



CALIFORNIA NATIVE PLANT SOCIETY *San Diego Chapter Newsletter*

NATIVE GARDENING COMMITTEE



The San Diego Chapter of the California Native Plant Society presents..

Circling Back to Nature

California Native Gardens of East San Diego County

The 8th Annual California Native Garden Tour | Saturday, April 9, 2022 | 9:00 AM - 4:00 PM



**CNPS-SD 8th Annual
Native Garden Tour
“Circling Back to Nature”
Saturday, April 9, 2022
9:00 am to 4:00 pm**

Tickets \$30 (thru Apr 8) on sale now at:

<https://ticketstripe.com/gardentour2022>

or

<http://cnpsd.org/events/2022/gardentour>

Tickets are selling fast for the CNPS San Diego Chapter *Circling Back to Nature - California Gardens of East County Garden Tour*. Be inspired by exploring and learning from these gardens that illustrate habitat plants, dry streambeds, adjacent natural areas, pool-to-pond conversions, water catchment devices, slope gardens, charming water features, bridges, sculptures and more. See a few of our tour gardens featured on [facebook.com/cnpsd](https://www.facebook.com/cnpsd)

TICKETS: Online tickets are \$30 now through April 8 and \$35 at the door.

Everyone who bought tickets online before **March 28** will have a tour booklet mailed to their home within the week before the tour and can start the tour at any garden location on Saturday.

If you purchase your tickets after March 28, you will be able to pick up your tour brochure at the **Water Conservation Garden** 12122 Cuyamaca College Dr W, El Cajon, CA 92019.



Artwork above by Margaret Gallagher

Native Garden Committee Potluck Meeting Tuesday, April 12; 5:30 pm

Spring and daylight savings time has arrived! Our next meeting in April will be outside at the home of **Lee and Debbie Gordon** in Scripps Poway. Lee will be giving a “*hillside tour*” of what is blooming in his native habitat at **4:00 pm** for those who would like to come early.

The meeting is open to anyone interested in gardening with native plants. Since Lee and Debbie live in a gated community, please sign up [here](#) or contact us at gardening@cnpsd.org if you would like to attend. A gate code will be sent to you 2 days before the meeting.



Left: Shooting Star (*Primula clevelandii* var. *insularis*) is one of the many native plants that bloom on Lee’s hillside. Photo: **C. Hoey**

March 8 Zoom Meeting

Environmental scientist **Renee Murphy’s** presentation “*Cultivating Your Inner Scientist*” is now posted on our YouTube channel in case you missed her engaging talk. See it here: <https://www.youtube.com/watch?v=njpes5lo3gw>.

Moosa Creek Nursery "Behind the Scenes" Tour



To celebrate Native Plant Week, the NGC is sponsoring a "behind the scenes" tour at **Moosa Creek Nursery** on Friday, **April 22 from 10 to 11 am**. Registration is limited and Moosa Creek has been kind enough to allow people to pre-order plants at a **20% discount**. You will be able to purchase and pick up your order on the day of the tour.

To register and submit your native plant pre-orders, go to this link: [Moosa Creek Tour](#). Pre-orders will be accepted through **April 15**.

Parking is limited, so carpooling is highly recommended. After the tour, hop over to the Bates Nut Farm next door for a few treats!

Introduction to Native Plant Maintenance Workshop Update



Photo credit: **Greg Rubín**

This first ever workshop on March 19th with **Greg Rubín and Leo Hernandez** filled up quickly! We never imagined it would be so popular, and I know a lot of people were disappointed they couldn't get into the workshop.

It only makes sense if we are going to promote gardening with natives, that we also offer workshops on how to take care of them. We will be planning more native plant maintenance workshops, so keep an eye on your inbox for future announcements.

Native Plant Week April 17 - 24

As we celebrate Native Plant Week this month, I began to think about what that means globally and at the local level.

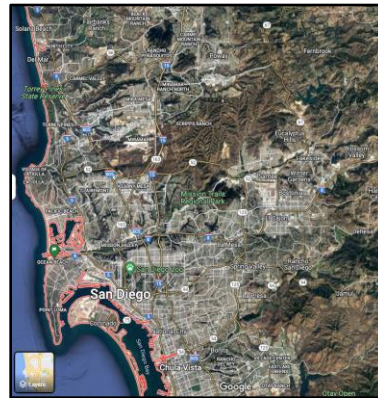
The recent news headlines are sobering: *"Climate Change is Harming the Planet Faster Than We Can Adapt, U.N. Warns"* NYT, 2/28/22; *"Silent Skies: Billions of North American Birds Have Vanished"* Scientific American, 9/19/2019; and the March 3, 2022 New York Times' article *"This Map Shows Where Biodiversity Is Most at Risk in America"*.

California has the most imperiled biodiversity of any state in the contiguous United States according to NatureServe <https://www.natureserve.org/>. In other words, we are considered a biodiversity "hot spot" defined as greater than

1,500 endemic plants and animals that have lost 70% of their original habitat.

Much of this habitat loss and fragmentation can be attributed to urbanization, farming, invasive plants, and fires - not unlike what is occurring on a global scale.

What about San Diego?



Have you ever looked at a Google map satellite view of San Diego? You will notice coastal urban communities have replaced much of the coastal sage scrub habitat with residential landscapes consisting of lawns, exotic plants, and non-native succulents. This means our local and migrating birds,

butterflies, and wildlife have few resources for food, shelter, and water to survive and thrive.

How We Can Reverse Habitat Loss

We can mitigate habitat loss by restoring pieces of nature in our urban landscapes to create "waystations" for wildlife. According to entomologist and author Doug Tallamy, *"If half of American lawns were replaced with native plants, we would create the equivalent of a 20-million-acre national park, nine times bigger than Yellowstone, or 100 times bigger than Shenandoah National Park."*



Above: Dunn's Mariposa Lily (*Calochortus dunnii*) Photo: Calscape.

From the canopy above to the soil below, we all have an opportunity to slow down or even reverse habitat loss by creating our own native habitat landscapes with a trio of shelter, water, and food (insects). So, let's expand our gardens with more California native plants!

Did you know that California has...

- Over 30% of all plant & vertebrate species in the U.S. occur in California.
- 1,000+ species of vertebrates (65% occur only in California): 650 birds, 220 mammals, 100 reptiles, 75 amphibians, 70 freshwater fish, 100 marine fish and mammals
- 6,500+ types of plants (2,000+ endemic to California)

- 30,000+ species of insects including 1,600 species of native bees (Biodiversity Fact Sheet, resources.ca.gov) This month's featured article by NGC member, **Susan Lewitt** will go into detail about Biden's and California's 30 X 30 initiative to expand and protect 30% of native habitat by 2030.

If you love gardening with California native plants and would like to join the Native Garden Committee (NGC), sign up here: [Join NGC](#). A separate monthly email is sent out to members with meeting announcements, volunteer activities, workshops and early bird sign-ups that don't always make it into the Chapter newsletter. We would love to see you!

*Natively yours,
Christine Hoey*

Going Wild with Natives: 30x30 – Supporting Health & Biodiversity **By Susan Lewitt** (Photos by the author)



Private native garden from the CNPS Native Garden Tour in North County.

In the distant past, the earth was brimming with countless species in diverse habitats, including lush forests, sparkling grasslands, and waterways teeming with life. Later, a new species evolved, one that was a bit more inventive and adaptable than most others. This species started making changes that would help it survive, flourish beyond measure, increase beyond necessity, and put many other life forms in peril. This species, of course, was us.

