I’ve always looked forward to winter as a time to throw the past year’s losses and victories on a (metaphorical) compost heap, turning them over occasionally until they yield richer soil. As we enter the third grueling year of a global pandemic, it feels more important than ever to find opportunities to rest, recover, and reconnect.

In this issue of Flora, we explore how nature can help. From science journalist Florence Williams, for example, we learn how spending time outside restores us, physically and mentally, and can even help heal heartbreak (page 11). But there’s an important caveat to these benefits, Williams emphasizes: To fully enjoy them requires a sense of safety and belonging. Both can be elusive for people from historically marginalized communities—a reality that outdoor equity organizations such as Outdoor Afro, Latino Outdoors, and many community based organizations seek to remedy.

Those solutions require everything from public policy, such as California’s 30x30 and Outdoors for All initiatives, to hyperlocal projects that collectively can transform a community’s connection to nature (see our featured garden on page 28).

The more intimately we understand and experience California’s flora, the stronger our connection to it grows. For some people, that connection deepens into the kind of passion found in CNPS Rare Plant Treasure Hunt Manager Amy Patten’s essay (page 20). As I read Amy’s beautiful reflections on the rare plants—and complex emotions—that wildfire can awaken, I found my own perspective transformed (and I bet yours will be, too).

Speaking of change, I have some important news to share about Flora. First, I’m thrilled to announce the arrival of our new publications program coordinator, Krystle Ramos, and the return of our senior director of public affairs, Liv O’Keeffe. Krystle has already brought her thoughtful editorial eye and sharp attention to detail to this issue of Flora. Those of you who know Liv will rejoice, as we have, to have her back on board.

In the midst of all this good news, I have a bittersweet announcement of my own: I am leaving CNPS as editor-in-chief to pursue a new career opportunity. I’m deeply grateful for the time I’ve spent with you, Flora readers, and for the letters and stories you’ve shared. I know I’m leaving this magazine in excellent hands, and look forward to reading—and perhaps contributing!—to its pages going forward.

—Emily Underwood

COVER: A dramatic burst of Santa Cruz cypress (Hesperocyparis abramsiana) seeds make an appearance after the 2020 fires in the San Mateo and Santa Cruz counties. Photo: Amy Patten

LETTER FROM THE EDITOR

We Need Nature and Each Other—More Than Ever

A conversation with Florence Williams

The Cannabis Industry’s Growing Pains

CNPS works to curb its environmental damage

02 In the News

06 Cool CA Natives

Newly Rare

28 Featured Garden

Growing Community

30 Grow Native Plants

Navigating Nurseries

32 Life with Native Plants

From Clarkia to Yorkia

36 Kids’ Corner

Ready, Set, Connect!

38 Future-Minded

A Conversation with Kathy and Rich LaShure

40 Upcoming Events

INSIDE

08 Tiny Plants Close Up

Angela Pal’s small delights

20 After the Fires

Hunting for rare plants in the wake of wildfire

24 The Cannabis Industry’s Growing Pains

CNPS works to curb its environmental damage
NEW LEGISLATION FOR WALKER RIDGE

On January 12, Congressman John Garamendi (D-CA03) introduced the Berryessa Snow Mountain Expansion Act (H.R. 6366), a first-of-its-kind bill in California. The bill would expand the National Monument by 3,925 acres in Lake County, require a National Monument Plan to be completed in consultation with federally recognized tribes, and provide a path for day-to-day tribal management of the land. The bill also renames Walker Ridge to Molok Luyuk, which is Patwin for Condor Ridge. Passage of H.R. 6366 would support California’s 30x30 initiative to protect 30 percent of its lands and water by 2030. “Congressman Garamendi’s H.R. is truly something to celebrate,” says CNPS Conservation Program Director Nick Jensen. “It is a groundbreaking piece of legislation that will ensure irreplaceable habitats are conserved while respectfully incorporating and honoring the knowledge of our Native American partners.”

Lawsuit Against Tejon Ranchcorp Revived

On January 14, Los Angeles Superior Court Judge Mitchell Beckloff ruled that the California Native Plant Society and the Center for Biological Diversity can move forward with their legal battle against the Tejon Ranchcorp Centennial Project. If approved, the Centennial project would develop 19,000 homes 65 miles north of Los Angeles in fire-prone woodlands where 31 wildfires have occurred between 1984 and 2015. According to Jensen, Centennial’s flawed analysis of wildfire and greenhouse gas impacts “epitomize why the project is both bad for public safety and imperiled habitats.” Judge Beckloff’s decision, Jensen says, “points toward a growing body of evidence that we must do better.”

