

Obispoensis

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



November 2014

Spear Orache or Spear Salt Bush (*Atriplex patula*)

As I write this article, it's August in the year of California's third most severe drought. There's not much out there in bloom. So I've retreated to one of the few places where plants are doing anything. Yes, I'm returning to the coastal salt marsh. That is where we found the plant to be featured in this issue of *Obispoensis*. It's a plant that generally doesn't get into wildflower books but does make it into many weed books. This is because it is weedy, widespread, and its flowers are green or brown and tiny and (in our area) fruiting is relatively rare.

The plant is *Atriplex patula* ssp. *hastata* or just plain *A. patula* depending on which plant ID book you're using. In our area, *Atriplex patula* may have two subspecies which differ, according to some identification keys, primarily by their leaf shape. Subspecies *hastata* is the more common and distinctive of the two. Dr. Robert Hoover in his *The Vascular Plants of San Luis Obispo County* states that *A. p. ssp. hastata* is very common around the Morro Bay salt marsh. The other subspecies, *A. p. ssp. patula*, according to Dr. Hoover, is rare in our area. The only location he cites is nine miles north of Morro Bay. Subspecies *patula* produces leaves that are narrow, oblong or lanceolate; their bases are smooth and rounded and therefore lack any backward projecting lobes or acute projecting angles. The model for this plant grows along the uppermost edge of Morro Bay salt marsh. You probably won't get your feet wet if you would like it find it because it grows where it will get inundated only by the highest of tides, if at all. A look at Bonnie's drawing will show the distinctly arrow-head shaped leaf blades with their conspicuous backward projecting lobes on the outer leaf blade base, making the leaf resemble a spear point or arrowhead. This shape is technically termed "hastate" by botanists. The shape of the leaf gives it its subspecies name. However, if you look again at Bonnie's drawing, you will see some leaves that are NOT hastate but would be at home in *A. p. ssp. patula*. I suspect that this is the reason why the new *Jepson Manual* doesn't recognize subspecies in this species. It simply refers all forms to the species *A. patula*. It is interesting that they retain the common name of spear saltbush or spear orache for all appearances of the species. A word about its leaf arrangement. Most of the descriptions indicate that it is alternate but a look at Bonnie's drawing will show the plant drawn has paired, opposite leaves prominently displayed. Look at the drawing again, and you will also find alternating leaves as well. The most technical description I found stated "Leaves alternate except the proximalmost." I'm not sure what "proximalmost" means.

According to *The Jepson Manual*, it may or may not be a native plant; but a survey of the WEB leaves little doubt that

it is a "recent introduction to North America." There are two common coastal salt marsh species of salt bushes found in or near the Morro Bay salt marsh. The other species, *A. watsonii* or Watson's salt bush was the plant profiled in the December 2011 issue of the *Obispoensis*. The two salt bushes can readily be told apart with only a casual glance at their growth patterns. Watson's salt bush grows in flat mats that can become mounded in the center. Therefore its branches are horizontal and parallel to the ground. Spear saltbush's branches are vertical and thus can reach a height of a foot or more. Watson's saltbush rarely reaches a height of 4-6 inches.

