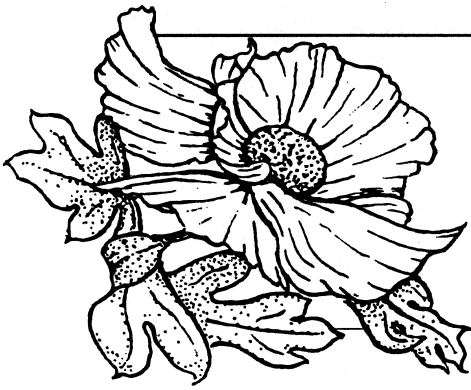


April 2016



CALIFORNIA NATIVE PLANT SOCIETY
San Diego Chapter Newsletter

CHAPTER MEETING

Tuesday, April 19
Casa del Prado Room 101
Balboa Park

Presentation:
Native Gardening and Edible
Landscaping

By Ari Tenenbaum

Come get some tips for integrating CA native plants into edible landscapes. We will discuss specific plants that lend themselves toward being incorporated in or alongside edible garden areas. **Ari Tenenbaum** is the co-founder and lead designer of Revolution Landscape.



He holds a B.S. in Plant Science from the University of California, Santa Cruz. He applies his wealth of plant knowledge and environmental solutions to create innovative, vision-driven designs.

6:30 p.m. – Natives for Novices: Topic TBD.

7:00 p.m. – refreshments, browsing, & socializing.

7:30 p.m. – presentation.

Chapter meetings are free and open to the public.



See page 5 for more info.



THANK YOU TO OUR GARDEN TOUR SPONSORS!

Presenting Sponsor – Hunter Industries

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WELCOME NEW MEMBERS!

Jessica Griffith
Brooke Kiel
Echo Lee

Korie Merrill
Ally Sands
Pamela Weinisch

BOARD MEETING

Wednesday, April 6, 6:30 – 9:00 p.m. 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 Wednesday falls on a holiday. Members are welcome to attend as observers. To add an issue to the agenda, please email president@cnpsd.org.

SPRING PLANT SALE & FESTIVAL AT CUYAMACA COLLEGE WATER CONSERVATION GARDEN

Saturday, April 23, 2016, 9 a.m. to 3 p.m.

For all ages. FREE. This family-friendly community celebration of spring and a greener future features fun programs, exhibitors and demonstrations that will help you become a better gardener and learn how to conserve our precious resources. The Cuyamaca College Ornamental Horticulture Department will be holding its biggest plant sale of the year.

Ongoing Festival Activities at Cuyamaca College Conservation Demonstration Garden:

- Water Agency booths
- Succulent plant sales
- Garden membership booth
- Compost demonstration, 10am-1pm
- CNPS plant sale
- Gift shop sales
- Open House from 9 a.m. – 4 p.m. Visitors welcome to explore The Garden at their leisure.

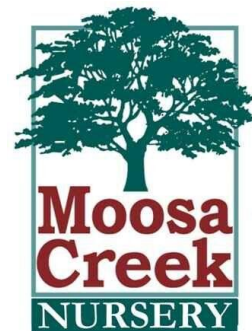
Scheduled Activities:

- 10 a.m. - 2 p.m.: Landscape Design Consultation Appointments.
- 10 a.m. – 1 p.m.: Compost Demonstration
- 10 a.m. – 1 p.m.: Soils booth
- 9 a.m. - 12:30 p.m.: Watercolor Society
- 10:30 a.m.: Garden Tour
- 12:30 p.m.: Garden Tour

Partner Organizations

- Cuyamaca College
- Heritage of the Americas Museum

Garden Tour Wild Lilac Sponsors



FIELD TRIPS

Enjoy Nature's Gardens!

April 10, Sunday, 8:30 a.m. to noon.

Surprises on the north side of Cowles Mountain: Botanizing and Tending the Big Rock Trail. This part of Mission Trails Regional Park is well-known by Santee residents, but not by many others. The Big Rock Trail heads toward the top of Cowles Mountain. The terrain varies from alluvial fan at the bottom, and as the incline increases, becomes switchbacks cut around bedrock outcrops, sloping mini-meadows, and narrow watercourses carved into the slope.