Guenoc Valley Project Halted

On January 4, Judge J. David Markham of Lake County Superior Court ruled that the Guenoc Valley Project is prohibited from moving forward with its luxury development in Northern California’s Guenoc Valley, an area that has a history of extreme wildfires. The ruling comes after the Environmental Impact Report (EIR) for the 16,000-acre project lacked sufficient analysis on emergency evacuation for residents during a wildfire. According to Peter Broderick, an attorney with the Center for Biological Diversity, “The court recognized that Lake County failed in one of its most important jobs, which was to consider how dangerous development in the path of fire can increase risks to surrounding communities.”

Protection from Adara Development

On October 7, 2021, San Diego Superior court Judge Richard S. Whitney struck down San Diego County’s approval of Adara at Otay Ranch—a victory for a coalition of environmental groups, to which CNPS belongs, and for the California Attorney General. Judge Whitney stated that the EIR for the project dismissed both legal details and the fact that the land had already been designated as undevelopable. Frank Landis, Conservation Chair for the San Diego CNPS Chapter, expressed, “This victory protects numerous native plant species, a wildlife corridor, vernal pools, and populations of the endangered Quino checkerspot butterfly.”

New Botanical Guide to Baja California

November 2021 brought the release of the beautifully illustrated, bilingual Guide to the Flora of the Sierra de San Pedro Mártir / Una Guía a la Flora de la Sierra de San Pedro Mártir, a guide to the flora of the high Sierra mountains of Baja California. Co-authored by Alan Harper, Sula Vanderplank, and Jon Rebman, the book is a Botanical Research Institute of Texas publication. Coming soon to CNPS at store.cnps.org!
SEPULVEDA BASIN WILDLIFE PRESERVE CLEAN UP

January 22: Volunteers from Friends of the L.A. River, San Fernando Valley Audubon, and the South Coast CNPS chapter clean up trash, remove invasive weeds, and plant native plants around the Sepulveda Basin Wildlife Preserve. The monthly event includes a guided nature walk to learn about the ecology of the area, says Kevin Jauregui, Friends of the LA River, Education & Outreach Coordinator. Photo: Kevin Jauregui

PROTECTING RARE SPECIES AT PINE HILL PRESERVE

The El Dorado CNPS Chapter is participating in studies at Pine Hill Preserve, which protects more than seven rare plant species, including the endangered Pine Hill flannelbush (Fremontodendron decumbens) pictured above. One study involves the response of both native and non-native plant species to clearing and burning in a fuel break, the initial results of which were published in the California Fish and Wildlife Journal (Klip, et al., Special Fire Issue, 2020). Photo: Ginna Meyer

EDUCATION AND RESTORATION AT CHINA CREEK PARK

Homeschool students help the CNPS Sequoia Chapter plant valley oaks on December 3, 2021, as part of an education and restoration project in China Creek Park, in Fresno County. “The kids vary a lot in size, strength, and attention span, but most got a chance to help at digging,” wrote volunteer Warren Shaw. Photo: Ger Dempsey

SAN DIEGO PLANT SALE

CNPS-San Diego Chapter created this box of six plant species that grow at Mission Trails Park for a January plant sale that the two organizations co-hosted. Plants include black sage (Salvia mellifera), bladderpod (Peritoma arborea), California buckwheat (Eriogonum fasciculatum), blue-eyed grass (Sisyrinchium bellum), willowy monardella (Monardella viminea) and California sunflower (Encelia californica). Photo: Torrey Neal

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Bladderpod (Peritoma arborea)
COOL CALIFORNIA NATIVES

by ELLEN DEAN, Associate Rare Plant Botanist, Rare Plant Program

NEWLY RARE


LEARN MORE ABOUT THE INVENTORY AT RAREPLANTS.CNPS.ORG

Crawford’s spring beauty (Claytonia crawfordii)
Photo: Larry Crawford
This plant is known only from four populations on high-elevation volcanic ridges in Tuolumne County. It was first photographed by Larry Crawford, for whom the species is named, and then described as a new species in 2018 by Thomas Stoughton. It has been assigned a California Rare Plant Rank of 1B.1, which means it is rare or endangered throughout its entire range.

THREATS
Climate change, timber activities, and random events that could eliminate its very small populations.

