CHAPTER MEETING

Tuesday, April 21
Casa del Prado, Balboa Park
Room 104, 7:00 p.m.

Obscure Islands of the Pacific Coast of Baja California
by Tom Oberbauer

The Pacific Coast of Baja California is home to a number of islands that range in size from a few acres to Cedros Island that is nearly 350 sq. kilometers. A number of islands are little known and little explored scientifically, beginning with the Coronado Islands that are visible off shore just to the south of Point Loma. Others include Todos Santos Islands off Ensenada; San Geronimo near El Rosario; San Martin, a volcanic crater near San Quintin; and Natividad and the San Benito group near Cedros Island. Many of them support endemic plants, and in particular, the Genus Dudleya is well represented on the islands. Each island was formed under different conditions ranging from volcanic to odd mixes of rock material that has been smashed together in ancient continental subduction zones and later pushed to the surface. Each island is a spectacular visual feast.

In early April, Tom Oberbauer will join a small expedition attempting to land and explore these islands. He hopes to bring back many new pictures of the islands, but also has beautiful pictures from previous trips. He has extensive experience examining Baja’s islands’ botanical resources over the past 36 years. He gave a presentation about Guadalupe Island to our chapter in 2010.

6:30 p.m. — Natives for Novices. "Wildflowers in Your Garden" by Clayton Tschudy.
7:00 p.m. — refreshments, browsing, socializing.
7:30 p.m. — presentation.

Fifth Annual
California Native Plant Week
April 11 - April 19, 2015.
Celebrate by attending a field trip or other event!

Second Annual Tour de Plants

Yay, it’s time for the Second Annual Tour de Plants—the only native plant hike in the known world that takes place on bicycles!

Details: Saturday, May 2, 10:00 a.m. Easy, mostly flat 6-mile in and out ride along Lake Murray, 5540 Kiowa Dr., La Mesa, CA 91942. Four or five stops along the way to find and identify 20 native plants—maybe nothing rare, but it’s a great opportunity to get kids away from video games and introduce them to native plants. And there are lots of invasives for us to curse (out of hearing of those kids, of course). Bring sun protection and water. Meet at the large concession stand in the Lake Murray Parking lot. For more information, email hospitality@cnpssd.org . Cell phone contact day of tour: 619-948-2776.

Afterparty: About 12:00 we’ll bike (or drive—your choice) down the hill to a nearby restaurant Lake Murray Café, 5465 Lake Murray Boulevard in La Mesa for refreshments (full menu) and camaraderie (full bar).

Plus: Again, there will be prizes of little or no value! But if you fall in the lake, you’re ineligible for a prize.
Nobody fell in Lake Miramar last year, but be careful out there anyway!

Another plus: This is an opportunity to tease our new President by again forcing him to be a living advertisement for CNPS-SD.

Chapter President David Varner at last year’s Tour de Plants.

Chapter meetings are free and open to the public. They are held in the Casa del Prado, just west of the Natural History Museum, in Balboa Park.

**Native Plant Week Proclamations**

What is the month of April famous for, besides April Fool’s Day? Native Plant Week, of course—the third week in April—a celebratory season for all of us who are fools for native plants!

Awareness of native plants needs to be much more widespread; CNPS-SD member Betsy Cory is making a contribution to that effort by requesting proclamations on Native Plant Week from the 18 incorporated cities and 16 water districts in San Diego County. She emailed each agency a draft proclamation based on a resolution passed by the California Legislature, with the additional mention of CNPS’ 50th anniversary. The cover email was tailored to each agency to show how native plants were relevant for that agency.

Of the agencies that have replied, all have been eager to pass the proclamation. Some of them mail the proclamations, but many prefer to present them at meetings. Since most of the city meetings are televised, this is one more way to bring Native Plant Week to the attention of the general public.

On a more serious note, spring is a traditional period of reflection and renewal. This year, April is the time of Easter, Passover, California Poppy Day, Arbor Day, and Earth Day. We can all contemplate the things that are important to us as inhabitants of this planet. Wouldn’t it be great if everyone felt the way we do about native plants? City councilmembers and water district board members are all very well, but every one of us can do a bit to raise the awareness of the people we come in contact with. And as the Panamint Daisy blooms and the Fremontia forms its buds, this is the perfect time to do it.

