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# *Obispoensis*

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

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October 2015

## Bird's foot trefoil (*Lotus corniculatus*)

Well, we're at it again. The plant discussed in this issue of the *Obispoensis* is NOT a native plant. It is bird's foot trefoil (*Lotus corniculatus*) and it is native to Eurasia and North Africa. Bonnie's drawing is a combination of new and old. The leafy twig bearing an inflorescence and fruit along with the intact and expanded flower and the intact and split fruit were borrowed from Dr. David Keil's and my plant taxonomy text. The view of the plant growing flat on the ground is new. I suspect that most of you will immediately recognize from the drawings that the plant is a member of the bean, pea, or legume family (Fabaceae). The pea and bean names come from two of the many important economic crops found in the family. In fact the Fabaceae is the second most important economic family of plants. It is second only to the grasses (Poaceae). The last name, legume family, is derived from the essentially unique fruit found in this family, the legume. Historically, that is up until the middle of the 20<sup>th</sup> century, this family was known as the Leguminosae after its fruit. I suspect a few of us old guys may still call it that.

The common name commonly used for this species in our area (according to the internet, there are over 90 common names for it in England alone) is "bird's foot trefoil." The bird-foot can be imagined from Bonnie's drawing. Look at the arrangement of the flowers. Now imagine there are five of them and they have turned into fruits. The fruits are long (up to 4 inches) and thin and are arranged all in a single horizontal plane, just like the toes of bird's foot. This appearance is enhanced by the hard, sharp style base which resembles a claw. Trefoil is actually a mistaken interpretation of the leaves. Again look at Bonnie's drawing of the leaves. Note the three blades at the leaf's tip. These are the origin of name trefoil for *tre-* (3) and foil (blades). The two blades next to the stem are also part of the leaf, but because there is no petiole (leaf stalk), they look like and are positioned like stipules. What looks like the leaf stalk is actually the axis (rachis) of a pinnately compound leaf. Remember, common names can't be rejected because they are misleading. One of the other common names might be worth mentioning because it refers the bright yellow flowers. It's "butter and eggs" which refers to the bright yellow flower's resemblance to a fried egg yolk. The internet seems to indicate that the North American literature apparently prefers using the name "bird's foot deer vetch." Deer vetch may have fewer mistakes. But vetch can be and is often used for any member of the legume family with vine-like, spreading stems and pinnately compound leaves.

Most of the temperate members of the Fabaceae bear flowers that are variations on the flower in the drawing. Because it is so distinctive, the different petals have been

given separate names. The largest and uppermost petal that covers the entire flower in bud is the banner petal. When the flower matures, it often bends upward in the middle producing a very conspicuous sight that is easily seen by potential pollinators. The two petals to the side are known as the wings as they often flare outward and resemble (loosely) the wings of a butterfly. In fact, the technical name for a flower with this arrangement is termed *papilionaceous* which is derived from root, *papilio*, which means butterfly. There is a group of common butterflies that share that name. The bottom of the flower is made up of two petals fused along their distal bottom edges to form what appears to be the keel of a V-bottomed boat. These petals are termed the keel petals. The ten stamens and single pistil are usually totally hidden between the keel petals.

When I was growing up in Western Illinois, I would occasionally look at my parents' farming magazines. I think I remember reading about this new forage crop which would modernize Midwestern pastures. The articles indicated it was highly productive and would stand up to stomping and grazing by large herbivores (cattle, sheep, goats, etc.). Even better, it was a member of the legume family which has associated with their roots bacteria that are capable of converting unusable atmospheric nitrogen into forms that could be utilized by plants to make their proteins and nucleic acids. That is, it was capable of adding nitrogen fertilizer to the pasture.

The plant was our bird's foot trefoil. But I don't remember seeing any pastures of it, although this could be that I was not able to visit that many different farms. Why didn't it live up to the hype in the farming magazines? I suspect it is due to its habit of sending out its stems flat against the soil surface, only producing vertical stems to raise their flowers a few inches. It would not be an easy plant for an animal to get into its mouth. I did see on the internet that new commercial varieties that produce more up right stems have been bred. Actually, it is a moot point about its use in Midwestern pastures as most of the pastures in that part of the country have disappeared. Livestock is now raised in feedlots or huge warehouse-like buildings generally out of sight of the public. Since it seems to be drought and lawn mower tolerant, I have seen it spreading in parched lawns during this drought cycle. When in bloom from May into August, it can turn a parched lawn yellow.