Some may have noticed that I have not identified the family to which salt bushes belong. This is because taxonomy texts (and most of the WEB entries) place it in the Amaranthaceae while *The Jepson Manual* places it in the Chenopodiaceae. Classically, before DNA sequence data, salt bushes were placed in the goosefoot family (Chenopodiaceae). When the DNA sequence data and cladistic or phylogenetic classification methodologies became available, it was noted that genera of the mostly temperate zone Chenopods and the mostly tropical family Amaranthaceae came out together but were inconclusively separated in their phylogenetic diagrams. For example see Kadereit, et al. [2003. Phylogeny of Amaranthaceae and Chenopodiaceae and the Evolution of C4 Photosynthesis, Int. J. Plant Sci. 164(6) 959-986]. This led many taxonomists to combine the two families into one. Since the Amaranthaceae is the older name, it had "priority" over the name, Chenopodiaceae. Therefore, if the two families are combined, then the Rules of Botanical Nomenclature require that Amaranthaceae be used. The classical Amaranthaceae contains only four California genera (only one of them the very widespread -- the weedy pigweeds, *Amaranthus*). In contrast, the classical Chenopodiaceae is huge in California. It consists of at least 17 genera and many species. Although most common in deserts, it is found in many other habitats as well. In other words, the classical Chenopodiaceae contains many species that dominate many habitats in California, whereas the classical Amaranthaceae are a relatively minor component. This raises a question that has been raised many, many times before. What is the purpose of Biological Classification? When mutually exclusive, is its highest purpose to indicate phylogeny (evolutionary relationships) or is it to aid identification (ID)? Obviously it's best when both purposes are in agreement! The authors of the Phylogeny paper admit that the phylogeny of the genera within two families is somewhat weakly supported, I think the editors of *The Jepson Manual* came down on the ID side of the question. I'll leave all of you to determine who is right. ☺ Dirk Walters, illustration by Bonnie Walters

President's Notes

The chapter is very happy to see the Pismo Preserve come to fruition, and we will be offering our help in any botanic assessments that are needed.

Our last meeting was very interesting with some great photos, but mostly wildflowers had eluded photographers this year and some of us had very interesting travel stories to tell. Thanks for all the desserts as well.

I would like to welcome Holly Sletteland to our Board. She will be working with Jim Johnson on membership, handling communications with members while Jim will maintain mailing list and member roster. I would like to thank them both for this vital contribution.

Our next meeting has Susan Krzywicki coming down from the CNPS State Office to talk about our new horticultural programs. We always have a horticultural talk around the plant sale, but this will follow the sale. We expect a big turnout at the sale as the long term forecasts say we are heading for slightly lower than average rainfall till the new year, and then slightly higher than average after that. Doesn't close to average sound good! This is the time to get those drought tolerant natives in the ground. We will have our book table at the sale. ☺ David Chipping

Conservation

The U.S. Fish and Wildlife Service has announced a draft policy on crediting voluntary conservation actions taken for species prior to their listing under the Endangered Species Act. The proposed policy seeks to give landowners, government agencies, and others incentives to carry out voluntary conservation actions for non-listed species by allowing the benefits to the species from a voluntary conservation action undertaken prior to listing under the Act to be used – either by the person who undertook such action or by a third party – to mitigate or to serve as a compensatory measure for the detrimental effects of another action undertaken after listing.

This is thinking of conservation under the same mindset that came up with carbon credits. This might work for carbon, but when a species is about to be listed it is because it is approaching a crisis, and the last thing it needs is additional take justified by this credit system. CNPS has commented, and comments close November 6. You can find more at <http://www.fws.gov/endangered/improving_ESA/prelisting-conservation.html>

On the local front, the Phillips Refinery Rail Spur DEIR has been reissued and I invite anybody who has found additional biological information since we commented on the original DEIR to get hold of me. The main issue this time is the rail traffic. ☺ David Chipping

CHAPTER MEETING

Thursday, November 6, 2014, 7:00 p.m. at the San Luis Obispo Veterans Hall, 801 Grand Avenue, San Luis Obispo.

"Native Plant Gardening for a Water-Challenged Future"

This is the horticulture program with Susan Krzywicki, Horticulture Program Director for the California Native Plant Society. She has also served on her local chapter board, run the chapter Gardening Committee, and was a native plant landscape designer in San Diego. She is chair of the San Diego Surfrider Foundation Ocean Friendly Gardens Committee and has been a member of the Bayfront Cultural and Design Commission. for the Port of San Diego.

California native plants are the key component to creating a Sense of Place. Because of the unique interaction of flora, fauna, geography and rainfall, we can create beautiful gardens that are evocative of our rich cultural heritage while providing space for the rich variety of wildlife that make our state so special.

Supporting native plant gardening is a natural branch of the CNPS mission for preservation and conservation.