When we scouted on March 17 we found a rich array of native species filling these varied niches. On the lowest part of the alluvial plain, huge sycamores shade a stream channel. As we ascended we passed groves of elderberry, and a section a hundred feet long with emerging colonies of larkspur (*Delphinium* sp.). We hope they will be flowering by April 10 so we can see which species they are. Chaparral candle (*Hesperoyucca whipplei*) with 10' bud stalks rise above chaparral shrubs draped with clematis and wild cucumber vines (*Clematis pauciflora* and *Marah macrocarpa*). Several small groves of healthy 15' high mission manzanitas (*Xylococcus bicolor*) indicate that this area didn't burn in 2003.

Unfortunately tocalote thistle (*Centaurea melitensis*) has been introduced along the trail in a handful of places and threatens to overwhelm this lovely native plant refuge. We plan to botanize going uphill, and to weed on the way back down the hill. The organizers will bring bags to stuff with weeds, and the Chapter's hand tools and gloves to distribute at the beginning of the field trip, or you can bring your own gloves and favorite weeding tool.

Directions: Meet at 8:30 a.m. in Big Rock Park: 32.831248,-117.01 839, at 8120 Arlett Street in Santee 92071. From Mission Gorge Rd. turn south on Big Rock Rd. Turn left on Arlett St. and into the parking lot of the park. Overflow parking is right next to the park at Harritt Elementary School. Our walk will begin at the trailhead at the southwest end of the big lawn by the tennis courts. You can print a trail map with contours from the following link:

<http://www.mtrp.org/assets/files/MTRPTrailMap.pdf>

Wear hiking boots with ankle support, light-weight long pants, sun protection, clothing suited to the weather, and bring water and snacks. This well-developed trail includes stair-steps in the steeper areas

and ends at a service road that continues to the top. We hope to go as far as the service road, an ascent of around 800' over 2 miles. If anyone wants to head up Cowles Mountain after the group heads back down, the elevation gain to the top is roughly another 400'.

April 16, Saturday, 8:30 a.m. to Noon.

Botanical Field Sketching in Mission Trails Reg. Park, with Artist Callie Mack as Coach. Among the tools we can use to sharpen our observation skills, sketching is a time-proven ace. Mission Trails Regional Park is a great outdoor studio for students of natural history. Bedrock formations vary, as do the landforms that emerge over time from the action of water, air, and the plant and animal life on those mineral strata. The use of time-proven tools like pencils and paper allow us to focus on these natural features and challenge our beliefs about what we see by trying to illustrate them.

Callie Mack, teacher and professional artist and illustrator, has called this region home for decades. Her illustrations grace a variety of public venues, including the Zoo and San Diego River Park. Participants will be able to observe Callie developing quick studies of plants as parts of the whole scene, and physical attributes that distinguish them from other plants. Bring your own portable sketch paper and medium of choice. The morning should be pleasant and we have found a few shady places where pausing to sketch won't mean overheating, if the day heats up. Late season plant species should be blooming.

Participants who do not want to sketch will be given coaching in plant identification by the more skilled participants in the group. We may be honored with the participation of a couple of outstanding local botanists.

Directions: Meet at 8:30 a.m. in the parking lot where the west end of Jackson Drive meets Mission Gorge Road, Santee CA 92071, 32.817070, -117.0559519. We will follow the trails into the heart of the park in Suycott Wash, on trails that are for hikers only, so we won't be dodging mountain bikers. The oak groves should provide pleasant shade while we pause.

Wear good walking shoes, clothing suited to the weather, and bring water and snacks, and sketching materials if you plan to get some coaching. Bring your favorite plant ID guides if you want some botanical ID coaching. This walk is on well graded paths with only a little elevation gain and loss. If anyone wants to see more of the park, wear hiking boots with ankle support to explore Fortuna Mountain above the wash, where the trails get rugged.

April 24, Sunday, 8:30 a.m. to Noon.