I need to produce one last paragraph on the genus name, *Lotus*. Back in 2006, *Obispoensis* published an article entitled, *Lotus scoparius*, which is the scientific name for a very common Coastal Scrub and Chaparral shrub. Its common name is shrubby deer weed or deer vetch. It  
(continued on next page)

## Bird's foot trefoil continued

turns out that the most recent edition of *The Jepson Manual* has a new genus name for that plant. Shrubby deer weed, has been moved to a different genus, *Acmispon*. All other native New World members of the old genus *Lotus* have been moved to other genera as well. The genus *Lotus*, as now constituted, is restricted to plants native to the old world. So the genus name *Lotus* is still valid for this old world plant. ☘ Dirk Walters, Illustration by Bonnie Walters

## Conservation

Summer has been quiet, thank goodness, concerning large threats to native plants. The drought and associated water restrictions are smothering a lot of development plans, at least for the moment. CNPS has been included in consultation regarding the conservation lands associated with the Topaz Solar Plant, and an interesting meeting was held out at the plant.

As I write this, the Planning Commission is about to consider, and I hope reject, the Laetitia Winery Agricultural Cluster. But the main driver is concern about local water supplies. County staff has recommended rejection, and also question the number of houses

allowable under the agricultural cluster ordinance. The ordinance is a real problem as it allows additional houses into an area as an incentive to clustering. When the cluster is spaced out rather than compact, the whole issue becomes questionable.

The drought has renewed the idea of raising the height of Salinas Dam, which would have significant impacts, but nothing solid has been proposed as yet. The loss of trees from the additional capacity has been a major concern. In the area to be flooded there are 1,639 coast live oaks, 633 blue oaks, 198 valley oaks and 469 gray pines, as established in a Draft EIR. Once the Nacimiento pipeline gained acceptance as a source of water, the Salinas Dam proposal was dropped, but at least one supervisor is proposing raising the dead.

Perhaps the greatest immediate problem with the drought is the death of hundreds, of not thousands, of oaks and pines and also shrubs such as the rare Morro manzanita. CNPS has no strategy in regard to possibly permanent climate change, as there is too much uncertainty in just about every ecological issue. Even with the promise of an El Nino this winter, a mass of warm water in the north Pacific makes the expected rainfall a guessing game. A historic tragedy is embodied in Cambria, where a subdivision was platted out in the pines, which must now be cut down due to fear of fire. We hope homeowners find enough water to at least keep some young tress alive. Grey water works! ☘ David Chipping

## Field Trips

**Saturday, October 3, 2105, 9:00 a.m. End of Sand Spit Road, Montaña de Oro.** Join the California Native Plants Society, Morro Coast Audubon Society, and Sierra Club, for a joint field trip looking for shorebirds and coastal dune plants. This outing will feature a look at the Snowy Plover habitat and talk about the recovery of this species. Meet at the end of the Sand Spit Road in Montaña de Oro State Park (the first road on the right, 0.75 miles from the park entrance). We plan to walk about 4 miles, north along the ocean side of the dunes for a couple of miles, cross over to the estuary side, then back to the parking lot. Restrooms are available at the Sand Spit parking lot. Bring water, snacks / lunch, and binoculars. Sturdy shoes, sunscreen, hats, and jackets are recommended. No RSVP needed. For more information, contact Bill Waycott (805) 459-2103, bill.waycott@gmail.com.

**Saturday, October 17, 9:00a.m. Fall Plant Walk La Purisima Mission.** Charlie Blair will lead a tour of fall blooming plants of the Burton Mesa Chaparral. Come and see what's out in this often forgotten time of year. Meet at 9 a.m. at the east end of Burton Mesa Boulevard (1550 E. Burton Mesa Blvd.) at the Mission Hills Community Service District Office. From the north, take the Constellation Road off-ramp from SR 1, and turn left on Constellation Road, then right at Burton Mesa Boulevard. From the south, Burton Mesa Boulevard can be accessed from either Harris Grade Road. or Rucker Road. Again, turn right on Burton Mesa Boulevard. Call Charlie Blair (805) 733-3189 for details.

## Plant Sale and Horticultural Notes

Now that summer is almost over, the long dry days and warm nights will give way to cool crisp mornings and as autumn approaches . . . The Plant Sale. With luck this winter will bring hopes of copious amounts of rain as predicted by the National Weather Service. El Niño weather patterns are perfect for adding plants to the garden. Suzette and I think this will be a very good thing for the plant sale.

More than ever we can say, “use the winter rains to help establish your native plants.” November is one of the best months to plant in. This is why the sale has always been held in the fall. So please keep this in mind while talking with your friends and neighbors about the sale.

As always, the plant sale is our biggest fundraiser for the year. The money we earn goes towards meeting room rental, web page maintenance and upgrades, and the *Obispoensis* newsletter printing and mailing.

Suzette and I invite any and all members, new or old, to please volunteer to help at this year’s annual plant sale. There are many jobs to be done and I can always match you to something that fits best for you. Some jobs are: setting up chairs and tables, unloading plants, directing traffic, assisting with plant sales, and answering plant related questions. It’s a great way to meet new people, talk to old friends, learn plant names, and get some exercise. We will have books, posters, T-shirts, . . . oh did I forget to say volunteers get first pick of plants before the sale starts.

