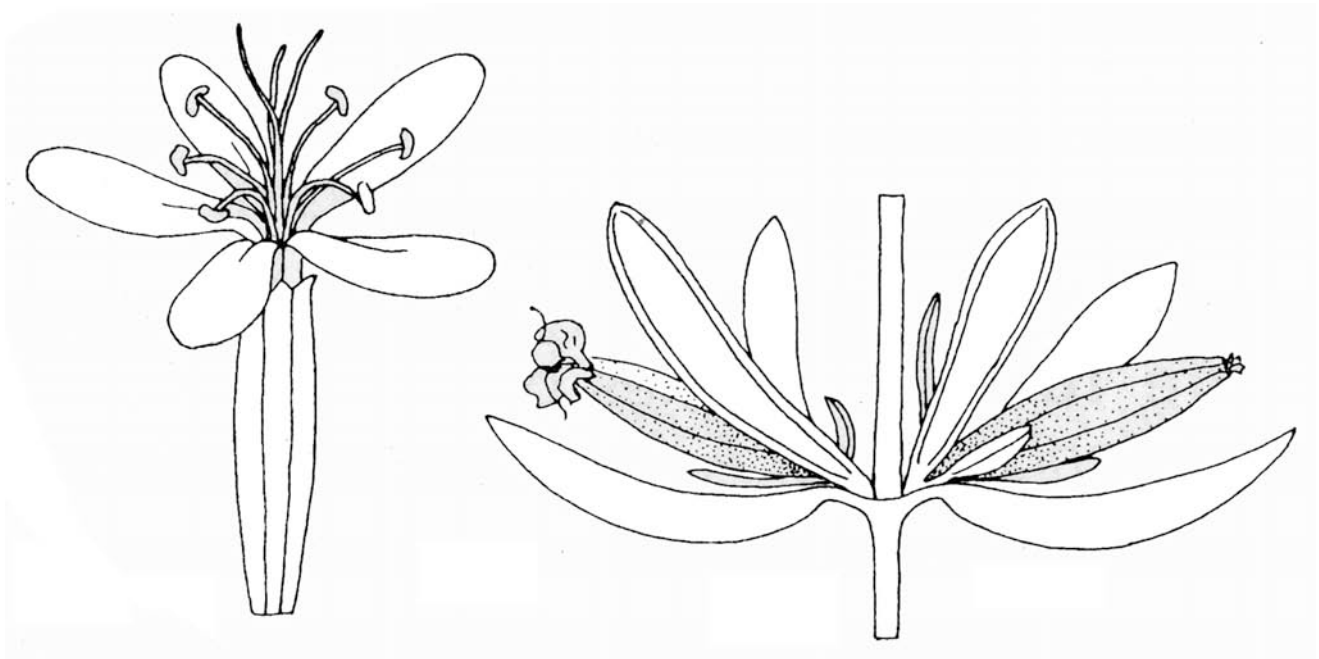

Obispoensis

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



NOVEMBER 2008

Alkali Heath (*Frankenia salina*)

The plant profiled this time is our only common representative of the small family, Frankeniaceae, (4 genera and 90 species worldwide). The family is essentially restricted to salty or halophytic soils. Our local species is *Frankenia salina* which in older floras was identified as *F. grandiflora*. The only English common names I know for it are alkali heath or more commonly just, "frankenian." The illustration is Bonnie's drawing used in Dr. David Keil's and my *Plant Taxonomy* textbook done several years ago.