There have been extinction events before humans graced this planet. The world had many periods of instability until our planet settled into the climate patterns we rely on today. Unfortunately, we humans are changing the world, causing it to shift away from the consistency we have known. This puts more plants and animals, including humanity, at risk of extinction. How?

Humans are putting the world in peril by wastefully overusing resources, not being mindful of conditions we are creating, overdeveloping land without regard for consequences, and

prioritizing wealth over true needs of health and well-being. Our activities since the dawn of the Industrial Revolution have added increasing amounts of greenhouse gases to the thin protective atmosphere surrounding our planet. "While the US has some of the world's strongest environmental policies, its species, ecosystems, and natural spaces are in rapid decline. About 12,000 wildlife species are in need of protection to avoid the threat of extinction. ...Nature in America is in trouble..." (Jones B. "The Biden administration has a game-changing approach to nature conservation"; <https://www.vox.com/2021/5/7/22423139/biden-30-by-30-conservation-initiative-historic>. May 7, 2021.)

Other threats, especially to biodiversity, are invasive species. Some of these have been purposely introduced through agriculture and horticulture, and others have landed in novel places purely by accident. Some are non-natural hybrids not found in nature, and others are natives from distant lands. These alien species escape cultivation, crowd out native species, and take over natural spaces, sometimes forming monocultures. Can we change this? If so, how?

The 30x30 initiative – called "America the Beautiful" – can make a significant difference. The term "30x30" refers to the efforts by several countries to have 30% of planet Earth protected in an indigenous natural state by 2030. This would give all species, including those that are threatened and endangered, a chance to thrive. Our planet and its life forms depend on biodiversity to survive, which would be ensured by most of the world's leading countries pledging action regarding 30x30. This goal would just be a step on the way to the even more effective goal of having 50% of our planet protected as soon as possible.

You – as a person involved with CNPS, nature, and native plants – can contribute to this goal. There are many ways to make a difference. Just by dedicating at least 30% of your garden to native plants, you can contribute to stabilizing biodiversity in San Diego and supporting San Diego as a biodiversity hot spot. Also, if you are remodeling or building a new home, you can extend the area of your green space by planning a rooftop native garden. Even if you are not redesigning your home, you can research rooftop gardens to see if that works for your property. For more information on rooftop gardens, check out "All About Rooftop Gardening" at: <https://www.thespruce.com/rooftop-gardening-1403340>.

Other helpful actions include encouraging your local schools and businesses to plant native gardens in bare areas, especially those that are underutilized. You may also contact your congressional leaders and our President to ask them to support converting more land into protected natural spaces. The most effective way to contact the White House is by handwriting a letter containing only one subject. Send it to President Joe Biden, The White House, 1600 Pennsylvania Ave NW, Washington, DC 20500.

Secretary of Commerce, Gina Raimondo, said "30 percent is the beginning. It's setting a very strong foundation and we hope [it] will build the momentum for longer-term conservation to

benefit current and future generations.” (<https://www.vox.com/2021/5/7/22423139/biden-30-by-30-conservation-initiative-historic>). The ideal would be to have 100% native plants in protected areas to support local biodiversity and slow down or prevent extinction, but biodiversity can be preserved by protecting 50% of our planet Earth. There will always be those who long for exotic plants. We just must make sure that a reasonable portion of the land supports what really belongs here. For those of you who take this pledge and start or continue using native plants in your garden, keep in mind that it only takes a garden of 70% native plants to qualify for the California Native Plant Society (CNPS) San Diego chapter’s Native Garden Tour. Let’s get planning, planting, and preserving our world and our health. For a short video explaining more about 30x30 and to sign the pledge to help, please go to: <https://inthistogetheramerica.org/30x30-pledge/>.

California has its own initiative – 30x30 California – that includes protecting the biodiversity of our land areas and our coastal waters. The following links will provide you a further understanding of California’s goals and the need for 30x30 and the biodiversity that this initiative supports: <https://www.californianature.ca.gov/pages/30x30> and <http://biodiversity.ca.gov/our-biodiversity/>

According to Albert Lundeen, Media Relations Manager of the California Natural Resources Agency, Governor Gavin Newsom advanced nature’s part in combating climate change, protecting biodiversity, and prioritizing conservation by signing Executive Order N-82-20, Nature Based Solutions, in October 2020. The 30x30 California goals include pledging to protect California’s distinctive biodiversity and improving access to nature for everyone, along with recreation upgrades. Increasing natural spaces would sequester more carbon and help protect California from climate change. Through the efforts of the California Natural Resources Agency, more than 7,000 opinions have been gathered to help outline how to accomplish this program using 10 methods, including easements, acquisitions, enhancing conservation on Federal lands, and helping communities improve conservation. There will be a finalized document in the spring identifying the crucial steps with the aim of being completed over an 18-month period.

With the right efforts and support, 30x30 is attainable and will enhance the living quality of our state, our country, and our world. And it is just a start!



Left: A small section from a private native garden.

(A modified version of this article was originally published on December 1, 2021, in the San Diego Horticultural Society’s newsletter.)



Left: Several native plants, including bladderpod and buckwheat, in a private native garden.

Below: Native plant species around Lake Murray.



Overlooked Plants for the Native Garden

Perennial Wildflowers, Part 1

By Lee Gordon

(Photos by the author)

Perennial wildflowers are great for their colorful seasonal displays. In the wild, they grow, bloom with a splash, make seeds, then disappear. Once established, and with irrigation, they bloom more reliably than annual wildflowers. Our prominent designers build their native gardens with roughly 70% foundational evergreen plants, and they tuck perennials into smaller spaces and along the border. This makes for a tidier garden, but it misses what perennials have to offer. Perennials like to show off, and I like to give them some room so they can strut their stuff!

We find perennials blooming all over our open spaces, poking flowers up through a shrub or peeking out from below. My favorite spots are the uncommon places where perennials just take over. These are the sites that make me want the same in my garden.

My garden has two 10’ areas filled with buttercups (*Ranunculus californicus*), checkerbloom (*Sidalcea malvaflora*), and blue-eyed grass (*Sisyrinchium bellum*), and they are beginning to light up as I write this in early March. Their color dazzles for few months, then they fade and go to seed, and finally, warm weather dries them up. After that, I trim them to the ground, leave the trimmings as a mulch, and let the ground sit empty until the next growing season. I consider the open ground to be a small price to pay for the perennials’ riotous spring blooms.

I introduced buttercups to my garden, but the checkerbloom and blue-eyed grass were already there. They all create seedlings that keep their allotted space full, and of course, they also pop up elsewhere in the garden. I suppose that when they grow in the wrong place, they are weeds, but I call them my

“preferred weeds”. They may not be growing where I had intended, but they sure beat dandelions and scarlet pimpernel, and their color is always welcome. These perennial intruders tend to displace the weeds I don’t like, but they also stay out of the way of my foundation plants. They are easy to weed out if I need to make way for something else.

Most of the perennials in this article are grassland plants. They grow among shrubs in our chaparral and in hillside meadows. In the past, they grew amid native bunch grasses, but they also find a way to grow in the middle of invasive exotic grasses. Grassland perennials also mix it up with one another. It is common to find two, three, or even four of these species all living side by side. Monet would appreciate the color mix.