So if you can volunteer, please fill out the slip at the end of this newsletter and snail mail it (the old fashioned way) or e-mail me at [grityls@gmail.com](mailto:grityls@gmail.com) or call 805-674-2034 with any questions. Just indicate hours that you can help. You can also hand the slip to Suzette or me at our October 1 meeting. Until then Happy Gardening, John and Suzette

### CNPS at the Arroyo Grande Village Summer Concert Series

On August 30, our CNPS chapter was the non-profit organization selected to have a booth at the Arroyo Grande Village Summer Concert Series. This event was a fun raiser for us. We were in charge of selling raffle tickets to the audience. All profits from these sales went to CNPS. We provided five raffle items and the Arroyo Grande Village provided five additional items. The Central City Swing Band played big band tunes, it was a warm summer afternoon and we made a handsome profit. Thanks to the merchants who donated to our raffle items: Miner’s Hardware, Native Sons and the Basin St. Regulars. Special thanks to all our members who helped make this event a success: Bill Waycott, Linda Chipping, June Kristoff-Jones, Charlie Blair, David Chipping, Larry Vierheilg. With much appreciation, Mardi Niles.



Raffle items provided by CNPS

A big thank you to all who joined or renewed during the lazy, hazy days of summer. We are so happy to have you!

Jesse Arnold	John & Esther Gowan
Warren Arnold	Susan Grimaud
Joyce Bauerle	Michaela Koenig
Brandi Bergreen	Ellen Nelson
Jeff Blauer	Jay & Tina Salter
Jean Burns Slater	Michael & Natalie Schaefer
Frank Bush	James Smith
Dagmar Collins	Pamela Thomas
Connie Geiger	David White

**San Luis Obispo Chapter Meeting**  
 Thursday, October 1, 7:00 p.m.  
 Dessert Potluck and Members' Slide Show  
 Bring a dessert to share and your 15 best photos, slides and digital pictures. Meet at the Veterans Hall, 801 Grand Avenue, San Luis Obispo.

## NIPOMO NATIVE GARDEN FALL PLANT SALE

Saturday, October 3, 9 AM to 1 PM

Nipomo Native Garden Parking Lot on Osage  
 Tefft to Pomeroy, left on Camino Caballo. Right on Osage

Wide Variety of Landscaping Plants  
 Many Drought Tolerant Grasses Shrubs, Trees  
 NNG Tee Shirts & Caps  
 Information Advice  
 Great Plants – Great Prices  
 Support our all volunteer local Botanical Garden  
 For more information 929-3589

*Obispoensis* is published October through June except January. Items for submittal to *Obispoensis* should be sent to rhotaling@charter.net. The deadline is the 10<sup>th</sup> of each month. Botanical articles, news items, illustrations, photos, events and tidbits are welcome!  
 Visit the websites [www.cnps.org](http://www.cnps.org) and [www.cnps-slo.org](http://www.cnps-slo.org)

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



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

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RETURN SERVICE REQUESTED

Nonprofit Organization  
U.S. Postage Paid  
San Luis Obispo, CA  
Permit No. 114



**CNPS Native Plant Sale Volunteer Sign Up**

Pacific Beach High School, 11950 Los Osos Valley Road, San Luis Obispo  
Saturday, November 7, 2015

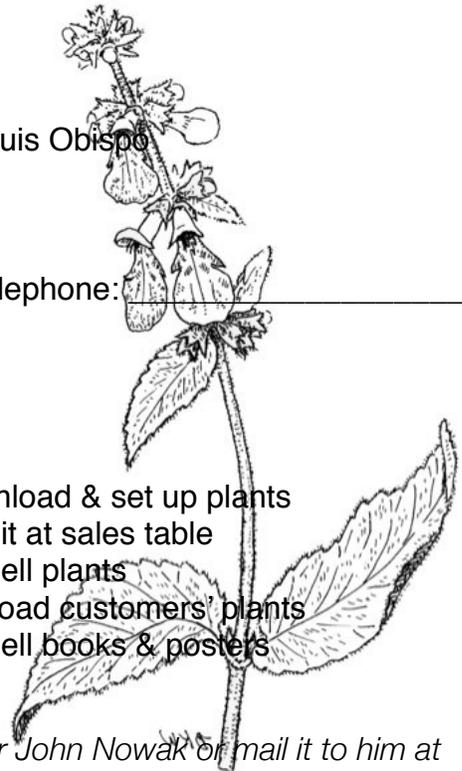
Name: \_\_\_\_\_ Telephone: \_\_\_\_\_

Please mark the hours you can help

- 7 - 8 a.m.
- 8 - 9 a.m.
- 9 - 10 a.m.
- 10 - 11 a.m.
- 11 - 12 p.m.
- 12 - 1 p.m.
- 1 - 2 p.m.

- Help as needed
- Set up tables
- Hang Signs
- Sell seeds
- Cashier

- Unload & set up plants
- Sit at sales table
- Sell plants
- Load customers' plants
- Sell books & posters



*Please complete this form and bring it to the October meeting for John Nowak or mail it to him at P.O. Box 6401, Los Osos, CA 93412*