As of March 15, the cities of Coronado, Encinitas, Escondido, Oceanside, Poway, and Vista have passed Native Plant Week proclamations. In April, the cities of Chula Vista, El Cajon, Lemon Grove, San Diego, and Santee plan to pass the proclamation. The proclamation request is pending in the seven other incorporated cities of San Diego County. By the end of March, the proclamation is to be passed by the Fallbrook Public Utility District, the Helix Water District, and the Olivenhain Municipal Water District. The proclamation request is pending at ten other water districts and Camp Pendleton.

**Welcome New Members!**

John Barry & Mary Barry  Lorin Lilikoi Lima  
Jessica Bloomstone  Dana McCoy  
Louise Freisleben  Maureen Phillips  
Dorothy Jansen  Oliver Ryder  
Ruth Kaplan  California Garden Clubs, Inc.

**Board Meeting**

Wednesday, April 1, 6:30 – 9:00 p.m. (Pls note new ending time). 4010 Morena Blvd, Suite 100, San Diego (Thomas Guide 1248 C4). CNPS-SD Executive Board meetings are always the first Wednesday of the month, except when the 1st falls on a holiday. Members are welcome to attend as observers. If you wish to discuss an issue, please email president@cnpssd.org to get your issue on the agenda.
**“EXPLORE NATURE’S GARDENS” FIELD TRIPS**

**Saturday, April 11.** 9:00 a.m. – noon. **Artesian Creek Restoration Site with leader Arne Johanson.** In celebration of native plant week, CNPS offers an opportunity to explore and learn about this successful several hundred-acre restoration project. Tour the site and enjoy the wildflowers. Learn how minimal resources brought about a transformation of what was once degraded cattle range land. Hear how it was accomplished largely without planting. See how it has been converted into vibrant coastal sage and riparian habitat. While the focus will be on the approach used to bring about this transformation, there will be ample opportunity to see some of the rarer plants and to just enjoy some special places.

Meet at 9050 Maranatha Drive, San Diego CA 92127, across the street from the private Maranatha School. Maranatha Drive is a short spur off to the north of Camino Del Sur. From I-15 take Camino Del Norte west about 3.6 miles. From SR 56 take Camino Del Sur north 6 miles. (Thomas Guide 1169 C2).

The trip will involve driving to several locations, parking, and taking several short hikes of ¼-mile each and back, some on fairly steep and rocky terrain. The rest is quite easy. Wear good footwear for the terrain, bring water and sun protection. A restroom stop will be provided en route between field locations.

Contact tour leader Arne Johanson at invasiveplants@cnpssd.org (phone 858-248-3645, if needed on the morning of the field trip.)

**Sunday April 12.** 9 a.m. to noon. **See the restoration of rare plant and animal habitat in Rice Canyon, Chula Vista, with leaders Mark Dodero and Anna Bennett** (both are restoration biologists at RECON Environmental). This project has succeeded in restoring habitat for cactus wrens, and populations of Otay tarplant (*Deinandra conjugens*) and San Diego thornmint (*Acanthomintha ilicifolia*) in Rice Canyon. The techniques to restore many kinds of coastal vegetation have been searched for, and gradually discovered, by habitat restoration biologists. The effort to do so in coastal San Diego County picked up speed in the mid-1990's, when species of plants and animals found only in our rapidly dwindling coastal wildlands were identified for protection and mitigation under Federal and State environmental laws. Mark and Anna managed both of the restoration projects that will be seen, which included supervision of maintenance crews and conducting biological monitoring surveys.

Meet at the parking lot on the east end of Rice Canyon located on the west side of Rancho Del Rey Parkway and just north of Buena Vista Way (Lat. 32.644745, Long. -117.011314). The parking lot is approximately 3.5 miles east of I-805. The group will walk 1.5 miles along a relatively flat well-maintained dirt access road and relatively flat pedestrian and bicycle trail. Please wear good close-toed walking shoes, have sun protection, and bring water and snacks. Bring a small field notebook or electronic device to make notes in the field.

If people want to ride-share from central San Diego meet at 8 a.m. in the parking lot behind Denny's on Friar's Road just east of SR-163. The event can accommodate **25 participants**. Please RSVP as soon as possible to hold your spot by contacting Kay at fieldtrips@cnpssd.org.

**Saturday, April 18.** 9 a.m. to noon. **Piedras Pintadas Trail in western Rancho Bernardo with leader James Dillane.** This popular trail skirts the south edge of the Lake Hodges reservoir to reach Piedras Pintadas Ridge, named for a prehistoric Native American rock-art site that can be seen from a distance with binoculars. The trail begins in disturbed habitat but as it makes its way toward the ridge it crosses pocket grasslands, riparian vegetation and coastal sage scrub. The trail climbs through chaparral and passes by a waterfall, then crosses the creek above it before the gentle climb to the ridge. The ridge is a mixture of coastal sage scrub and chaparral with boulders and frequent openings that fill with flowers in the spring, including four species of lupines, four species of phacelia, and masses of goldfields.