The three best-established perennials in my garden are buttercups, checkerbloom, and blue-eyed grass:

Buttercups occupies large patches on grassy hills above Metate Rd. in south Poway. I wanted to recreate these patches in my garden, so I cleared an area and planted about 30 plants. Within a few years, these plants and their seedlings filled the space. A year or so later, I planted the second area with another 30 plants. Buttercups produce upright flower stalks with plenty of bright, shiny yellow blooms.

Checkerblooms moved in to share the first of the buttercup plantings. Checkerblooms bloom a bit later than the buttercups, but there is always a period when both are in full bloom at the same time. I love their complementary colors. Mallows are known for large, clear flowers and checkerblooms are one of our showiest mallows. When they are ready to bloom, checkerblooms send out arching stems upon which the flowers appear, a few at a time, travelling the length of the stem.

Both buttercups and checkerbloom are rigorously seasonal. They grow, bloom, and dry up, all on a schedule. It does not matter if you irrigate. The good news is that irrigating the dormant plants does them no harm. They reliably return in the fall.

Blue-eyed grass shares the second buttercup planting. As before, the blue and yellow color combination looks great. Blue-eyed grass blooms earlier and longer than checkerbloom and buttercups. The monthly irrigation keeps the plants green even in the summer. There are always a few blue flowers almost any time of the year. Because the plants stay green, I don’t trim them like the others. The flower stalks dry up above the rest of the plants, and then they are easy to pull out by hand.

While the first three perennials are well established in my garden, the next two are works in progress.

Viola pedunculata (Johnny jump up) has long occupied my hill, but unlike the other two, it produces few seedlings here. Years ago, I imbedded rocks to create steps for a pathway up the hill. The pathway became so choked with buttercups and checkerblooms, I could not get through, so I cleared them away. Since then, I have been growing and planting Johnny jump-ups to fill the area around the pathway. They are small, so they do

not obstruct the path. This has been a long process because they don’t seed new plants and because they grow slowly. It takes three or four years before they are ready to bloom. They may be small, but they reward you when you crawl down to them to smell the amazing scent of fresh peaches from the flowers.

Silene laciniata (cardinal catchfly) produces striking red blooms relatively late in the season. In open spaces, their flowers rise above shrubs and non-native grasses. There are some that bloom in the shade next to the trail in the Del Mar Mesa Preserve. On a hike there one time, a friend discovered a hummingbird whose tailfeathers were caught in a catchfly’s sticky leaves. He freed it and it buzzed away. Should we call it a catch-bird?

I have been planting catchflies in several areas of my garden for the past several years, and I am encouraged by what I see. Unimpressive first year plants return the next year larger and stronger. A few bloom in their first year, but most wait a year. They are all irrigated, and they stayed green into the fall last year and produced flowers the whole time.

Delphiniums end this article. In comparison to the above perennials, delphiniums are exercises in unrequited love. *Delphinium parryi* (Perry’s larkspur) and *Delphinium cardinale* (scarlet larkspur) have both defied my efforts to establish them in my garden, but I include them here because their flowers are magnificent. If you see them blooming in our open spaces, you will not forget them.

I have managed to get Perry’s larkspur to grow and bloom on my hill a few times, but they failed to return the next year. These were sites with summer irrigation, and summer irrigation is said to kill them, so now I am trying to establish them at sites without summer irrigation.

Calscape.org tells us that delphinium care is moderately easy. If you are having success with our native delphiniums in your garden, I would love to hear how you do it.

Part 2 (next month) will review establishing perennials in your garden, including how to find them, how to grow them from seed, and how to keep them alive when you plant them. It also has tips for collecting their seed. The seeds you collect enable you to share your good fortune with friends in the CNPS.



When I saw this buttercup meadow near Metate Rd. in south Poway, I knew I wanted a buttercup meadow in my garden, too! This photo is from late March 2013.

Buttercups & checkerbloom compete for attention. The late March 2015 photo was taken about two years after I planted the buttercups.



Blue-eyed grass (left) is a tiny iris. This cluster, like many in my garden, seeded on its own, then expanded.

Below: A Johnny jump-up leaves room for foot traffic on a rock step. Flowers are



just beginning to appear (early March 2022). *Alchemilla arvensis* [*Aphanes occidentalis*] (western lady's mantle) is the tiny plant crawling under the already small violas. This delightful little native plant recently



arrived, entirely on its own.

Left: Cardinal catchfly in Rattlesnake Canyon (May 2017).

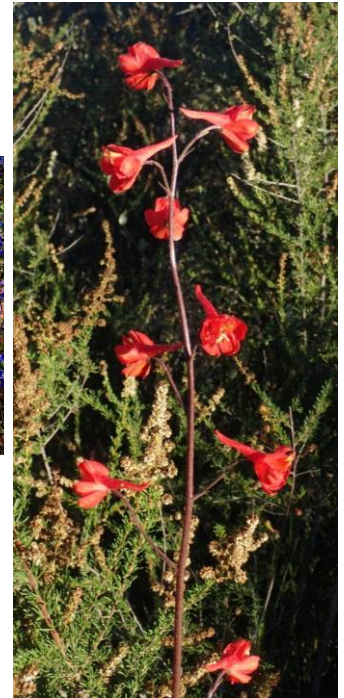


Last year, I planted this 1' patch of about a dozen cardinal catchflies tightly, probably too tightly (right). Nevertheless, the plants are preparing to send up bloom stalks. I expect them to begin flowering by April, and to continue flowering into the fall. I planted many more this year, with a 6" spacing.

Below: *Delphinium parryi* in Spring Canyon produced a breathtaking display in May 2019, after plentiful rains. Delphiniums need plenty of rain to bloom well.



Right: *Delphinium cardinale* near the Iron Mountain trail in June 2019. Flower stalks reach 9' tall in a good year.



CNPS-SD BOARD NEWS

April 2022 Board Meeting

Wednesday, April 6, 6:30 – 9:00ish p.m. The meeting will be via Zoom. To add an issue to the agenda, or to get the link to the meeting, please email president@cnpsd.org.

March Board Meeting Summary

The board approved the following:

- Returning to in-person chapter meetings at a limited capacity as long as those who are integral to organizing a meeting agree to do it.
- To form a committee to explore the options of having a native plant sale in the Fall of 2022 and to present a recommendation at the April 2022 board meeting.

Other items discussed by the board included: our Well's Fargo Account; agreement among board members to continue receiving our mail at the SD Natural History Museum; acquiring sponsors; 2022 Native Plant Week; the upcoming native garden tour; the poaching of white sage to supply an international demand for white sage products; and having a Fall 2022 plant sale.

The meeting adjourned at 8:30 pm.

~ **Bobbie Stephenson**, Chapter Secretary

SEEDS AND BULBS



The Juniper Canyon Native Seed Library, sitting next to the canyon at Felton and Ivy in San Diego, opened on January 29, 2022. The library houses free native seeds that can be selected for propagating in your yard, garden, or canyon-side landscaping. Within the library can be found simple information on how to use the library, photos with guidelines for available plants, and

native seed packets that have been individually labeled with a helpful QR code pointing to Calscape, which will access guidance on how, where, and when to use the seeds. When fully grown the native plant will flower and set seeds. You then harvest the mature seeds, place them in the small envelope and drop the envelope off at the library -- and the cycle continues. The library was open through March and then closed during the months when planting seeds would be ineffective. San Diego Audubon is the official sponsor of the neighborhood native seed library program with support from San Diego Canyonlands and CNPS-SD. Learn more about Native Seed libraries in San Diego and 10 other locations at t.ly/wwQW.

