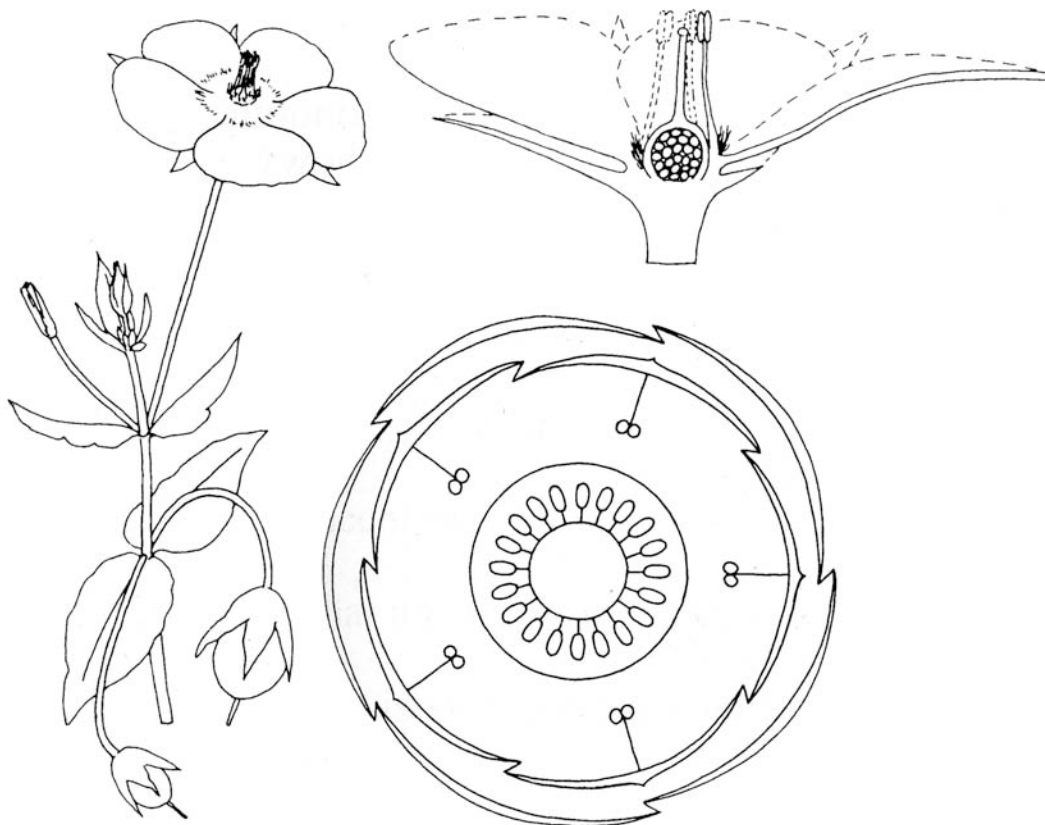


Obispoensis

Newsletter of the San Luis Obispo Chapter of the California Native Plant Society



February 2010

Hoover Award

We are pleased to announce that George Butterworth is the recipient of our Chapter's annual Hoover Award.

Chief among George Butterworth's distinguished contributions is his work describing the flora of the Carrizo and the nearby Chimeneas Ranch Reserve. The precision and care with which he has surveyed has earned him the respect of botanists and land managers statewide. He has created an herbarium for Chimeneas and the Carrizo that has the admiration of all those making reference to its collections. He has set a high benchmark; and his manner inspires many to follow his example.

The professionalism of his effort has greatly benefited our local flora by attracting statewide interest and cooperation. The substantial state and CNPS plant association mapping effort for valley grassland has focused on George's territory in Eastern San Luis Obispo in substantial part because of the expertise he offers. George has a profound appreciation for the diversity and complexity of our local associations. His ability to lead crews to the exact and unique local expression of these plant communities has encouraged the mapping effort to proceed with greater detail and precision.