James Dillane, an accomplished botanist and retired science teacher, will add a lot to this fun opportunity to learn about native plants and native relics. The round-trip walk is 3.8 miles total, with some elevation changes. It is a well-maintained trail, and at the rate that native plant walks go, there will be no athletic challenges. We will stay on the trail to protect vegetation from trampling, and can break into smaller groups with sub-leaders so that everyone will enjoy the walk.

There are bathroom facilities at the trailhead. Bring at least 1 quart of water, wear sun protection, and have comfortable walking shoes. The total hiking distance is 3.8 miles with up to 200 feet of elevation change.

Take I-15 to the West Bernardo Dr./Pomerado Rd. exit. Head west on West Bernardo Dr. for about ½ mile and turn left onto Rancho Bernardo Community Park Driveway. Follow this road to the back of the community center and meet behind the tennis courts. There is additional parking further along the driveway. Google Map Coordinates: 33.046881, -117.077566.
If you want to ride-share from central San Diego, meet in the parking lot behind (north of) the Denny’s on Friar’s Road just east of SR 163 at 8:30 a.m. Those who do so should plan on returning to that location by 12:30 p.m.

**Sunday, April 19. 8:30 a.m. to 3:00 p.m., Noble Canyon Trail Wildflower Hike with leaders Clayton Tschudy and Joe Sochor.** Wildflowers, pine forest, chaparral, inland sage scrub. Leaders: Clayton Tschudy and Joe Sochor. This one-way, all-downhill, trail travels from the Sunrise Highway to the Noble Canyon trailhead in Pine Valley. The trail is famous for its late spring wildflowers and for the diversity of its plant communities. Many wildflowers can reliably be seen, including 3 species of *Ceanothus* (California lilac), Humboldt lily (*Lilium humboldtii*), grape soda lupine (*Lupinus excubitus*), wallflowers (*Erysimum* spp.), foothills penstemon (*Penstemon heterophyllus*), scarlet bugler (*Penstemon centranthifolius*), Indian paintbrush (*Castilleja* sp.), blue flax (*Linum lewisii*), yellow violet (*Viola pedunculata*), white forget-me-not (*Cryptantha* sp.), and yellow monkeyflower (*Diplacus* sp.). Pine Valley Creek, flowing nearly year-round, supports remnant plant populations of redbuds (*Cercis occidentalis*), California bay trees (*Umbellularia californica*), and giant chain ferns (*Woodwardia fimbriata*). A large population of stream orchids (*Epipactis gigantea*) can also be found among the other water-lovers. We will break for lunch at the first Pine Valley Creek crossing, and sup under the shade of western sycamores (*Platanus racemosa*) in fields of wild wood strawberries (*Fragaria vesca*).

Our hike leaders are **Clayton Tschudy**, botanist and Director of Horticulture at the Water Conservation Garden; and **Joe Sochor**, local botanist. No reservation is necessary. Questions should be directed to Clayton Tschudy at least 48 hours ahead of the scheduled hiking time at (858) 774 7692.

Meet at 8:30 a.m. at the Noble Canyon trail head (the bottom end of the trail). From San Diego, go east on I-8 until you pass the community of Alpine. Exit I-8 at Pine Valley Road and go north. Turn west (left) on Old Hwy 80 and proceed 1 mile to Pine Creek Road, next to a bridge over Pine Valley Creek. Turn north (right) and proceed 1.6 miles to the Noble Canyon Trailhead on the right. The trailhead is in a large parking area and is clearly marked. Once the group has gathered we will leave some cars at the Noble Canyon Trailhead parking lot and carpool to the higher Penny Pines Trailhead on the Sunrise Highway, at mile 27.3 from the I-8/Sunrise Highway interchange. The hike will commence downhill. Once we all reach the bottom, we will again carpool to pick up the cars left at Penny Pines before heading home. **Both trailheads require a National Forest Adventure Pass, which can be purchased at the convenience store at the corner of Pine Valley Road and Old Hwy 80 in Pine Valley.** Please make time to pick up last minute water and passes so that you are not late for the hike. We must leave on time in order to finish the hike by mid-afternoon. Because this one-way hike requires carpooling between the trailheads, we will need several cars available. Therefore, large groups should not carpool from the San Diego area.