Mt. Tedoc stonecrop (Sedum rubiginosum)
Photo: Julie Kierstead
This leaf succulent has striking yellow and red flowers that produce copious nectar for its bee pollinators. It was described as a new species in 2018 by botanists Peter Zika and Barbara Wilson and has been assigned a California Rare Plant Rank of 1B.2. It is currently known only from three populations in Tehama County.

THREATS
Fire, fire-fighting activities, over-collecting, and climate change.

Nelson’s stringflower (Silene nelsonii)
Photo: Michael Mesler
Features of the beautiful, delicate white petals of Nelson’s stringflower distinguish it from other species of catchfly (Silene). Nelson’s stringflower was first described in 2019 by a group of botanists led by Michael Mesler at Humboldt State. It is now assigned a California Rare Plant Rank of 4.3, a rank for species that are not as rare as those ranked 1B. The plant is known from 68 locations in a narrow region of Trinity County.

THREATS
Road construction and maintenance, grazing, forestry practices, severe fires, and the creation of slash piles for burning.
I spend my days hiking around the state to search for rare plants and collect their seeds. Back at our Berkeley office, I process the seeds and send them off to seed banks, where they’re preserved in long-term storage in freezers. I feel lucky to work with our rare native flora, but I especially love tiny plants. Finding small rare plants requires extra attention and care. I have to slow down and get close to notice and appreciate them. Here are a few of my favorites from 2021.

SHORT DWARF CUDWEED
(Hesperevax sparsiflora var. brevifolia)

I collected this cute plant in some dunes at Point Reyes. It looks unremarkable—the flowers are so small you almost don’t notice them, but I think that makes the plant all the more extraordinary. This one was already a little past its prime when I collected it, so I’m glad its silvery leaves are distinctive enough that I was able to identify it. As I was collecting it, a cow came up to me to be petted, and then it wouldn’t leave me alone. I really needed to finish my work, so I kept running away from it as I was collecting. It even started grazing in the area I was collecting in, so it’s a good thing this plant is so tiny and close to the ground. Finally, the cow sat down and I was able to finish my collection.
PINK MARGINED MONKEYFLOWER
(Erythranthe trinitiensis)

I saw this plant for the first time in 2018, when I was botanizing alone in the Scott Mountains. That was before I worked for CNPS, so it felt special to revisit it for work a few years later. In June 2021, some CNPS staff members and volunteer Ken-ichi Ueda and I went to Shasta-Trinity and stumbled across a new occurrence of this monkeyflower (shown below) in the middle of a Forest Service road.

GROWS UP TO 5.9”

WHITE FAIRY POPPY
(Meconella oregana)

This little annual in the poppy family is recorded only from nine locations in California. I went out with three volunteers from the East Bay chapter, Glen Schneider, Cynthia Adkisson, and Ken-ichi Ueda, to look for it on a steep ridge in the East Bay. It was exciting to meet a rare plant that I had never seen before—practically in my backyard. Though the flowers are small—less than half a centimeter in diameter—when they were open, they were pretty easy to spot. Some of the plants were already developing fruit. We marked a few dense patches with small metal tags, and I went back about three weeks later to collect the fruits in coin envelopes.

GROWS UP TO 6.3”

WE NEED NATURE – AND EACH OTHER – MORE THAN EVER

by EMILY UNDERWOOD

It feels good to be outdoors: to dig in a garden, walk through a forest, or just sit still, listening to birdsong. But why do these activities increase our sense of well-being? Is it because we’re breathing cleaner air, escaping from daily stressors, or getting a recommended allotment of exercise? Or is there something special about spending time outside, surrounded by the living world of plants and animals, wind, soil, and water?

After struggling to adjust to city life after moving to Washington, D.C. from Boulder, Colorado, science journalist and Outside contributing editor Florence Williams wondered about the evidence for the benefits of time spent in nature (as opposed to, say, jogging on an indoor treadmill). She visited researchers around the world and even sported a portable brain-monitoring EEG unit through the woods to get answers. Her 2017 book The Nature Fix: Why Nature Makes Us Healthier, Happier, and More Creative explores evidence for the importance of nature to our mental and physical well-being—and underscores the urgent need to increase access to nature for everyone.