For several years, he has organized delightful field trips for our Chapter into the Chimeneas, Carrizo and Elkhorn Plains. Chapter members attending his tours have earned a glimpse of "his" little-seen land. Universally, field trip participants praise his planning effort and his annotated checklists. Again, he has set a high benchmark for others to emulate.

Quite unexpectedly, George presented the chapter with a local butterfly and plant associate checklist. The Butterfly checklist represents a popular, educational and important part of our Chapter's outreach to the community. It is evidence that George's scope of study is expanding; we look forward more surprises from him.

The Carrizo has been the setting for much unfortunate drama and conflict. We feel the professionalism, modesty and attention George lavishes on the flora of the Plains serves to heal and protect the land. George possesses the driest of a dry wit and that remarkable humor makes him a character to fit the landscape.

The Hoover award was presented at the Chapter's January banquet in recognition of George Butterworth's distinguished and unstinting contributions to our county's flora. I encourage everyone to be certain to sign up for one of George's field trips in what promises to be an exceptional spring, and congratulate him yourself for his accomplishments and this honor.

~ John Chesnut



About the Cover

Anagalis arvensis (Pimpernel)

The plant profiled in this issue of *Obispoensis* is native to Europe and must be considered a weed, but a pretty one. Bonnie's drawing was done for the third edition of Dr. David Keil and my plant taxonomy textbook. This common plant has a large number of common names. These include pimpernel, scarlet pimpernel, red chickweed, eye-bright, shepherd's clock, poison chickweed and poorman's weatherglass. Its scientific name is *Anagalis arvensis*. In my older wildflower ID books it tends to be called poorman's weatherglass whereas more modern guides name it scarlet pimpernel or just pimpernel.

Yes, it is a weed, but generally not a hated one. Somewhere, I remember reading that gardeners often give it benign neglect. That is, when they find it in their gardens, they leave a few plants and will even remove other more aggressive weeds from around it. They do this because the plant is prolific but easily removed and it grows in a short broad mound (less than 6 inches tall) with many smallish brightly colored flowers. As one might guess from the common name, scarlet pimpernel, the flowers would be bright scarlet. And you would be correct if you encountered the species in the Eastern U.S. or Europe. But out here in Coastal California, the flowers tend to be a orange-red or salmon colored. I have no idea why we have a different color variant than elsewhere. Yes, this is the same species that was used as a signature of the leader of group of aristocrats who worked to save French aristocrats from the guillotine in the early days of the French Revolution. The tale was first a novel and then a play and musical.

The "chickweed" common names refer to the observation that this species has the same general habit and habitat as the common chickweed with which many of us lazy gardeners are already too familiar. Both have low spreading stems with leaves borne in pairs on opposite sides of the stem (opposite arrangement). However, where chickweed leaves appear narrow and elongate, scarlet pimpernel leaves are wide and resemble cross-sections of tiny green eggs (ovate). The name poison chickweed refers to the plant's poisonous characteristics. According to Fuller and McClintock's, *Poisonous Plants of California*, the entire plant contains a number of nasty compounds that give it an acrid smell. Human poisonings are rare, but it can be a major cause of livestock poisonings. They report that livestock poisoning has been a bigger problem in Australia and New Zealand than here in the United States.

Pimpernel flowers are about the same size (ca. 1/4 in. across) as chickweed flowers, but otherwise as different as they can be. As stated above, the drawings reprinted here were originally done for textbook and in doing so, Bonnie adhered to some conventions. However, the half flower drawing is an innovation created by her as a reaction to earlier conventions. Her drawing is a true half flower not just a diagram. She shows the flower parts present behind the plane of the cut as well as those that would be made visible by the cut. The other diagram is called a floral diagram which shows the flower parts in

President's Notes

Our chapter continues to thrive and sales of the *Wildflowers of San Luis Obispo* are fast and furious. The Fungal Foray had such a large turnout that it had to be divided into three large groups, led by experts and comedians David Krause, Mark Brunschwiller and Dennis Sheridan. We learned about mushrooms we might eat, should be careful about, or should offer to Wall Street bankers.