Explore the Flora of the Elfin Forest Recreational Reserve Southwest of Escondido. The Reserve protects an array of habitats around a potable-water reservoir perched on top the hills south of Escondido Creek. The trail leading through this refuge of the inland foothill environment begins with a fairly steep series of switchbacks up a deeply incised north-facing slope, with shade-loving natives that thrive on the ground water sheltered in its formations. Many feel that the stars of this array of plants are the colonies of the uncommon canyon sunflower (*Venegasia carpesioides*; see photo) that we hope will be blooming for this field trip.

On reaching the rolling terrain at the top of this ascent, a blend of chaparral and coastal sage scrub species carpet the natural landscape that eventually meets with the reservoir, creating a lovely scene and a great habitat for animals.



The route will be an “out-and-back” of around two miles. The first and last part of the field trip will be the relatively steep ½ mile, but in the shade most of the time, then rather even terrain for around a mile on the top. We will go slowly as usual! Note that the incline is significant both up and down.

Directions: Meet at 8:30 at the parking lot for the Elfin Forest trailhead at 8559-8599 Harmony Grove Road, Escondido CA 92028, 33.087199, -117.143690. From I-15 south of the junction with Hwy 78, take Exit 31, West Valley Parkway, continue about 1.5 miles, then turn left on Harmony Grove Road and continue about 3 miles and turn left into driveway to the trail parking lot. This driveway is about 300’ east of the driveway to the Olivenhein Water District buildings. **To ride-share from the O’side area**, meet at 8 a.m. at the park’n’ride on the east side of I-5, a long block south of Mission Blvd, at 1590-1698 Maxson St, Oceanside 92057, 33.199900, -117.366340. **To ride-share from south coastal SD**, meet at 7:30 a.m. behind Denny’s on Friar’s Road just east of Hwy 163 in the parking lot off Frazee Road, 32.7782905, -117.15491.

Wear shoes with good ankle support, long pants, sun protection, and bring a couple pints of water and snacks. Some of the group may want to have lunch together at the Stone Brewery north of West Valley Parkway after the walk.

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 we adhere to all rules and guidelines for the lands 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 study footwear and carry sufficient water, sun protection, food, clothing layers, personal first aid and other supplies you may need. **For questions about a particular field trip, please contact Kay at fieldtrips@cnpsd.org.**

TOUR DE PLANTS

Otay Valley Regional Park
Saturday, April 16, 10:00 am



For Kids, Plant Nerds, and Everybody: You can introduce your kids to the awesomeness of native plants because this tour includes things like the bloody nopal bugs, the march of the teddy bear cactus (oh-so-loveable but oh-not-so-huggable), greens that your mule will love, and for real plant nerds--the Orcutt’s Bird’s Beak that will be blooming here, the only place in the county! And kids—it’s a parasite, and you’ll see lots of parasites at OVRP! But don’t worry, although the place is crawling with parasites, they don’t suck your blood, only plants’ blood....

Details: A somewhat up and down loop of 6 miles; some are rocky, so sturdy bikes are recommended. 4 or 5 stops along the way to find and identify 20 native plants. Bring sun protection and water. Meet at the Visitor Center on the west side of Beyer Blvd, near 2360 Beyer Blvd, just south of the stoplight, in Chula Vista. For more info, email hospitality@cnpsd.org. Cell phone contact day of tour: 619-948-2776.

Afterparty: About noon we’ll drive one mile to the Applebee’s at 610 Palomar in Chula Vista for refreshments and camaraderie, where we will again award the beloved...Prizes of Little or No Value! You will undoubtedly win one! But if you fall in the lake, you’re ineligible for a prize. So be careful out there!

TECOLOTE CANYON NATURAL PARK



April 3; 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.

Garden Tour Sage Sponsors



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SCHMIDT DESIGN GROUP, INC.



CNPS-SD NATIVE GARDEN TOUR

“Landscaping for the Future”

April 2 and 3, 2016

The success of every Garden Native Tour is always due to the enthusiasm and generosity of spirit of the people who gladly open their gardens and the docents who explain the beauty and practicality of native plant gardening with hundreds of visitors. This year’s tour is doubly blessed to be able to present four additional gardens thanks to the cooperation of other groups.