The pictured species of alkali heath is common in the salt marsh at Morro Bay as well as along the California coast from the Bay Area south into Baja. It is also found growing along the edges of salt flats of the desert interior such as Soda Lake in the Carrizo. Salt marshes and alkali flats look to be as flat as a pancake. But a closer inspection reveals their surfaces to be made up of small hills and shallow valleys if it is coastal and more or less a shallow bowl in the interior. I must grant that the difference in elevation between highs and lows is only inches. But these elevation inches translate into extreme differences in soil salt concentrations. Soil salt concentration in the valleys is very high while that of the hills is significantly lower. Alkali heath is a plant of the "hill" tops and outer edges of salt marshes. It also the first common herb encountered around the outer edge of the alkali flats. Therefore it prefers relatively lower salt concentrations. The problem with salty soils for plants is that plant cells must extract water via physical and chemical cellular processes. Plants can't drink like animals can. In order to get water into plant, the salt concentration within the plant root cells must either be higher than that of the soil in which it grows or they must expend valuable energy to "force" water to enter the cell. In both of these cases, only water with little or no salt enters the plant. Another possibility is for the plant to have a way of allowing salt water to enter the plant roots and flow through its plumbing (xylem) and then out the tips of stems and leaves. In this last situation, the cells bordering the plumbing are able to extract only the water from the salt water while allowing the ever increasingly concentrated brine to pass onto of the plant tips where it is expelled. Alkali heath uses this method *which, by the way, I don't really understand*. My evidence that it uses the last method is the conspicuous salt deposits that develop on its leaves during the dry portions of the

day. The salt water extruded by the leaves, evaporates leaving salt deposits behind.

Alkali heath consists of herbaceous top and woody base. I.e. it is suffrutescent. Its small leaves are folded down (revolute). It produces a few scattered small pink or flesh colored flowers at a time. Like many plants that live in very harsh environments, alkali heath expends relatively little of its resources on sexual reproduction. The purpose of sexual reproduction is to produce variation. This variation is insurance against changing conditions. The more variable is the offspring, the greater is the chance that at least one of its offspring will be able to survive in a new environment. However, in harsh environments, where the probability of a seedling surviving is extremely low, plants tend to expend their limited resources in vegetative (asexual) growth or expansion. This is the main explanation why plants and animals of harsh and/or specialized environments are the most in danger of going extinct when conditions change.

Several of my references including Dr. Matt Ritter, in his *Plants of San Luis Obispo: Their Lives and Stories*, report that alkali heath is sold in health food stores under the name of *yerba rheum*. They report that it is used for treatment of diseases of mucus membranes and for inflammation of joints. On the other hand our species is listed in J. C. Th. Uphof's *Dictionary of Economic Plants* as being an astringent used medicinally for dysentery, diarrhea, gleet, catarrh and leucorrhoea. Several authors recommend it a garden plant but I suspect it would take a die-hard native plant gardener to want to grow it.

– Dirk Walters, Illustration by Bonnie Walters

President's Corner

I would like to thank all of you who brought in the wonderful desserts and great pictures to share at our October meeting. We are so lucky to have the our expert photographers who gave us world class images. This was also the first time that there were no 35mm slides.. time does pass. November is THE month for all of you 'native gardeners', so be sure to come to the plant sale. It is our chapter's main fundraiser, so you can help us out by helping yourself to a bunch of plants. The chapter need some more help as well. We need a Secretary for the Board, and many of our Board would not mind a rest. If you think our mission is worthwhile, I would

welcome your attendance at our Board meetings, just to take a look at what we do and with no obligation. Give me a call. On another issue, I asked last year that members contact me if they wanted to be on a chapter e-mail list for fast breaking news, and the response was tiny. This time let me know if you DON'T want to be on the e-mail list by e-mailing me at 'dchippin@calpoly.edu'. – David Chipping

Conservation

The Santa Margarita Ranch, with its many problems, was rejected by the Planning Commission, after failing to discuss all of the issues including the impacts to plants and wildlife. I believe some of the Commission votes were cast so the project can be quickly appealed to the current Board of Supervisors and approved before a "greener" Board is seated in 2009. Yet another "agricultural cluster" has now been proposed for Laetitia Winery, on the east side of US 101 south of Arroyo Grande. This impacts lots of oaks, and is asking for over a hundred housing units where there are currently just a couple. Just as in Santa Margarita Ranch, our beloved oaks will probably take a back seat to water supply issues. I have attended County Planning Dept. meetings on "Smart Growth", which will hopefully act to push urban sprawl back toward the urban core. I urge our members to support this broad planning process.

On another matter, The CNPS Conservation Conference will be taking place in 2009 (see the www.cnps.org web page for details). Our chapter was asked to supply a poster presentation about our activities, and I thought I would share the abstract with all of you, as a reminder of the importance of what we have done and will be doing.