Our Board is supporting the City of SLO with a financial donation as it is trying to close a purchase of beautiful serpentine grass lands and Chorro Creek Bog Thistle Canyon habitat along Froom Creek. I have also asked the Board to consider giving the Carrizo Plain special attention through an emphasis on enhancing conservation science (see below).

Mardi Niles is once again taking on the board position of Field Trips coordinator, so you should contact her with ideas.... and especially if you can get us onto private lands with great flowers
~ David Chipping

their proper relationship as seen looking straight into the flower. Compare it with the flower drawn of the plant. You will find five fused petals with five stamens just inside them. In most plants, stamens are placed between the petals or petal lobes, but in pimpernel the stamens line up with the center line of the petals (stamens opposite the petals). This condition is relatively rare and is shared with other members of its family, Primulaceae. In contrast, our common chickweeds have separate, white, deeply 2-lobed petals. That said, chickweeds and pimpernels do share how the seeds are placed within their fruit. Both of them produce dry fruit that open to release the seeds (capsule). In both, the capsule contains a single, undivided cavity. From the base of the cavity a single central fleshy column arises to which the seeds are attached. This type of seed attachment or placentation (free-central) is also relatively rare. Pimpernel capsules break open via a horizontal ring around their middle such that the top of the fruit falls away like a cap. In contrast, chickweed capsules open at the top via 5-10 short vertical brakes that result in 5-10 teeth around the opening.

One last common name requires explanation and that is poorman's weatherglass. This name refers to the observation that pimpernel flowers are fully open only in bright sunshine when light is high and humidity is low. But as humidity rises and/or clouds begin to thicken in preparation for a storm, pimpernel flowers begin to fold up. So, if you are busy in the garden and you notice your pimpernel flowers closing, it means rain is due. We also might recall that getting our weather forecasts from newspapers, radio, and television is a recent phenomenon. Before them farmers had to do their own forecasting and they used whatever they could find that worked.

Pimpernel can be found throughout our Chapter area. However, it will be most conspicuous where there is adequate moisture along with some disturbance. All the local ID manuals say that the species is particularly common in the coastal area and sporadic in the interior.

~ Dirk Walters, Illustration by Bonnie Walters

Conservation Issues

Another decade and, boy, is it warm! I walked Coon Creek on January 7 and one trillium was in flower, and cardamine and hedge nettle, deer weed, and some other things were all convinced it was spring already. The ceanothus in my yard has finished flowering already. This might be just fine provided we don't have a cold snap, but the downer is that the lack of anything resembling a hard frost is allowing cape ivy to continue its aggressive takeover of the understory in the Los Osos Oaks Preserve. It can be controlled by hand-pulling, so that certain areas could be kept open, but no longer can we depend on the frosts to kill off the above-ground biomass. I would like to talk to anyone who would like to work with me on control strategies at locations where you have noted an alien invasion.

I am asking CNPS to work with Friends of the Carrizo Plain in amassing useful botanic information for assessing long term changes in conditions and health of rare plant populations. I want to begin a GPS-based inventory of conditions, in which sites will be identified and photographed over an extended period of time, and I am seeking GPSers (cache-seekers, for example) who might want to help. I am also collecting all manner of biological information to be included in a science database for the Plain, including grey literature and hitherto undocumented locations of rare plants. You all know where to find me.

~ David Chipping

Chapter Meeting

Our February speakers are Christina Bird-Holenda and her husband Eric. They will be speaking about California's native orchids.

Christina has studied and photographed native orchids in their natural habitat from all over the USA and many areas of the world. While she is not a professional photographer, folks enjoy presentations given by her husband Eric and herself as they generally include culture and fauna as well, when pertinent. They have taken many trips over California to photograph the native orchids (as well as other native flowers), and they can indeed do a program just covering the orchids of California (including southern Oregon, where it is easier to find and photograph many of them).

Christina grew up in N.Carolina and Georgia and Eric in Santa Maria. They met on an orchid expedition trip to Ecuador in 1996.