~ Cindy Hazuka, Seeds and Bulbs Chair

CONSERVATION

Conservation Committee Meeting

Contact conservation@cnpsd.org for meeting information.

Oaks and Humans

Happy Earth Month! Originally, I was planning a thousand-word diatribe on how global civilization isn't taking climate change seriously enough yet. That's certainly true for everyone who wants us to travel without worrying about our emissions.

Fortunately for all of us, I got a request in parallel with efforts by the Global Consortium for the Conservation of Oaks (GCCO). This is part of an effort to protect rare oaks, yes, globally, put on by the International Union for the Conservation of Nature (IUCN) and the Morton Arboretum. In 2020 they released a global Red List for Oaks that is available at <https://mortonarb.org/app/uploads/2021/05/RedListOaks2020.pdf>, and now they're trying to do something about it. Thanks to a couple of CNPSers who saw the initial invite, I got hooked into this.

IUCN has its own rarity ranking system, but the IUCN Red List more-or-less matches being on the CRPR lists. Unfortunately, there's not much interaction between the various American Endangered Species Acts (ESA) and the international IUCN rankings, so I'm now trying to help people who normally do

IUCN understand the ins and outs of California conservation politics.

In San Diego County, there are three IUCN red-listed oaks: Cedros Island oak (*Quercus cedrosensis*), Engelmann oak (*Q. engelmannii*) and Nuttall's scrub oak (*Q. dumosa*). I'm working on the latter two.

Engelmann's oak is currently California Rare Plant Rank (CRPR) list 4, which means it's unprotected, while Nuttall's is a list 1B, which means it could be listed under an ESA but isn't. The reasons for these rankings are a mix of politics and science, but the upshot is that we're starting to consider whether Engelmann oak should be re-evaluated for list 1B status, and whether Nuttall scrub oak should be listed as threatened under the California ESA.

There are multiple reasons to re-evaluate, especially with Nuttall's scrub oak. All known populations are isolated. If climate change makes their current redoubts uninhabitable for them, how can they move north? Millions of people have settled the areas between the surviving populations, in parks along the coast, throughout the species' range from Baja to Santa Barbara. No scrub jay could fly acorns from park to park.

Worse, oaks are slow-growing, so if they're having trouble reproducing or even surviving, it will take a decade, likely two or more decades, before a germinating oak seedling can grow big enough produce acorns of its own. By the time we can tell they're in trouble, it will take a lot of time and effort to get them out of trouble. And climate change is running down the clock.

The other issue is genes, because as we all know, scrub oaks hybridize. In San Diego, a putative hybrid, *Quercus X acutidens* (aka *acutidens*, the X denotes hybrid status) is thought to be the most common scrub oak in San Diego, if it's not a species of its own. Since Nuttall's is undeniably a scrub oak and Engelmann's is genetically an overgrown scrub oak, it should be no surprise that both are thought to hybridize with *acutidens*.

This is where some people get all knotted around genetic purity and only saving "genetically pure individuals." I'm not in that camp, and neither are most academically trained botanists. Some organisms simply hybridize more easily than do others. This group includes oaks, ceanothus, manzanita, wheats, mustards, and yes, humans. Hexaploid bread wheat, for instance, has two genomes from the genus *Aegilops* (goat grass), one genome of *Triticum* (true wheat), and we have no trouble labeling it as *Triticum aestivum*.

We have to work out with oaks how much genetics matter in identity. If an oak is morphologically Nuttall's but has *acutidens* chloroplasts, does it matter? (Chloroplasts are generally, though not exclusively, inherited from the mother). That's something we have to sort out. But that's work for the oak working groups.

While we're doing that, you can do something important.

One big question we need to answer is whether Engelmann's and Nuttall's are in trouble, and you can help. This won't be

precisely a rare plant committee survey, but when I was asked to float this by CNPS, I jumped at the idea.

If you're an iNaturalist user, we want you to learn how to identify the Engelmann oak and Nuttall's scrub oak as best you can. Use Jepson eFlora, realizing that the size and habitat information are wrong for Nuttall's—it can get bigger and grow on a variety of soils away from the coast. Then start recording where you find them on iNaturalist. It's especially important for Engelmann's, because survey records are a few years old and fires in Riverside County probably wiped a bunch of them out.

While it's important to chart where the adults are, it's even more important to chart where the seedlings are. If all anyone can find are a bunch of old oaks without seedlings around them, that's a huge red flag that they're not reproducing. Seedlings, in this case, are oaks less than about a foot tall. Most of them will be under the parents. The key point is we need people to go out with iNaturalist and locate the seedlings for us, so we know where they're currently reproducing.

Even more important than seedlings are saplings. Saplings are about knee high to head high. They're the true gold standard for reproduction. Oaks often have seedlings under their canopies if the tree is healthy, but oaks are shade intolerant, so those little seedlings aren't going to grow very tall unless the parent dies and they've got big enough root systems to survive in the resulting gap. Typically, more than 90% of oak seedlings die. While finding seedlings is important, because it tells us that the oaks can reproduce there, finding saplings is golden, because those are where oaks are reproducing successfully.

So that's the opportunity: go out and find Engelmann's oaks and Nuttall's scrub oaks and upload your finds to iNaturalist. We need you to especially look for seedlings and saplings, and we need you to check places where no one's found any, not just revisit sites that have already been surveyed. Since this isn't a rare plant hunt, we don't have rights of entry, so only go where you're legally allowed to go. The important thing is to do it, because we need those data to find out what shape both species are in.

Have fun!

~ Frank Landis, Conservation Chair

OAKS OF SAN DIEGO COUNTY

Part 2: White Oaks, Laying the Groundwork

In Oaks of San Diego County, part 1 (February 2022), I covered oaks in general and in more detail, the red and golden oaks. The white oaks are a bit more challenging. I thought I might add more history into the mix. If you step back in time early in the last century, say 1927, the choice of white oaks in San Diego County and books to identify them were a good deal more limited than they are today. As a botany enthusiast, you might have a copy of Davidson and Moxley's *Flora of Southern*

California (1923) and Willis Jepson's *Manual of Flowering Plants of California* (1924) on hand. Botany is a whole other experience at that time. Unless you physically visited one of California's herbariums, you might only have books, their keys, and short descriptions in hand to sort out your oaks. It was all about interpretation, gestalt, and word of mouth. There was no internet, no Google to search, no California Consortium of Herbaria, no easily accessible photo libraries to access, and no iNaturalist where people more knowledgeable about oaks could weigh in on identifications.

Only two species of white oak would be available to users of these books in San Diego County:

Quercus dumosa (scrub oak) with three varieties that were not universally recognized (*Q.d.* var. *dumosa*, *Q.d.* var. *elegantula*, & *Q.d.* var. *turbinella*), and

Q. engelmannii (Engelmann's or Mesa oak)

In two of the next handy botany guides to come along, Phillip Munz's 1935 *Manual of Southern California Botany* and Howard McMinn's 1939 *Illustrated Manual of California Shrubs*, there is little change except that McMinn considered none of the *Q. dumosa* varieties worth recognition and Munz transferred *Q.d.* var. *elegantula* to Engelmann's oak, treating it as a synonym with the name *Q. McDonaldii* var. *elegantula*. Clearly there was a bit of uncertainty as to what to do with this last oak. Regardless, the name *elegantula* effectively disappears from botanical guides a short time after.