THE SAN LUIS OBISPO CHAPTER CONSERVATION PROGRAM

San Luis Obispo Chapter of CNPS was formed over concerns about a Forest Service firebreak, resulting in the 1969 formation of the West Cuesta Botanic Area. Cooperation with Los Padres National Forest has resulted in mapping and fencing of rare plant populations, and consultation in post fire recovery efforts. CNPS has worked with government agencies in the protection of the Carrizo Plain and has contributed to rare plant inventories, visitor center educational displays, vernal pool surveys, and is active on the Advisory Council.

Within the county, the chapter also actively comments on BLM issues, works with CalTrans on highway routing, consults with the National Guard at Camp Roberts and Camp San Luis Obispo on oak restoration and rare plant surveys, and advises California State Parks on conservation and exclusion of OHV's from the Oso Flaco Lake dune area. The program was also an active participant in the Hearst Ranch conservation easement, gaining extra protection for rare plants of Arroyo de la Cruz. The chapter retains active participation in the County Weed Management Area program. The chapter actively comments and testifies publicly on CEQA documents, maintains a strong relationship with SLO County planning staff, and has members sit on city and county committees. Public education is a key element of conservation, and the chapter interacts with other conservation groups, maintains a booth at public events, and stresses conservation through horticulture. The chapter also supports a active native plant classroom program in Los Osos Middle School. – David Chipping

Horticulture

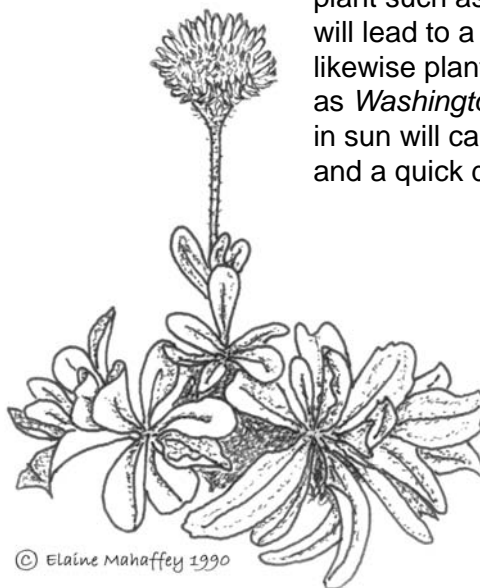
By the time you read this we will be days away from the plant sale and I'm sure you will have your list ready. There are so many plants to pick from that sometimes it can be a little overwhelming. I thought this would be a good time to go over some of the basics about how to pick the right plant for the right place.

The first item you must consider is the amount of sun your area receives. Some plants are for

shade only and others must be located in full sun. Putting a full sun plant such as manzanita in the shade will lead to a short lived decline, likewise planting a shade plant such as *Washingtonia* or giant chain fern in sun will cause massive sunburn and a quick death.

The second most important requirement to consider is water. Is the area you want to plant in a wet location or is it a dry one? In general, a good rule of green thumb is, if the plant grows in a riparian zone such as

Continued on page 5



Chapter Meeting

Thursday, November 6, 7 p.m. "Cacti, Agaves, and Yuccas of California and Nevada" by Stephen Ingram.

Botanist, writer, and photographer Stephen Ingram is a native Californian with a long-time interest in plants and plant ecology. He received a B.S. degree in Biology from Lewis and Clark College, and an M.A. degree in Botany from the University of California, Santa Barbara. Following graduate school, Stephen was employed as part of the Research Department at Selby Botanical Gardens in Sarasota, Florida, managing the herbarium and working on an epiphyte flora of Monteverde, Costa Rica. He has also worked as a botanical consultant doing rare plant surveys in the Eastern Sierra and the Mojave Desert. Stephen is past president of the Bristlecone Chapter of the California Native Plant Society. His photos have been used in numerous books, magazines, and calendars.