Eric is a hobbyist grower of orchids and has been very active in the Five Cities Orchid Society for a number of years winning many awards and recognition for his plants. Christina is primarily a nature photographer of flora and fauna and has documented most of the native orchids in their habitats in the US and Canada as well as species in many countries throughout the world.

Meet at the Veterans Building, 801 Grand Avenue, San Luis Obispo, 7:00 p.m., Thursday, February 4.

Thank You Renewing Members, and Welcome New Members to Our Chapter

New Members: Jeanne Greenelsh, Joey Morrow, Peggy Lipe, Joanna & David Kisner, Arthur Hazebrook, Linda Karr and John Reid.

Renewing Members: Melissa Boggs, Liz Curren, Samantha Kaisersatt, Rick Mathews, Cynthia Perrine, Rhonda Riggins, Gary Ruggerone, John Veres and Benjamin Wagner.

Horticulture

by John Nowak

Hi everyone, I hope you are all having a great winter. I'm sure glad we are not back east. No chance of gardening when its 10 below across fifteen states. Luckily here in California with so many climatic zones, we can choose if we want inland cold or moderate coastal. And so this brings us to our topic for this month, selecting the right plant for your climatic zone.

This may sound a bit simple but for some reason I have seen this problem many times. Usually someone has not taken the time to study the cold hardiness of their plant picks, we get a cold snap and blame! dead plants. I have seen hundreds of dollars gone just like that.

So how can you avoid this kind of costly mistake? The answer is easier then you think, take some time to study the weather. By examining the weather extremes in your local city, you can determine a worst case low temperature. Remember there are many micro climates in a given area so this base temperature will help you to pick the right plants for your town.

Your next question might be, how do I find out this information? Great question, the county agriculture department keeps good records on our local climate so they can make the proper recommendations when a farmer wants to grow a crop. They also use this information to help out homeowners. You can call them. Another place to watch is the local papers. The weather section always shows the record high and low for that date. Garden books like Sunset's *Western Garden Book* show climate zones which can be useful but do not show small micro climates. These zones can then be found listed next to the plants' names. You use this zone information to help pick the right plants.

Lastly, the national weather service has a great web site with lots of numbers. There you can trace the lowest temperatures and develop monthly trends. You can use these trend models to help you determine the best time to plant your springtime garden.

So as you can see, with a little proper knowledge we can make the right plant choices and have a great garden for all seasons. Good luck this winter and happy gardening.



CNPS Saves Chorro Creek Bog Thistle Habitat

A CNPS work crew of David Chipping, Nancy and Bill Shearer, and Suzette Girouard (left to right below) cleared a pampas grass infested wetland (right) where Chorro Creek bog thistle was at risk of extirpation. Two hours of hard work cleared the site. It was pretty tough work, with Nancy walking a gazillion miles carrying stuff to the big pile and the rest of us slipping and sliding on the steep hillside. We think we got 99.9% but there will be a few missed sprouts and reseedes so it will be revisited to remove any fresh sprouts.



I did an inventory of thistle on that hillside for the thistle recovery plan for DFG, and the majority of once occupied "wet foot" space on the hillside had been taken over by the pampas, so we have done some very real good in helping the population recover. This is what CNPS is all about!

CNPS has many sites such as this which could use similar attack by work parties, so contact David Chipping if you would like some exercise.
~ David Chipping



A Special Benefit for CNPS Members

Growing Grounds Farm is a non-profit wholesale nursery Adult Vocational Program of the Transitions-Mental Health Association. They have a large selection of California natives. They are not open to the general public. However, for CNPS-SLO chapter members

ONLY, the Growing Grounds Farm is open for plant purchases on the 3rd Tuesday of each month, from 2-4 p.m. at the Growing Grounds Farm on Orcutt Road. Visit their web site, www.growinggroundsfarm.org, for more information about the Farm.

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Mills Biology Professor Searches for California's Ecological History

Mills College professor of biology Bruce Pavlik's latest book, *The California Deserts: An Ecological Rediscovery* (University of California Press) may alter the way we address environmental challenges.