Clay Tschudy, our 2012 garden tour director and Horticulture Director at the **Water Conservation Garden**, has recruited and trained docents for the new Habitat Garden and adjacent Butterfly Pavilion. They will be explaining the different soil and maintenance requirements of the riparian, oak, and coastal sage scrubs. Clay’s innovative new native plantings will also be featured on a self-guided tour within the Garden.

Peggy Junker and **Ed Piffard** at **Mt. Helix Historical Park** are not only working to restore native plants to the slopes of this stunning natural landmark, they’ve enlisted volunteers and their El Cajon neighbors to make this the literal and figurative high point of Saturday’s events. Ed leads the Mt. Helix **Garden Party** volunteers in their restoration work, and has enlisted them to act as docents along the Yawkee Trail that circles the peak. Peggy has arranged for a food truck so people can buy lunch to enjoy in the Park’s outdoor amphitheater and she persuaded their neighbors at Foothills United Methodist Church to donate van and drivers to shuttle tour attendees up the mountain from 11 a.m. to 2 p.m. Their efforts will allow tour attendees to enjoy a panoramic view of San Diego, visit with volunteers in the historic amphitheater, then take the short hike along the trail that encircles it.

Mary Duffy and the volunteers at **Earth Discovery Institute** have arranged to open the Rancho Jamul Ecological Reserve for the tour, and to show the native gardens they have created at the mid-century Daley Ranch house. In addition to EDI volunteers, CDFW staffers will be on hand, and a butterfly garden started by elementary students and Tecate cypress and cholla “plantations” can be visited. Although they weren’t able to pull off a lunch truck, brown-baggers can take advantage of the dining room inside the historic ranch house on Sunday.

The efforts of **Michael Golden** have turned **Grossmont**

College from a good tour stop to a great one. In addition to working with campus administrators, landscapers, and police, he recruited a dozen students to serve as docents at the College's five native gardens. The students are learning about the native plants in the garden to share with tour attendees and then to pool their findings into a guidebook for their fellow students.

The support and cooperation of these groups will add something special to the weekend. The Garden Native tour always engenders a great sense of community and sharing. If you haven't already bought your tickets, it's not too late. For those with tickets, inviting friends to be your guests this weekend could be another step to widening our community of back yard environmental activists.

~ **Dave Flietner**, Garden Native Tour Director

NATIVE GARDENING

Old Town Native Plant Landscape

Saturday, April 9: Work Party - 1 to 3 p.m. Join the Partners in Grime in Caring for Native Plants. Come find the "Be Here WOW!" zone when you become one with the weeds and all else to experience in the Native Plant Landscape, including the bells and whistles of the trains and trolleys, and booming radios of cars waiting for the signals to change. For some weird reason, people talk about how peaceful it is in the Landscape!! Your theories will be welcomed. The landscape is at the corner of Taylor and Congress streets. Park for free in the parking lot of the California Dept. of Transportation across Taylor. Bring water, sun protection, gloves, and your weeding tools of choice, or borrow ours. Questions? Contact Kay at fieldtrips@cnpsd.org.

Native Gardening Committee

April 13. Meets 2nd Wednesday of each month. Info: **Mike Gonzales** at gardening@cnpsd.org.

CONSERVATION

Conservation Committee

April 5. First Tuesday evening of each month. Contact **Frank Landis** at conservation@cnpsd.org for location.

LA Envy?

Sigh. Today I did a little rare plant survey in a field of beautiful beach primroses. Dare I spend a column on rapturous prose about unexpected flower fields? Nope. It's still more about dealing with developers and projects.

First, a reminder: this month they're collecting signatures to put the Lilac Hills Ranch development on the ballot. As I wrote in March, please don't put your name on that initiative! The County spent \$18 million of our money creating our current General Plan. Lilac Hills proposes a development that's ten times denser than the current General Plan would allow (thousands of people versus hundreds). Few if any of these homes will be available for families making less than around \$100,000, so this project does little or nothing to ameliorate the County's affordable housing shortage. It will also clog I-15 traffic at Valley Center pretty much permanently. There aren't a lot of native plant issues, fortunately, but in purely human terms, this particular pile of concrete doesn't help the County as a whole.