We will talk about the watershed concept of gardening, review key issues and discuss maintenance and appreciation of native plants in the garden, near the wildland interface and in public places.

Additionally, I will talk about my role as the Horticulture Program Director: how we support the chapters and expand our sphere of influence to all Californians, including the Baja region.



Susan Krzywicki

Honeybees and Native Plants

It's no secret, honeybees are not doing well. There are many scientists and researchers working on this problem. At this time there is not a clear cut answer to what is causing what is called "Colony Collapse Disorder" or CCD. Some scientists believe a small parasitic mite is the culprit. Others believe the lack of rain the last three years has impacted wildflower fields and the bees are dying from starvation. Lastly, pesticides applied by homeowners and farmers to fruit and vegetables crops are harming bees as they forage for pollen. So what can we do to help? With winter just around the corner and the possibility of rains, we are once again thinking about what should we plant this year. Keeping the bees in mind, I would like to make some suggestions.

The genus *Ceanothus* is my first pick. With flower colors of blue and white, the sweet smell draws bees by

the thousands. It's not hard to find a species that can fit in your garden. There are large tree types, shrubs, and groundcovers to pick from. They must be planted in a sunny area.

My second choice is the genus *Salvia*. Many *Salvia* species grow in sandy, dry soil types and are well known to attract bees. They do not require heavy irrigation and are free of many pest problems.

Lastly, *Eriogonum* or buckwheat is a wonderful plant that will grow in many soil types and requires very little irrigation once established. My favorites are *E. arborescens*, Santa Cruz Island buckwheat, and *E. giganteum*, St. Catherine's lace.

So this year while you are thinking about what to plant in the garden, I hope you will consider what you can do to help the little bee. *John N.*

Field Trips

Saturday, November 1, 8:00 a.m., Cruikshank & Salmon Creek Trails, Big Sur. If you are looking for an outing with inspiring views and diverse landscapes, please join us. However, this hike will be very strenuous. We will hike through the heart of the Silver Peak Wilderness in southern Monterey Co., starting in the coastal redwoods, later seeing many Santa Lucia fir, then passing through the Lion Den Springs Botanical Preserve with its abundant stand of Sargent's Cypress and adjacent serpentine barrens, and finally returning to the coast through stands of Douglas Fir, as well as Coulter and Ponderosa pines. The total length is 13 miles with about 3,000 feet of elevation gain. The hike will take all day. We will set up a car shuttle between the two trail heads. Our route will start at the Cruikshank trail head, climb nearly 7 miles to the South Coast Ridge Rd., walk 1/4 mile south to the top of the Salmon Creek Trail, and descend back to Highway 1. There is poison oak on this hike. Hikers must contact the leader at least 24 hours ahead of time. We will meet at Santa Rosa Park (SLO) at 7:20 a.m. and Washburn Day Use Area in San Simeon State Park at 8:00

a.m. Bring water and food. Sturdy shoes, sunscreen, hats, and jackets are recommended. For more info, contact Bill Waycott, (805) 459-2103, bill.waycott@gmail.com. Rain or the threat of rain cancels this hike.

Saturday, December 20, 8:30 a.m., Hazard Peak, Montaña de Oro State Park. Join us to explore some of the hidden beauty of MDO State Park. We will meet at the Visitors' Center located just beyond the entrance to Spooner's Cove, walk inland along Islay Canyon, then hike up the Barranca Trail, joining the Hazard Peak Trail to the top, and finally back to the Visitors' Center. We will see different plant communities from riparian, to oak woodland, and coastal sage scrub. This is a moderately strenuous nine mile hike with 1,000 ft. elevation gain and will take a minimum of four hours to complete. Bring water and snacks. Sturdy shoes, sunscreen, hats, and jackets are recommended. For more info, contact Bill Waycott, (805) 459-2103, bill.waycott@gmail.com. Rain or the threat of rain cancels this hike.

Native Plant Sale

November 1, 2014

9 am - 2 pm
Pacific Beach High School
11950 Los Osos Valley Road, SLO



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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*.



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California Native Plant Society*
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