Munz dominated California botany in the latter half of the century with his *A Flora of California* (1959) and *A Flora of Southern California* (1974). With these books we still only have these two oaks to choose from here in San Diego County. So how did we get from there to here as our choices of San Diego white oaks:

Q. berberidifolia – CALIFORNIA SCRUB OAK

Q. cornelius-mullerii – MULLER'S OAK

Q. dumosa – NUTTALL'S SCRUB OAK

Q. engelmannii – ENGELMANN'S OAK

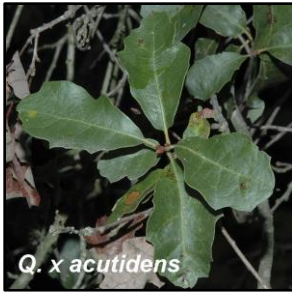
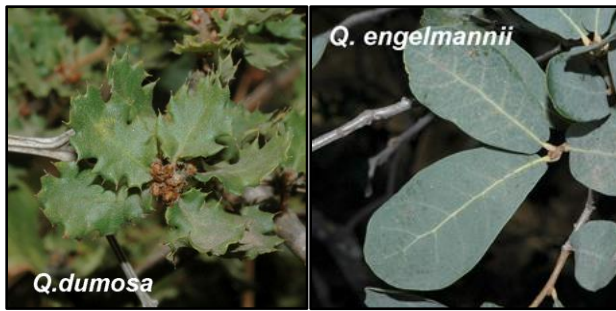
Q. x acutidens – TORREY'S OAK



Q. berberidifolia



Q. cornelius-mullerii



It is hard to believe that virtually all scrub oaks in San Diego within the white oak group were lumped under a single species. On the other hand, it certainly made it a lot easier to identify scrub oaks. It was recognized that scrub oak (as frequently referred to at the time) was quite variable and at least some of that variability was attributed to hybridization between this oak and Engelmann's oak. Jepson said of it in 1923 "highly variable in leaf texture and outline and in acorn character, both of cup and nut".

Let's tackle Engelmann's oak first. Being the only tree in the group (at least most of the time). LeRoy Abrams, in his 1923 *Illustrated Guide to Plants of the Pacific States*, was the first major flora to use the name "Engelmann's oak". Otherwise, it was generally known as "mesa oak" until the mid-1900s.

In San Diego County, Engelmann's oak is an interior oak, found away from the immediate coast but generally avoiding the deserts, except at the base of the Banner Grade. It is found in oak woodlands, oak-grassland savannahs, and scattered within chaparral and coastal sage scrub communities. It is also found outside of San Diego County, most notably on the Santa Rosa Plateau of Riverside County, scattered about the interior valleys of Orange and Riverside Counties, and extending north to the foothills of the San Gabriel Mountains, where it was once moderately common in the vicinity of Pasadena and Monrovia.

Engelmann's oak is generally a tree with semi-deciduous oblong leaves, at a relatively long 20-60 mm (0.75-2.5 inches). The leaf margins are mostly entire (smooth) or with a few coarse teeth, and a rounded tip. Distinctively, the leaves, at least in the right light, have a bluish-gray green cast. The acorn is relatively small, barrel shaped, and the cup seems overly small. Like all white oaks, Engelmann's oak has warty acorn cups. In its pure form, it is easily recognized but hybrids abound and make the line between Engelmann's oak and the shrub species a bit fuzzy.

One of the unique characters of Engelmann's oak, which will have bearing later in our story, is that the cotyledons, the first

pair of leaves sent out by seedling Eudicots, are fused. In other Southern California white oaks, the cotyledons are free.

The oak had an interesting start when it was first discovered in San Diego County. Perhaps the first white oak collected in San Diego, there is a delightfully recounting of it in a short essay by James Lightner titled "Parry's Forgotten Discoveries, 1849-1851" (available at <https://www.sandiegoflora.com/wp-content/uploads/2014/11/Parrys-Forgotten-Discoveries-1849-51-1.pdf>). In June 1850, Charles Parry, traveling by mule, obtained a collection between Ramona and Santa Ysabel. Parry sent the specimen to world renowned botanist, John Torrey at New York. Torrey determined the oak as *Quercus oblongifolia*, later to be known as Sonoran blue oak. Sonoran blue oak is found in southeastern Arizona and the Sierra Madre of western Mexico. Torrey believed that the oak Parry found was likely an extension of this species into the San Diego region.

This same oak was found to occur in the vicinity of San Gabriel near Los Angeles in the 1860s and then again collected in San Diego County without a specific locality by Henry Nicholas Bolander and Alexander Kellogg in April 1874. By the 1890s a dozen collections had been made near San Diego by collectors including Parry, Samuel B. Parish, George Vasey, Charles Orcutt, and Edward Lee Greene over a wide area of the backcountry.

Not everyone agreed that the blue-gray leaved southern California oaks were *Q. oblongifolia*. In 1889, Edward Lee Greene proposed the name *Q. engelmannii* for the oaks of California in honor George Engelmann. The two oaks are very similar, the typical hiker might not be able to separate them side by side. The main difference lies in the size of the fruit and the form of the tubercles on the acorn cup with Engelmann's oak being larger. Since that time, Engelmann's oak has become a species of conservation concern, first being included in the 4th edition of the CNPS Inventory of Rare and Endangered Plants (1988) as a List 4 plant, and later as a California Rare Plant Rank (CRPR) of 4.3 plant. The primary threat has been from loss of habitat, especially in the foothills of the San Gabriel Mountains.

Let us turn our attention to the scrub oaks. The white scrub oaks have always been a little problematic. Most field botanists in the last century were content to put most of them in the *Quercus dumosa* bin, largely because the plants were not closely examined. Others, more observant, knew the situation was more complex but not certain what to do about it. On one of his many webpages, Tom Chester included this quote from Francis M. Fultz, from *The Elfin Forest of California* (1923):

"*Quercus dumosa*...is not only the...most widely distributed, and most plentiful wherever it is found, but is also the one which is most frequently shrub-like form in appearance. The *dumosa* varies a great deal in size, and also in shape of leaf and acorn – in fact, so much so that botanists have tried to make several species out of it, but not with very much success."

I think the first species to tackle would be Nuttall's scrub oak. This is the most distinctive of our white scrub oaks even though

the name has resulted in some confusion. A few decades ago, when it emerged that the name *Q. dumosa*, after nearly a century of being applied to nearly all the white scrub oaks in California, should only be applied to a narrow subset of them, a good deal of confusion followed. This was further complicated by conservationists insisting the name *Q. dumosa* also belonged to a rare oak (*Q. dumosa* has a CRPR 1B status).

Nuttall's scrub oak is mostly typically found in coastal chaparrals and occasionally in coastal sage scrub or woodland, often on sandy soils within a few kilometers of the coast, often in widely disjunct populations, from Santa Barbara County south into northwestern Baja California, Mexico. In San Diego County, where the maritime influence spreads inland over a broader coastal plain, the distribution flares inland reaching as much as 7 kilometers (4.5 miles) on Otay Mesa.

Nuttall's scrub oak is readily separated from other scrub oaks in San Diego County by generally having a rounded, sometimes low, often broader than tall, habit, with dense, often tangled reddish branches that are angled. The dark green leaves, which are generally less than 20 mm (0.75 inch) long are frequently round to oblong in outline, often wavy and with distinctly toothed margins, though these are sometimes smooth. Whereas the trichomes (hairs) on the leaf of most white oaks are minute and require a dissecting scope to see clearly, on Nuttall's scrub oak you can see them with your eye, assuming your closeup vision is not failing as it is in my aging eyes. A simple trick, turn the oak leaf sideways and look along the central vein. If you can see hairs without a hand lens, and the leaves are dark green and somewhat rounded, you are almost certainly holding Nuttall's scrub oak. There are also more trichomes on the upper leaf surface than we typically see on other shrub species.