Second, there's all the development slated for Del Mar Mesa. The most egregious is 475,000 square feet of concrete (camouflaged as a six story office building) that's right at the edge of the real preserve: Del Mar Mesa.

This behemoth is supposedly for a single leaseholder, so apparently it's planned to be an isolated campus for some big company. It doesn't help the neighborhood at all, and it will further clog Highway 56 at Camino Del Sur, which is where the jams start every morning if you watch the traffic. Since there's another 500,000+ square foot office building scheduled to be plopped down about two blocks away, this poor little intersection will be forced to support around a million square feet of office space, or about a third of one New York World Trade Center's worth, with a dinky little four lane freeway feeding into it. That freeway won't be widened for at least a decade either.

Ultimately, it's just a bad place to put anything. The site is surrounded on three sides by parkland, it's on a slope and cut by a draw, so it will take some serious grading and filling to make it into an office park, and it will impact old growth chaparral and a vernal pool at Del Mar Mesa. Personally, I think the developers got suckered when they bought it, and our job is to convince them of that.

If you're seriously annoyed about this development, I suspect they'll be talking about it at the next Rancho

Penasquitos Planning Board, April 6, 6:30 pm, at the Doubletree Resort on Penasquitos Drive. First the Planning Board has to approve the zoning upgrade to support the development (aka "The Preserve") so it can go ahead with an EIR. Without the zoning upgrade, it's dead in the water. If you're interested in stopping this development, and especially if you're a local resident in the Carmel Valley area, contact me at conservation@cnpssd.org for details.

So, what do these (and other) projects have in common? I'll call it LA Envy, just to be annoying. It's that ceaseless drive to build more buildings, more isolated, overly planned communities, with people living in houses far away from work and spending a too-long chunk of their lives in traffic jams blowing CO₂ out their tailpipes, while air quality worsens, we fail to meet our climate goals, and life gets gradually worse. That's progress for you.

Actually, it's sort of fighting words to call San Diego's development LA Envy. Saying that San Diego is trying to imitate LA is a classic tactic for getting the audience to boo in a City Council meeting. If you use these words in public, use them wisely.

Anyway, LA's bad design is pretty embodied in that county, all suburbs and traffic jams. Perhaps the design made sense in the 1950s, when the US government wanted people to spread out to be less of a target for nuclear war, but it doesn't work now. Right now, we need to think more about solar roofs, rain barrels, and not driving to work. That's a very different urban design challenge than what LA built, and that's why we should neither envy nor imitate them, even as they try to get the Newhall Ranch and Tejon Ranch developments built.

But maybe this is too bleak? After all, won't we have electric cars any day now, with fusion plants to power them? Well, no. The prediction for electric cars taking over is somewhere around 2025. That's most of another decade of gas-powered traffic jams before we get to switch to frying our car batteries on the hot pavement. And fusion plants have been promised for so long that smart people will only count on them when there's a working fusion power plant actually built somewhere.

Still, that mention of pavement brings up another issue that neither San Diego City nor County are dealing with. The manufacture of conventional Portland Cement generates about one ton of CO₂ for every ton of cement, and concrete can be something like 40% concrete, and manufacture of concrete and cement accounts for something like 5% of worldwide CO₂

emissions.

Should San Diego ration concrete to meet its climate action plan? I'd say so, what with the Convadium/New Stadium, Lilac Hills Ranch, The Preserve, and all these campaigns to rebuild crumbling infrastructure. Hopefully one day we'll have large amounts of high tech, carbon-neutral concrete and cement, but right now such materials are in the experimental stage, not available in bulk. In the short run, we should encourage the City and County to budget their use of carbon emitting materials, to allocate the amount they're willing to burn to projects that truly matter, and most importantly, not to waste it all on fast-talking developers. Hopefully this will encourage them to find better materials with which to build.