This is considered a moderate 10-mile hike if taken downhill as we will do. Elevation loss is a whopping 2,400’ with lots of short rises and falls in the trail. If you have challenges with your knees, a walking stick is recommended as the trail is sometimes steep. We will maintain a moderate pace throughout the hike. Sturdy hiking boots, long pants, sunhat, and sunscreen are a must. Bring at least two quarts of water and/or a hydrolyte beverage, a good sustaining lunch, and energy snacks. The stream water is not potable. Leashed dogs are allowed on this trail, but the leaders do not recommend bringing dogs unless they are in exceptional health and well behaved.

**General Field Trip Information**

Chapter field trips are free and generally open to the public. They are oriented to conservation, protection and enjoyment of California native plants and wildlife, and we adhere to all rules and guidelines for the lands on which we are visiting. In our arid region it is very important to be prepared for hiking on rugged and steep terrain and during wide temperature ranges and rapidly changing conditions. Participants should wear sturdy footwear and carry sufficient water, sun protection, food, clothing layers, personal first aid and other supplies you may need. If you have any questions about your ability to participate in a particular field trip, please contact Kay at fieldtrips@cnpssd.org.

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*Wood strawberry (Fragaria vesca)*
MUCH HAS BEEN ACCOMPLISHED

The California Native Plant Society turns fifty this year. For five decades countless individuals have been working to make a better world by preserving native flora. Just imagine how much worse things could be today if not for their efforts. We all owe a debt to those that have worked so hard for what we have today. Now we get to repay that debt by working for a yet better future.

We are largely a volunteer organization and we all certainly work hard to accomplish what is needed. Equally certain are the endless number of things that still need to be done. Seldom do we have a surplus of resources. Seldom do we have one-off items that are solved once and for all. Together we find a way to get done what needs doing. Each of us is working today to make a better future.

Sometimes we may feel like Sisyphus when things go wrong. Other times we may feel like Don Quixote as we battle mechanical policies or processes. Yet, we persist and often prevail, at least in part. Each of us doing our little bit to contribute to that better tomorrow.

Our organization places its focus on ecology, specifically native vegetation as a cornerstone of ecology. Many work directly for the benefit of native plants in one capacity or another. Many contribute in a support capacity freeing up others. We often also partner with others to leverage our strengths. Collectively we have accomplished much and we will do much more.

To all past volunteers, “Thank You”. For those of you who currently volunteer, “Thank You”. And for those of you whose time has yet to come, “Thank You in advance”. Each doing their part, each in their time. Together we make tomorrow what it can and will be.

~ Arne Johanson, Invasives Committee

NATIVE GARDENING

Native Gardening Committee
April 8. Meets 2nd Wednesday of each month. Contact Mike Gonzales at gardening@cnpssd.org for info.

Propagation Committee
The next work group meeting will be Tuesday, April 14 at 10:00 a.m. at the City Farmer’s Nursery. Contact Jim Wadman at propagation@cnpssd.org for information.

Old Town Native Plant Landscape

Saturday, April 11: Work Party - 1 to 3 p.m. Some native shrubs need pruning to prevent flopping and breaking. Come tend the Native Plant Landscape in Old Town, where the coyote bush specimens grow too much with just 2X/month water. We’ll take some time to brainstorm how to raise funds to buy a more sophisticated irrigation controller, so the area where these shrubs are located can be rescheduled to get water only once a month.

The Landscape is at the corner of Taylor and Congress Streets. Park in the Cal Trans lot at Juan and Taylor, then walk toward the trolley/train depot and turn in at the welcome sign on the adobe wall, under the cottonwood trees. Bring pruners, saws, gloves, sun protection and water. Restrooms are nearby.

~ Kay Stewart, fieldtrips@cnpssd.org

Sunset Cliffs Native Plant Garden

The Sunset Cliffs Native Plant Garden installation is scheduled for April 11 and 12. For real this time. At this writing, I have signed the long-awaited Right of Entry permit and it is circulating among the three City staff that need to sign it and I’m told it is a “done deal.” Saturday, April 11th between 9 and 4, we will do the hard work – breaking up the compacted soil and adding mulch and topsoil to the beds. If you’re fit, just drop by and help us out for a half hour or so. Please bring gloves and boots. On Sunday, April 12th, we will have the planting event, with Clay Tschudy giving a talk about the garden design at 10:30, and planting and watering from 11 to 3.