Nuttall's scrub oak is the only California white oak that retains the juvenile character of scaled acorn cups more typical of red oaks. We don't see this much in San Diego County, but it is a common feature on Nuttall's oak in other parts of its range. This is likely because north of San Diego County, Nuttall's scrub oak flowers earlier than other species and have less opportunity to hybridize.

Most of our scrub oaks are straight forward evergreen shrubs. Nuttall's scrub oak is not so clear cut. It appears to be semi-deciduous. In years with unfavorable conditions, cold or dry, most individuals can lose all or most of their leaves. There is an old individual on the Dana Point Headlands in Orange County. It loses all its leaves most winters and leaves behind an incredibly tangled mass of bare, angled branches, dense enough, you could just lay on top of the plant. At many sites, a dense layer of leaf litter forms below Nuttall's scrub oak. A clever way to know you have one is to put a branch in a plant press. Many of the leaves will have dropped off the branch by the next time you open the press. Neither California nor Torrey's scrub oak does this.

Nuttall's scrub oak is the species that got me interested in oaks. I wrote a book in 1995, *An Illustrated Guide to the Oaks of the*

Southern Californian Floristic Province, largely to address all the questions I got regarding Nuttall's scrub oak (I slipped a few other oaks in the book as well, it turned out that most of state's oaks fell within its boundaries). Until I met Nuttall's scrub oak, I pretty much called all oaks "*Quercus oaks*". I didn't really have much interest in the group. That all changed one day while attending a lecture given by Dr. Kevin Nixon and Dr. Kelly Steele as guest speakers circa 1981 at U.C. Santa Barbara where I was studying geography and botany.

Nixon and Steele had come to talk largely about Muller's oak, which they described and published in a paper in 1981. At the end of their presentation, they mentioned that they were working on another possible species, thus far apparently endemic to Torrey Pines State Park. A photograph of the oak caught my attention. I had seen this oak but it wasn't at Torrey Pines, it was in southern Orange County. I already knew Kelly as a TA for a botany field course and she introduced me to Kevin Nixon. They had an informal name for the oak "Moran's oak" and they were likely to name it *Q. moranii* after the great botanical explorer and lover of dudleyas, Reid Moran. There was still work to be done before they published the name, including being certain that no previous botanist had already provided a name for it, and getting a better handle on its name.

Within a few months, I had found the oak at several places in Orange County. At the time I was more of a conservationist than a botanist and I learned how challenging it can be to protect an un-named species. Of the sites I was aware of in Orange County, most were at risk, and some were lost within a few years of discovery. Eventually we would find it at 8 locations in Orange County. In the early 1980s though, it was tough times for this oak in Orange County. No one was really looking at it in San Diego County. Mitch Beauchamp published his *Flora of San Diego County* in 1986 and while it included Muller's oak, there was no evidence he was aware of "Moran's oak" (Beauchamp also introduced the name *Q. grandentata* into the San Diego County botanical awareness as a hybrid of Engelmann's oak and scrub oak but the type specimen was from Pasadena and it was actually a hybrid between San Gabriel Mountains leather oak and Engelmann's oak so it was never a San Diego County form after all).

Circa 1984, a chance find in the foothills of the Santa Ynez Mountains in association with a potential land donation to The Nature Conservancy changed the trajectory of Moran's oak. One of the highlights for the property was an interesting oak. Kevin Nixon was asked to look at it. Lo and behold, it was "Moran's oak".

In Richard Henry Dana's book, *Two Years Before the Mast*, published in 1840, Dana describes his life as a sailor and fur trader on the merchant ships *Pilgrim* and *Alert*. In the mid-1830s the *Pilgrim* made a few stops along the California coast, including at the Mission San Diego de Alcalá and Mission Santa Barbara. Dana, a former student at Harvard, describes his unlikely encounter with a former professor "strolling about San Beach, in a sailor's pea-jacket, with a wide straw hat, and

barefooted". The professor was Thomas Nuttall, who would be returning to Boston on the same ship as Dana after collecting plants and animals up and down the California coast.

Among the boxes of specimens that must have been loaded on the *Alert* at San Diego were specimens of scrub oak collected at Santa Barbara. In 1842, Nuttall would name this *Quercus dumosa*. Few botanists ever saw the type specimen and the name would be ubiquitously applied to white scrub oaks across California, including those found in San Diego County. We'll get back to that specimen later.

If Nuttall had collected his type specimen in San Diego, did he get *Q. dumosa* or did he get Moran's oak? It took Kevin and Kelly some time to track down Nuttall's original specimen (pre online database, it was a lot more challenging to track down specimens!). There was even a fear that the only specimen could be at Berlin and that it had been destroyed by bombing in World War II. Fortunately, this was not the case, and they tracked down the type. It was indeed the oak they had been calling Moran's oak. The new oak, as it turned out, was the old oak. For 150 years, botanists had attributed the wrong name to most of the scrub oaks in California. The next name in the queue was *Quercus berberidifolia*.

California scrub oak's name, *Q. berberidifolia*, was coined in 1854 by Friedrich Liebermann, a Dutch botanist mostly known for extensive collections in Mexico. The type for the specimen was obtained by Thomas Coulter but Coulter's original field notes were lost at sea and we will never know for certain where the specimen was obtained. I will address that further in Part 3.

The exact distribution of California scrub oak in San Diego County is a little uncertain. Depending on whom you talk to it is found largely along the coast and western foothills, all the way to the desert edge, or not at all. It is common in chaparral and scattered in coastal sage scrub and oak woodlands. The oak is a shrub, sometimes arborescent. Generally, its habit is more erect with open branching rather than low, broad, and densely branched, separating it from Nuttall's scrub oak, and the branches tend to be curved or arched vs. angled. The leaves are oblong to elliptic, or somewhat rounded, mostly less than 30 mm (1.25 inches) long, with smooth or toothed margins. The upper leaf surface is mostly glabrous (smooth), green and shiny. The lower leaf surface is paler with scattered minute hairs that require magnification to see. The trichomes generally have 6-8 rays. The acorn cup is tuberculated, and the nut is narrow or broad.

The investigation of odd scrub oaks at Torrey Pines eventually lead to a completely new understanding of *Quercus dumosa*. Before that, the oaks on the desert edge in eastern San Diego County were getting most of the attention. These oaks today are known as Muller's oak, named after Cornelius H. Muller, who founded the UC Santa Barbara Herbarium in the 1950s and was curator there from 1956-1964. He was one of the world's foremost oak experts. When I met him in 1981, it was said that he could identify any oak species in the world with a single leaf.

Muller's oak is largely a mountain oak found in interior chaparral along the desert edge of the eastern Transverse Ranges (San Bernardino and Little San Bernardino Mountains) and Peninsular Ranges of Riverside and San Diego Counties south to the Sierra Juarez Mountains of Baja California, Mexico. The overall foliage has a yellowish gray-green cast due to a very high density of minute, star-shaped hairs (trichomes). The leaves are leathery, about 25-30 mm (1-1.25 inches) long, usually longer than broad, elliptical in outline, tapered to the tip and with margins sparsely toothed. Both the upper and lower leaf surfaces are rich with trichomes. Upon the lower surface, the density is so thick the actual leaf surface is obscured. The trichome form a flattened rotate cluster, typically with about 12 rays (arms) but as many as 16. These are often fused at the base (this is a difficult character to see without an electron microscope). The acorn is not especially distinctive, though more often you see a more chocolate brown acorn than on other San Diego County oak species.

