunteers to peanut butter and jelly sandwiches (or you can bring your own lunch). We also work in our demonstration gardens during workdays.

Friday Walks: To find out where upcoming walks will be, sign up for our eNewsletter (email cnpschris@gmail.com) or check the Friday Walk webpage on sacvalleycnps.org
shows desert plants interacting with mycorrhizae even help store carbon by making caliche, soil limestone deposits that can last millions of years.

The same kind of planners that gave us urban sprawl now claim to fight climate change with so-called alternative energy projects, but these often do more harm than good by destroying green plants that effectively and efficiently reduce CO2 through photosynthesis. This happens around the planet wherever farms and natural habitats are covered by solar fields or artificial hydroelectric lakes. Even in deserts massive amounts of CO2 can be released as solar project construction exposes and disrupts ancient caliche deposits. Photosynthesis is not the only natural value these misguided projects end. Biodiversity is lost when they destroy natural vegetation and even in the air as massive turbine blades kill untold numbers of birds and bats.

The only place for solar fields is where there are no plants and thus no photosynthesis, such as on roof tops and parking lot shade structures. But the new alternative energy boom architects could care less about that. The only thing wanted is a new way to profit from sprawl. They don’t even really care about ending climate change. If they did, state subsidized Off Highway Vehicle programs would be gone by now since they burn fossil fuel and release CO2 just for fun as they destroy photosynthesizing vegetation. The only real solutions to climate change are using energy much more efficiently and nurturing the plants keeping our planet healthy. Since plants take ten times as much carbon out of the atmosphere as fossil fuels add to it, protecting each one and the places they grow is the best defense against climate change.

Congratulations to Bonnie Ross on the arrival of her first grandchild. Welcome Emelia Rose, born April 12.

Visit the Stockton subchapter’s website for the latest news: eepurl.com/u8mNj Use this link to subscribe to the Stockton sub-chapter e-mail list: eepurl.com/u8iTb CNPS members living in Stockton who would like to find others in the area to carpool to chapter activities in Sacramento should contact Nadia Zane, (209) 931-5151.
May 2014

sacvalleycnps.org

The Sacramento Valley chapter newsletter, Hibiscus, is published monthly, except for July, August, and December. Deadline for Hibiscus contributions is midnight of the Friday before the monthly meeting for possible inclusion in the next month’s newsletter. Please send your submittals to editorhibiscus@gmail.com.

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Submit content for the Summer Hibiscus by May 10!

Be sure your membership is current! See your address label for your renewal date.

Or Current Occupant

May 2014

sacvalleycnps.org

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