The site is at the extreme north end of the Sunset Cliffs Natural Park, across from the intersection of Adair Street and Sunset Cliffs Blvd (1350 Sunset Cliffs Blvd). For more info visit www.sunsetcliffsgarden.org or email Dave Flietner at flietnerd@gmail.com.

~ Dave Flietner

CONSERVATION

Conservation Committee
April 7. Meets the first Tuesday of each month. Contact Frank Landis at raresurvey@cnpssd.org for the location.
Check the Math

As most of you know, back in 2013 I did a simple model on Excel of how carbon sequestration at Cuyamaca Rancho State Park (CRSP) was supposed to work. I've done enough modeling to always be suspicious of my own work, and I asked at least five people to check the model to see if it held up. No one ever got back to me, and I've always said that "if the model is correct" it predicted etc., etc., etc.

I was going to explain how the model worked in this column, and so I did the one thing I hadn't done before, which was to recreate the model from scratch. In doing so, I found the one silly mistake I'd made (in Excel). It turns out that CRSP doesn't have to plant a dog-hair forest, that they can still sequester all their carbon with fewer trees.

My model was wrong, but that's not the end of the story. Let me start by explaining that the model is algebra and simple geometry. Most people freak out when asked to model how much carbon is in a tree, and for good reason. The first thought is that you're supposed to be accurate, and that involves fractals (those branches! those leaves!). Worse, most researchers have no clue what's going on below ground (those roots! those root hairs! The ectomycorrhizal mycelia!). Getting a precise answer is quite difficult, and we don't have a simple way of getting the underground information.

But there's an easy way to get a rough estimate. If you think about it, most of the carbon in the tree is in the trunk, especially if we're talking about the carbon that's going to stick around and fulfill a 100 year carbon sequestration contract. Fortunately, a young conifer is basically a cylinder of wood, and the formula for the volume of a cylinder is \(\pi r^2 h\), where \(r\) being the radius and \(h\) being the height. Wood is assumed to be 50% carbon, and you can look up the densities of various woods online. With this information, it's not that hard—unless you make stupid mistakes in Excel—to turn a mass of carbon into a mass of wood, then to turn it into crude model trees by dividing that mass of wood into a series of wood cylinders.

According to the literature we received from CRSP, they're sequestering 1.2 metric tonnes of carbon per acre per year for 100 years, or 120 metric tonnes of carbon per acre per century. Yes, I'm mixing metric and English measurements, but that's what we were given.

Now I'm going to introduce one other term: basal area. This is a timber harvester's idea: if you clear cut a stand in your mind, you're left with a series of stumps. If you take the area of each stump and add them all up, you get the basal area of the stand. You can calculate the basal area of living trees by figuring out their diameters and calculating each tree's basal area as if the tree was a circle with an area of \(\pi r^2\).

In addition to the amount of carbon CRSP wants to sequester, they also have a goal for how much basal area they want to achieve. In a Reforestation Project "Project Design Document" dated June 15, 2011, said that: 

\[l\]he target basal area at maturity is a forest with roughly 100 square feet per acre...This is in contrast to the more immediate pre-Cedar Fire condition which was on the order of three times that amount."

So what does a forest with 100 ft² of basal area and 120 metric tonnes of carbon sequestered look like? Well, 120 metric tonnes of carbon turns into 240 metric tonnes of wood (assuming wood is 50% carbon). According to the "Engineer's Toolkit" website, a cubic meter of "yellow pine" (most of the pines on CRSP are yellow pines) weighs 0.42 metric tonnes, so dividing 240 metric tonnes of wood into 0.42 tonnes/m³ gives us 571.43 m³ of "yellow pine." There are 35.31 ft³ per m³, so that gives us 20,179.83 ft³ of "yellow pine." Dividing that volume by a basal area of 100 ft² means that the trees in each acre, on average, are 201.7983 feet tall.

Does this make sense? I don't know how tall the tallest trees were prior to the Cedar Fire, but somewhere in the document, they talk about having 100 trees per acre. They're planting 250 trees per acre and thinning these to 100 trees per acre after 20 years. If we're talking 100 trees, each with a basal area of 1 ft² and each about 202 feet tall, that's ridiculous. The tallest redwoods in the world reach 379 feet, and they have individual basal areas that are over 100 ft². Something's still not right here.

What I'd love to do, at some point, is to sit down with the CRSP people, pull out our computers, and go over their math to see what's going on. While I think it's sane to want an open forest on CRSP, I'm still having trouble seeing how they meet their carbon sequestration goals AND their forest management goals simultaneously. We're still in the land of impossible model trees, which means something is wrong with either my model or their model or both.