It had been recognized for some time that the scrub oaks of eastern San Diego County were a bit odd compared to those on the coastal slope. Of the oaks near Campo and Jacumba, Engelmann thought these simply unusual *Q. dumosa*. Our friend, Edward Greene had described a new oak from the mountains of northern Baja California in 1889 as *Q. turbinella* (shrub live oak). Greene thought the oaks in eastern San Diego County were aligned with his new species. In 1909, in his three-volume *Flora of California*, Willis Jepson more or less sided with Engelmann but introduced a compromise and called these oaks *Q. dumosa* var. *turbinella*. The relationship of *Q. dumosa* to *Q. turbinella* remained a matter of debate for some years.

Another "student of the oak", John M. Tucker, a professor at U.C. Davis much of his life, jumped into the ring. His PhD dissertation was the basis for his 1953 paper on interrelationships in the *Quercus dumosa* complex. The paper was largely devoted to circumstances north of our area, notably, the status of *Q. turbinella* and *Q. turbinella* subsp. *californica* (this latter now known as *Q. john-tuckeri*) but we get an honorable mention. In Tucker's opinion, Engelmann was closer to the mark than Greene and the oaks in eastern San Diego County were not relatives of shrub live oak at all, rather something entirely different but still closely related to *Q. dumosa*. Nixon and Steele were following Tucker's 1953 lead when they published their paper giving the Muller's oak the Latin name we know it by today.

The final name in this puzzle is *Q. x acutidens* (Torrey's oak). Most of us first heard the name with the publication of the Jepson Manual in 1993. The name (as a full species) is about as old as *Q. berberidifolia*, being published by John Torrey in 1859 based on a specimen from San Luis Rey near Oceanside, Fallbrook, or Bonsall. Edward Greene stepped in again and was unconvinced that *Q. acutidens* was sufficiently distinct from *Q. dumosa* (in the historic sense, this would be *Q. berberidifolia*). By 1900, no author that I am aware of was recognizing *Q. acutidens* and what would become Torrey's oaks

was dropped into the minor variant of California scrub oak. The name was largely forgotten for over a century.

Not to leave any oak leaves unturned, Nixon and Steele were also looking at the oaks of San Diego County in the vicinity of Ramona that did not quite fit into any clear bin. They also saw similar oaks farther north in the Peninsular Ranges of Riverside County. The oaks were likely of hybrid origin but their diversity was in some ways “consistent” over very large areas. Because the oaks typically had moderate to large leaves, often were round tipped, and apparently had partially fused cotyledons (the first leaves to sprout in Eudicots), they were fairly certain that one of the parents was Engelmann’s oak. Engelmann’s oak is the only California oak with fused cotyledons. This group of oaks also tended to have fairly high trichome counts. High trichome density is a character of Muller’s oak, which is found along the eastern edge of and somewhat overlaps the range of Torrey’s oak, so they concluded that Torrey’s oak represented a stable hybrid, a “protospecies” between Muller’s oak and Engelmann’s oak. In a 1994 paper published in Novon by Nixon and Muller titled “New Names for California Oaks,” Nixon and Muller offer some hint of how they saw Torrey’s scrub oak under their discussion of the newly described island scrub oak (*Q. pacifica*):

“it is not known from the mainland but bears a superficial similarity to some of the tree forms that are putative hybrids between *Q. engelmannii*and *Q. cornelius-mulleri*...in San Diego County. The latter populations, which have been described as *Q. x acutidens*..., differ in having much greater variability in leaf shape, thicker, more coriaceous leaves, denser abaxial [leaf underside] leaf vestiture, much smaller hairs typically having more than 10 rays, and variable levels of connation [fusing] of the cotyledons...”

Many of the oaks in the vicinity of Ramona fit this description and the area has some of the best examples of Torrey’s oak. However, the actual limits of the form and whether it is better treated as a species or a hybrid, and its relationship to California scrub oak will be the subject of Part III.

We are leaving off things more or less where they stood in the mid-1990s. A lot had changed since 1927. Rather than having just a couple names available for white oaks at the time, we now have five. For the rest of California, the changes wrought in the 1980s and 1990s to oak taxonomy have really clarified the situation. Unfortunately, this isn’t quite the case in San Diego County. But that is the topic of Part III.

~ **Fred Roberts**, Rare Plant Botanist

HABITAT RESTORATION

March 15 marked the beginning of bird nesting season in San Diego County. It also marked our transition from the San Dieguito River over to Lusardi Creek where removing artichoke thistle is the primary target into July. Looking back, we accomplished a lot already this year. From January to March we

did follow up weeding on 40-45 acres in the two miles of San Dieguito River, another mile of follow up along Artesian Creek and some castor bean control at Blue Sky Ecological Reserve.

All of these areas have experienced abundant rebound in native vegetation. Artesian Creek is our oldest area and has well established coastal sage plants along with white coast ceanothus (*Ceanothus verrucosus*) chaparral and a riparian corridor. Blue Sky burned to the ground in 2007 and is now a vibrant mix of coastal sage scrub, chamise chaparral and oak riparian vegetation. Our San Dieguito River project is still in the early succession state in many places with plenty of arrowweed (*Pluchea sericea*) to go along with reeds, sedges, willows and a few oaks.

We are also seeing a rebound in wildlife. Artesian Creek and Blue Sky have top predators like bobcat, coyote and mountain lion. This certainly points to a very healthy food web. At the San Dieguito River project we see plenty of deer and coyote droppings. And I saw my first roadrunner at Lusardi, which is a good indicator that things are beginning to rebound there, and that **Bob Byrnes** and the team are having yet more success.

The following link is to a map of our work areas in yellow, white and orange. [Fairbanks Ranch / Rancho Santa Fe Project - Jan - Mar 2022 - Google My Maps](#)

~ **Arne Johanson**, Habitat Restoration Co-chair

RELATED ACTIVITIES

California Bumble Bee Atlas Walk

April 2, 2022, 10 am-12 pm. San Elijo Reserve, Solana Beach.
Join California Bumble Bee Atlas staff for a walk to learn more about bumble bees, their host plants, and how the project uses community science to survey these important pollinators. More information and registration at: <https://www.cabumblebeeatlas.org/events.html>.

Friends of Rose Creek

Friends of Rose Creek is looking for a Native Plant Coordinator at Rose Creek. For info, email info@saverosecreek.org. For info about Friends of Rose Creek, visit: <https://www.saverosecreek.org>.

Other Local Spring Garden Tours...

Many tours are beginning to include at least a few native gardens. See the tour listings below and mark your calendars:

- **April 30: Point Loma Garden Walk**
<https://www.pointlomagardenwalk.com/>
- **April 23 & 24: Theodore Payne Native Plant Garden Tour** <https://www.nativeplantgarden.org/>
- **April 30: Bernardo Gardeners Garden Tour.** Featuring the native garden of **Dennis Mudd**, who is converting his 3-acre property into a nature reserve. Fruit and flowering

trees are scattered throughout the landscape, as well as a few chickens. The patio area features a unique and innovative rainwater collection system.