Somehow, I don't think this notion will be popular, but dealing with cement emissions it is part of dealing with climate change. Cutting emissions is something that affects all of us, whether we're driving to work, driving to see wildflowers, or pouring the foundation for a backyard greenhouse. Or a new stadium.

Can we go carbon neutral? After all, how many of us have problems quitting smoking, let alone giving up coffee. It sounds too big, too complicated, for us to deal with. Are we doomed?

Here's the thing: the risk from climate change is not the same as the risk from smoking. By continuing to emit greenhouse gases, we're not increasing our chances of getting climate cancer, we're changing the climate in measurable and predictable ways. For example, the average high temperature for February 2016 in San Diego was 74.38°F, nine degrees hotter than the normal 65°F (the low was 3°F warmer), and this kind of change was first predicted over a century ago. If we magically stopped blowing CO₂ tomorrow, it would take decades for average temperatures to return to 20th Century norms. Climate change isn't about increasing probabilities, it's about increasing certain problems in measurable, predictable ways. There's a huge difference, and we can see the results of our efforts, even when they take a long time to fully take effect.

It's fairly normal to hear CNPSers claim that we're doomed, because we "can't" make the necessary changes, but there's no technological reason we can't transform society. After all, it's transforming anyway. The necessary changes are as much about attitude change as technology. Dealing with climate change is a matter of getting over things like apathy and selfishness, and sacrificing momentary, greedy cravings for a better long term future. It's about sitting through some uncomfortable meetings to stop bad projects,

rather than counting on someone else to do it for you, so you can have a quiet evening.

Want to do something to decrease the problem? April's a good month to start.

~ Frank Landis, Conservation Chair

OUTREACH EVENTS

Outreach is great fun, especially if you like to talk total strangers into being environmentally responsible about plants. It is made more fun by various tricks to lure unsuspecting children to your table (candy is not involved). And the children bring their adults with them! Want to know more about any of these or want to help? Email Betsy Cory at bcbetsycory@gmail.com.

DATE	EVENT	LOCATION	VOLUNTEER(S)
04/09/16 (Saturday)	Green and Clean	Chula Vista	Betsy Cory
04/16/16 (Saturday)	Earth Festival	Oceanside	
04/17/16 (Sunday)	Earth Fair	Balboa Park	
05/14/16 (Saturday)	Los Coyotes Recycling Event	Warner Springs	
05/15/16 (Sunday)	Ecofest	Coastal Roots Farm (near SD Bot. Gard.)	Mike Gonzales
05/21/16 (Saturday)	Bioblitz	Cabrillo National Monument	Betsy Cory , Anne Murphy, Bob Byrnes
05/21/16 (Saturday)	Otay V. Reg. Park Days	Chula Vista	
05/21/16 (Saturday)	Pechanga Earth Day	Pechanga	
07/04/16 (Monday)	Fair	Del Mar	Betsy Cory, Bob Byrnes

BOTANY

The Story behind Fishhook Flowers: A Window into Evolution

Whenever you have looked at our earliest-blooming cactus (Fishhook, *Mammillaria dioica*), you may occasionally have admired one with particularly large flowers. If you then checked the literature, you found a substantial flower size range given for this species: 1.5 – 2.5 cm long in Munz, 10 – 22 mm in Jepson. What these numbers do not tell you, however, is that they

actually include two distinct ranges – plants with small flowers (more common) and others with large flowers. This is especially obvious, when both forms grow side-by-side, as in picture 1, taken in the Cactus Garden off the Harper Canyon access road in Anza-Borrego Desert State Park.



Picture 1: A small-flowered plant in the lower left next to the large-flowered one in the upper right.

A close inspection of these two flower types reveals a less conspicuous difference: the large ones harbor well-developed pistils and stamina (as in picture 2), in the small ones the pistil clearly dominates (picture 3). Without correlating the flower size to this feature, the literature gives you a hint of what might be going on: Munz talks about “incompletely dioecious” flowers, Jepson calls the plants “either all bisexual or pistillate” – they are in one (admittedly cumbersome) word gynodioecious. The reverse, by the way, also occurs in nature, albeit seldom: androdioecious plants have either bisexual or male flowers. You are of course familiar with the fact that there are monocious plants with bisexual flowers and dioecious ones with separate male and female individuals – but why would a species like our humble Fishhook possess either female or bisexual flowers?