His presentation explores some of the unique attributes of the cacti, agaves, and yuccas and highlights what makes them such components of our native plant communities. With stunning images of their colorful blossoms and unusual growth forms, this program showcases a number of species and varieties that occur in California's deserts and coastal areas.

Stephen's new book is *Cacti, Agaves, and Yuccas of California and Nevada*. It will be on sale at the meeting.



Meet at the Veterans Building, Grand Avenue, San Luis Obispo, 7 p.m. socializing, 7:30 business meeting.

Field Trip

Saturday, December 6: A field trip to the Arroyo Hondo Preserve to enjoy fall colors in this majestic canyon along the Gaviota Coast. Meet at the gate at 9:45 a.m. Here we will visit one of Santa Barbara County's most beautiful canyons where the clear stream water is bordered by Western Sycamore and California Bay Laurel trees. The canyon walls tell the story of the geologic history of this region. There is also a restored adobe home that was once a stagecoach stop. We will have a tour of the preserve and habitat restoration project before we stop for a picnic lunch. The afternoon will be open. To learn more about this area visit the website www.sblandtrust.org. Meet at the SLO Vets Hall at 8:00 a.m. and at the Hwy. 166 and Hwy. 101 intersection on the west side of Hwy. 101 at 8:40 a.m. to carpool. If you have questions e-mail Mardi Niles at mlniles@sbcglobal.net.



Announcing the CNPS 2009 Conservation Conference – Strategies and Solutions

January 17-19, 2009, at the Sacramento Conservation Center and Sheraton Grand Hotel in Sacramento, CA. The goal of this conference is to identify and promote science and policy-based strategies and solutions to improve the conservation of California's native flora and natural landscapes. Early registration for this event began July 1. In addition to attending the event, there are many activities planned that members can participate in including a photo contest, botanical art contest, poetry reading, silent auction (provide an item or bid on an item), and many more activities. Please visit the website, <http://www.cnps.org/cnps/conservation/conference/2009/>, for additional information about the conference.

Silent Auction WE NEED YOUR DONATIONS!

A Silent Auction followed by a Live Auction will be held on Sunday, Jan 18 from 6:00 p.m.-7:00 p.m. during the poster session and cocktail hour preceding the banquet. Bring your wallet and help support this important fundraising event for the CNPS Conservation Program.

Donate artworks, fine wine, books, exotic vacations, gift certificates, carbon offsets, land! To donate items to the silent auction check the silent auction item box on the registration form and download the donation form http://cnps.org/cnps/conservation/conference/2009/files/cnps_2009_auction_donor.pdf (125kb pdf) or call 916-447-2677 to have forms mailed or faxed to you.

Horticulture continued

Myrica californica or pacific wax myrtle, it will need summer watering to keep it at its best. It will also need some shade to get a good start, and a somewhat heavier soil.

Speaking of soil, soil is the next most important item on the list. Is your soil heavy, containing clay? If so, you would not want to pick a plant which grows in dune sand such as *Coreopsis gigantea*. This plant prefers well drained soil and can rot easily if over watered in clay soil.

Well, I hope this will help you make the proper picks at the sale. As always I will be there with my staff of experts ready and willing to help you with any special problem areas. I want to take this time again to thank you for your continued support at the sale. Thanks again for those of you who have signed up to help, I will see you there. – John

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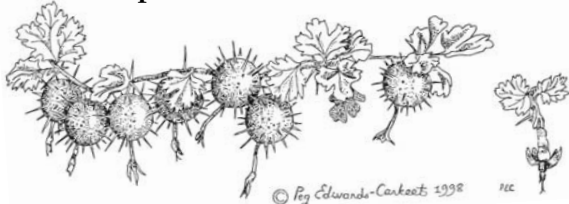
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Looking for native plant gardening information?

Las Palitas Nursery in Santa Margarita has a great website for learning about the growing of native plants.

www.laspalitas.com



Did You Know?

As a CNPS member, you can get \$6 off an annual subscription to *Pacific Horticulture*, the widely read journal of western gardening. Find out about these and other member benefits by visiting

www.cnps.org/membership

Join or renew today!



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 activities and conservation issues, and the chapter newsletter, *Obispoensis*.



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