In his research on the California deserts, Pavlik discovered how native peoples who inhabited these arid lands for 12,000 years experienced extreme climate change.

"From the last glaciations to the rapid spread of drought and high temperatures, they adjusted their technologies and lifestyles to new environmental limitations," he said.

"And they did this without destroying the evolving landscape. We have much to learn from them."

Pavlik said the desert landscape is rich with life, has a complex history, and is inspirationally beautiful, yet there is no book on the ecological relationships of arid lands that includes humans.

Pavlik writes about native people changing their behaviors and devising new technologies in response to environmental changes. For example, they shifted their diet to small animals and insects, such as jackrabbits and grasshoppers when mastodon, horse and giant ground sloth became extinct. This required new hunting weapons armed with small, notched arrowheads instead of large, fluted spearheads. By the time the landscape became desert, Pavlik said, the native peoples found ways to use available plants and animals for medicine and food.

"This book is my attempt to integrate humans into the web of desert life, and to pay homage to the first California ecologists, the native Americans," he said. "I also hope the book will help people think carefully and creatively about the ecological challenges we face."

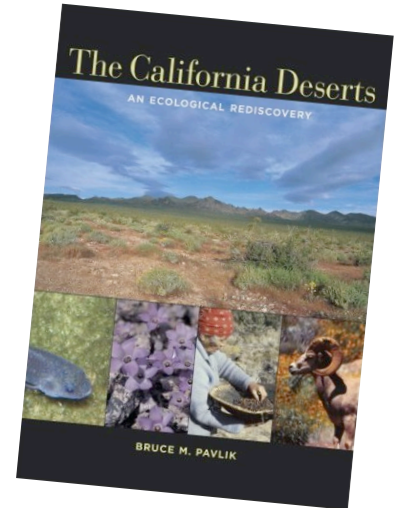
Pavlik said that we often respond poorly to ecological limits and economic needs. For example, in response to global climate change and population growth, he said we may choose options such as the development of solar power, the installation of carbon dioxide "scrubbers," and increased groundwater pumping. Yet these projects would industrialize California deserts and destroy vast tracts of biologically rich, intact habitat, he said. Instead, Pavlik said we should use already impacted places such as landfills, residential areas, and out-of-production agricultural lands for responding to environmental challenges.

"My research attempts to blend science with land management, and help agencies and companies make informed decisions when natural resources and development collide," he said.

Pavlik extends his enthusiasm for science with his students. He currently has students working at the Ash Meadows National Wildlife Refuge, a desert wetland with many unique plant and animal species outside of Death Valley National Park. They are investigating the role of native bees in maintaining populations of rare and endangered desert plants. Bees play a critical role in the pollination of all flowering species, without them, ecological systems would be seriously degraded.

Quynh Tran

Media Relations Manager, Mills College



Dedicated to the Preservation of the California Native Flora

The California Native Plant Society is a statewide non-profit organization of amateurs and professionals with a common interest in California's 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 and conservation. Membership is open to all.

Membership includes the quarterly journal, *Fremontia*, the quarterly *Bulletin*, which gives statewide news and announcements of the Society activities and conservation issues, and the chapter newsletter, *Obispoensis*.



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Field Trips

Saturday, February 27, 9 a.m., Late Winter Burton Mesa Chaparral Field Trip at the La Purisima Mission: The California Native Plant Society and Lompoc Valley Botanic and Horticultural Society will hold their annual winter field trip to the Burton Mesa Chaparral on the La Purisima Mission grounds. Meet at the east end of Burton Mesa Boulevard in Mission Hills at 9 a.m. for a chance to see the early bloomers and interesting scenery. To reach Burton Mesa Boulevard, get to SR 1 north of Lompoc. At the signal where SR 1 turns down hill towards Lompoc, take Harris Grade Road north to Burton Mesa Boulevard, and turn right (east). For more information call Charlie Blair at 733-3189.



*David Krause with Amanita muscaria
found on December's Fungal Foray*