There may be speaker coming from CRSP to talk at one of the upcoming general meetings. If I had my way, we'd be talking about how the math on CRSP works, because every time I try to understand the math underlying the Reforestation Project, it ends up not adding up. However, I was told that, in a general meeting, we don't want to bore everyone with the math, so the talk is to be
about other things. I think that's too bad, but given how many people didn't check my math, those who don't want math in a general presentation have a good point. If you feel otherwise, now is a good time to speak up.

In the bigger picture, I fear that carbon sequestration will ride on planting things that are simple to model, like cylindrical young pine trees. Anyone can do that math. It's harder to calculate the carbon sequestered by other plants. Gnarled old-growth trees, curvy oaks, and bushy chaparral shrubs grow using the math of fractals and lumpy trunks. As a society we can calculate these volumes—they show up in every computer-generated forest, after all—but it seems to be hard to ask botanists and foresters to get into that sort of thing. After all, we make mistakes on simple algebraic models. Still, if we want carbon sequestration to move beyond cylinders of wood, we've got to get more comfortable with the math of lumpy fractals. And we also have to check each others' models, rather than assuming that they're correct.

~ Frank Landis, Conservation Chair

**TECOLOTE CANYON NATURAL PARK**

April 5: 8 a.m. to noon. Meet at the Tecolote Nature Center on the first Sunday of the month. Wear sun protection and comfortable walking shoes; bring water. Rain at 8 a.m. cancels. Directions: exit I-5 at Seaworld/Tecolote exit. Go east (away from Mission Bay) on Tecolote, past the ball fields, along the driveway to the very end. Free and open to the public.

**RELATED ACTIVITIES**

**Point Loma Native Plant Garden**

April 4 & 19, 9 – noon. Work Party. Contact: Richard@sandiegoriver.org for more info.

**A-B Botany Society Presentation**

April 13, 10:00 a.m. Anza-Borrego Desert State Park Visitor Center, 200 Palm Canyon Drive, Borrego Springs 92004. The public is invited; FREE. Bug specialist Jeff Price: “The Beetles and The Bees: A look into the hidden lives of those who pollinate, protect and pilfer from our desert plants.” Price will explore the often over-looked lives of our native desert pollinators and their life cycles.

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**San Diego Horticultural Society and San Diego Floral Association**

**SPRING GARDEN TOUR**

**Saturda APRIL 11 9AM - 4PM**

For info and to purchase tickets in advance visit [http://sdhort.org/event-1807168](http://sdhort.org/event-1807168).

**RECON Native Plants Spring Native Plant Sale**

April 19, 9:00 a.m. to 3:00 p.m. RECON Native Plants, 1755 Saturn Blvd, San Diego, 92154. For info contact Patrick@reconnativeplants.com or 619-423-2284, or visit [http://www.reconnativeplants.com](http://www.reconnativeplants.com).

**Seaside Native Garden Tour**

Sunday, April 19. 2:00 p.m. Over 18 California native plant gardens in the historic Seaside Neighborhood of Downtown Oceanside Visit [BVAudubon.org](http://BVAudubon.org) or [OCNA.info](http://OCNA.info) or call the Buena Vista Nature Center at 760-439-2473 for more information.

The CNPS-SD Newsletter is generally published 12 times a year. The newsletter is not peer reviewed and any opinions expressed are those of the author identified at the end of each notice or article. The newsletter editor may edit the submittal to improve accuracy, improve readability, shorten articles to fit the space, and reduce the potential for legal challenges against CNPS. If an article, as edited, is not satisfactory to the author, the author can appeal to the board. The author has the final say on whether the article, as edited, is printed in the newsletter. Submissions are due by the 10th of the month preceding the newsletter; that is, April 10 for the May newsletter, etc. Please send submittals to newsletter@cnpssd.org.

To receive the newsletter electronically, email enewsletter@cnpssd.org.

**CNPS-SD Activities Calendar April 2015**

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MEMBERSHIP APPLICATION
___Student or Limited Income $25; ___Individual $45; ___Family $75
___Plant Lover $100; ___Patron $300; ___Benefactor $600; ___Mariposa Lily $1,500

Name(s): _______________________________________________________________
Address: ______________________________________________________________
Phone: __________________________ e-mail: ________________________________

Mail check payable to “CNPS” and send to: CNPS, 2707 K Street, Ste 1, Sacramento, CA 95816-5113.