<http://www.bernardogardeners.org/spring-garden-tour.html>

- **May 7: Mission Hills Garden Walk**
<https://www.missionhillsgardenclub.org/>
- **May 14: La Jolla Secret Garden Tour**
<https://lajollahistory.org/events/secret-garden-tour-of-la-jolla-and-secret-garden-boutique/>

Kate's Trees

Kate Sessions is known as the "Mother of Balboa Park" because she transformed public spaces into verdant oases with her agreement to plant 100 trees per year in order to lease land from the City of San Diego for her nursery. These trees provided shade, refuge for wildlife, cooler temperatures and clean air - all of which we still need in our current time. Kate's Trees is committed to honoring Sessions' legacy and providing high-quality trees to underserved areas. Native trees are available.

Native tree selection:

Cercis occidentalis – Western redbud (small)

Chilopsis linearis 'Monhews' – Desert willow 'Timeless Beauty' (small)

Heteromeles arbutifolia – Toyon (small)

Hesperocyparis (Cupressus) forbesii – Tecate cypress (medium)

Prosopis pubescens – Crewbean mesquite (medium)

Prunus ilicifolia subsp. *lyonii* – Catalina cherry (medium)

Pinus torreyana – Torrey pine (large)

Acer negundo or *A. macrophylla* – California box elder or big leaf maple (large)

Quercus agrifolia – Coast live oak (large)

Garden signs (<https://katestrees.org/garden-signs/>) are available with a donation of at least \$30 at <https://katestrees.org/donate-now/>. You will receive a confirmation email that allows you to pick up your sign at Mission Hills Nursery.

Center for Plant Conservation (CPC) National Meeting May 4-6, 2022

This meeting will be CPC's first **hybrid meeting**, with both in-person and online presentations highlighting the theme of "Celebrating Conservation Milestones." In-person sessions will be held at the Denver Botanic Gardens, which offers 50 gardens to explore, as well as the interactive Science Pyramid, Mordecai Children's Garden, and collections of natural history, art, and library holdings. Meeting sessions will be held at the Freyer – Newman Center, the new home to DBG's plant and fungi herbaria, art galleries, libraries, and research labs. In-person sessions will be live streamed and recorded for later viewing on the Whova conference platform used by the CPC National Office for the 2020 and 2021 virtual meetings. Virtual attendees will also have access to pre-recorded presentation content and

virtual breakout sessions. Learn more about CPC at <https://saveplants.org/> and register for the meeting at <https://saveplants.org/national-meeting/>

Presentation sessions will include updates from the CPC National Office on network-wide initiatives, in addition to lightning talks from CPC network partners on plant conservation research, accomplishments, and challenges. Conservation Officers and Network Partners are welcome to submit abstracts for presentation sessions highlighting this year's theme of "Celebrating Conservation Milestones." Contributors should consider presentation proposals that celebrate a long-term conservation story, an exciting achievement in a new conservation project, or topics that otherwise adhere to the theme.

Pre-meeting Field Trip, Wednesday, May 4, 2022: In-person attendees can attend a pre-meeting field trip to tour the USDA-ARS National Laboratory for Genetic Resources Preservation (NLGRP), which holds thousands of seeds, spores, and embryos from CPC's National Collection of rare plants. Registration will be first come, first served as space may be limited.



South Bay Earth Day 2022

Saturday, April 9. 11 am – 4 pm,
Memorial Park, 373 Park Way,
Chula Vista

EARTH DAY APRIL 22, 2022

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 submit items to newsletter@cnpsd.org

CNPS-SD Activities Calendar April 2022

4/6: Board Meeting via Zoom, p.3

4/9: Native Garden Tour, p.1

4/12: NGC Potluck Meeting, p.1

4/22: NGC sponsored field trip to Moosa Ck Nursery, p.2

Check the CNPS-SD website for activities and/or events that may have been scheduled after this newsletter was completed:
<https://www.cnpsd.org/events>

MEMBERSHIP APPLICATION

<https://www.cnps.org/membership>

___ Student/Limited Income \$25; ___ Individual \$50; ___ Plant Lover \$120; ___ Supporter \$500; ___ Patron \$1,000; ___ Benefactor \$2,500; ___ Perennial Monthly Sustainer Memberships starting at \$5/mo. provide much needed predictable income for our programs. Your indicated gift will be automatically repeated each month. Pls see <https://www.cnps.org/membership> to sign up for this membership level.

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

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April 2022 Newsletter

Dedicated to the preservation of the California native flora
CALIFORNIA NATIVE PLANT SOCIETY – SAN DIEGO

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Christina Clark.....christina.clark@cnpsd.org
Christine Hoey.....christine.hoey@cnpsd.org
Sheila Kirschenbaum.....sheila.kirschenbaum@cnpsd.org
Frank Landis.....frank.landis@cnpsd.org
Torrey Neel.....torrey.neel@cnpsd.org

CHAPTER COUNCIL DELEGATE

Frank Landis.....chaptercouncil@cnpsd.org

Email DISCUSSION GROUP

Craig Denson, Moderator
To join, email: CNPSSanDiegoDiscuss+subscribe@groups.io

RARE PLANT BOTANIST

Fred Roberts.....rarebotanist@cnpsd.org
(760) 712-7604

APPOINTED COMMITTEE CHAIRPERSONS

BOOK SALES: Cindy Burrascano.....booksales@cnpsd.org
(858) 342-5246

CONSERVATION: Frank Landis.....conservation@cnpsd.org
(310) 883-8569

E-MAIL ANNOUNCEMENTS:

Kendra Saad.....announcements@cnpsd.org

FIELD TRIPS: OPEN.....fieldtrips@cnpsd.org

GARDEN TOUR:tour@cnpsd.org

HABITAT RESTORATION: Arne Johanson..... (858) 759-4769 &
Bob Byrnes.....habitatrestoration@cnpsd.org
HOSPITALITY: Kye Ok Kim.....hospitality@cnpsd.org
INVASIVE PLANTS: Arne Johanson(858) 759-4769 &
Bob Byrnes.....invasiveplants@cnpsd.org
LIBRARIAN: OPEN.....librarian@cnpsd.org
MEDIA: Joseph Sochor.....media@cnpsd.org
MEMBERSHIP: Bonnie Nickel &
Jasmine Duran.....membership@cnpsd.org
NATIVES FOR NOVICES: Torrey Neel
.....nativesfornovices@cnpsd.org
NATIVE GARDENING: Christine Hoey
.....nativegardening@cnpsd.org
NEWSLETTER: Bobbie Stephenson.....newsletter@cnpsd.org
(619) 269-0055
ON-LINE ARCHIVING: Birda Hussey Nichols
ON-LINE INQUIRIES: Don Rideout.....info@cnpsd.org
PERSONNEL: Justin Danielpersonnel@cnpsd.org
PLANT SALES:plantsale@cnpsd.org
POSTER SALES: OPEN.....postersales@cnpsd.org
PROGRAMS: Torrey Neel, Joseph Sochor,
Kendra Saad.....programs@cnpsd.org
PROPAGATION: Amy Huie.....propagation@cnpsd.org
PUBLICITY: OPEN.....publicity@cnpsd.org
PUBLIC OUTREACH: OPEN.....publicoutreach@cnpsd.org
RARE PLANT SURVEYS: Frank Landis & Justin
Daniel.....raresurveyS@cnpsd.org
SEEDS & BULBS: Cindy Hazuka.....seedsandbulbs@cnpsd.org
VOLUNTEER COORDINATOR:
Jasmine Duran.....volunteer@cnpsd.org
WEBMASTER: Tim Thornton.....webmaster@cnpsd.org