Picture 2: Bisexual flowers with well-developed stamina on this plant at the Cactus Loop Trail.



Picture 3: Reduced stamina in the flowers of the same female plant as in Picture 1.

To answer this question, you have to remind yourself of what sexual reproduction is all about – the mixing of two different genomes to give rise to a variety of new combinations, some of which may have selective advantages over both parents (as opposed to asexual reproduction, which results in clone-like copies of the parent). That mechanism does not always work, as you can see for yourself when you watch bees going from flower to flower of the same plant – not much mixing going on there. Some plant species prevent this from an evolutionary perspective unproductive pollination by having developed self-sterility; only pollen from a different individual results in successful fertilization. Every grower of certain fruit tree varieties knows that you therefore need to have at least two individuals to obtain a crop; avocados are an example

Another failsafe way to ensure the recombination of genes is of course dioecy, where two different parents are always necessary to produce offspring. In evolutionary terms, this situation is considered to be more advanced than monoecy; losing the functionality of an organ is more easily accomplished than acquiring a complex new one. This would make bisexual Fishhooks the ancient form in the process of abandoning its female organ, and pistillate ones the upstarts on the way to true dioecy. Interestingly the former are less common than the latter, consistent with the fact that you need fewer males to fertilize females – again familiar to the growers of dioecious crops like kiwi, where one male is planted for three to five female plants. So, cryptically or functionally dioecious species (other terms used for plants possessing bisexual as well as unisexual forms) seem to be an intermediate stage in the evolution of a monocious species into a dioecious one.

Now that we have an explanation for the confusing Fishhook flowers, you might wonder what sense it

could possibly make to have plants with separate male and female flowers but on the same individual, as in many conifers, oaks, birches, alders, etc. In these cases, self-pollination is not completely excluded, but these species are wind-pollinated, and if you have ever watched the yellow clouds of pollen drifting through a grove, you know that the chances for mixtures are pretty good. Whatever works well is retained somewhere by Mother Nature at least temporarily, until an even better solution pops up.

~ Dr. Jürgen Schrenk, Member

RELATED ACTIVITIES

Anza-Borrego Desert State Park Botany Society

Friday, April 11, 10 a.m. LuAnn Thompson, who leads the Colorado Desert District PORTS educational program, will discuss the use of native plants in the program. **Attendance is FREE, and the talk will be at the Anza-Borrego Desert State Park Visitor Center.**

POINT LOMA NATIVE PLANT GARDEN

April 2 & 17, 9 – noon. Work Party. Usually 1st Saturday and 3rd Sunday of each month. Contact: Richard@sandiegoriver.org for more info.

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, October 10 for the November newsletter, etc. Please submit items to newsletter@cnpsd.org

CNPS-SD Activities Calendar April 2016

- 4/2-3 Native Garden Tour, p.1 & 5
- 4/3: Tecolote Cyn field trip, p. 5
- 4/5: Conservation Committee Mtg, p.6
- 4/6 **Board Meeting**, p.2
- 4/9: Old Town Native Landscape, p.5
- 4/10: Field Trip to Cowles Mtn, p. 3
- 4/13: Gardening Committee Mtg, p. 5
- 4/16: Tour de Plants, p. 4
- 4/16: Botanical Sketching at Mission Trails, p. 3
- 4/19: **Chapter Meeting**, p. 1
- 4/23: Spring Native Plant Sale & Festival, p. 2
- 4/24: Field Trip to Elfin Forest, p. 3

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.

CALIFORNIA NATIVE PLANT SOCIETY

San Diego Chapter
C/o San Diego Natural History Museum
P. O. Box 121390
San Diego, CA 92112-1390

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April 2016 Newsletter

Dedicated to the preservation of the California native flora
CALIFORNIA NATIVE PLANT SOCIETY – SAN DIEGO
www.cnpssd.org info@cnpssd.org

BOARD MEMBERS

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