Recently, Williams followed her curiosity down another deeply familiar, yet still-mysterious path: the science of heartbreak. When her 25-year marriage ended abruptly, Williams found herself seeking solace in nature, as her earlier reporting had suggested she should. But a solo wilderness trip was not a particularly effective remedy, she found. Her new book, Heartbreak, explores the importance of human connection in healing grief and heartbreak, and of combining it with nature’s restorative potential. For Flora, Williams shared what she’s learned about healing, awe, and the benefits of spending time in nature together.
EU: Your writing is often inspired by your own experiences, and your curiosity about them. We’ll get to Heartbreak soon, but what led you to write The Nature Fix?

FW: I didn’t really think a lot about how much I was relying on time in nature for my own mental health until I moved to Washington, D.C., and felt cut off from the mountain landscapes I was used to in Colorado. I started to think more about the ways in which our external landscape gets reflected in our internal emotional landscape, and I started to think a lot about the term “nature deficit disorder.” I wanted to know: Was that a real thing, and was there science behind it?

Of course, the mistake that I was making was to assume that nature only exists in beautiful landscapes. I was spoiled coming from Boulder. But after writing the book, I learned a lot about how to find beauty in urban settings, and how to cue my brain to optimize the nature that I can find here. For example, when I’m outside now, I deliberately ask myself, what fractal patterns can I see? What birds am I hearing?

There are certain questions that we can ask ourselves that are kind of a shortcut to the benefits that are rooted in sensory immersion. I think it takes a little bit longer to tap into, because we’re very much still replaying our to-do lists in our heads. We’re not so good at landing in the sensory body quickly. But there are ways to do it if you have, you know, a 30-minute walk in the park.

EU: The Nature Fix covers emerging science about how being outside affects our mental state and brain activity – what did you learn about that?

FW: We’re seeing more and more evidence that when we spend time in healthy, vibrant living ecosystems it’s really good for our nervous systems. For example, there are some interesting EEG studies showing that our brains can kind of shift into a calmer, more alert state when we’re outside in healthy natural ecosystems. Activity in our frontal cortex–our executive function network–dials down a little bit. Many of us spend most of our time in that network in modern daily life, answering emails and checking things off our to-do list. But when we’re outside, our sensory brains come online, as well as parts of the brain associated with things like a long-term self concept (like “who am I and who do I want to be moving forward”), and more generative daydreaming.

When we see something really beautiful and awesome in the environment, it tends to make us feel more connected to other people, as well as to the world around us.
We can settle into what psychologists call a state of soft fascination. I’m interested in evidence that our brains are designed to thrive in that particular state. Of course, the next question is, ‘What are the mechanisms? And which elements are doing what?’

**EU: Any hints?**

**FW:** A lot of the scientists I met have their own pet theories about the color green, or the restorative effects of bird-song. And you can show some of the benefits of these factors in the lab. But it’s hard to overlook the compounding benefit of putting all of them together. I’m really interested in biophilia – the idea that we have not only a natural affinity for other living things, but that the brain is naturally aligned with outdoor environments, such that, for example, our visual perceptual field is comfortable reading information in natural landscapes because that’s what it evolved to do.

**EU: Can you talk about some of the benefits of being around plants?**

**FW:** Plants are amazing! Some plants, including evergreen trees, give off antimicrobial aerosols called phytoncides. These compounds may boost the human immune system, as well as the trees’ or plants’ immune response.

There are some really interesting studies which involve piping these compounds into hotel rooms where research subjects are staying. And they do find that the people who stay in the hotel rooms with some of these compounds produce more Killer T immune cells, and that those T cells remain elevated for up to 30 days after exposure.

**EU: As a science journalist, were you skeptical of some of the claims for nature’s restorative power?**

**FW:** Yeah, I was skeptical. It seemed a little too easy to attribute these benefits to nature, when maybe they were happening because we were outside of the city, or away from air pollution, or exercising – we know there are well-established benefits to exercise. And it’s still hard to tease apart the components of the benefits. But some of the studies are really trying to control for that. For example, in the Japanese studies I write about in The Nature Fix, the researchers sent subjects to walk the same distance and time in urban areas, and in a forest. Even after 15-20 minutes of being in a forest ecosystem, blood pressure drops about four percent. Our stress hormone levels decline. Our heart rate variability shifts in a way that’s indicative of resilience to dealing with stress. And they only saw those benefits in the forest setting.

**EU:** The Nature Fix suggests that as little as five hours a month spent in a city park can make a big difference to our health. What progress do you see in increasing access and connection to nature for everyone?

**FW:** We’re seeing more organizations trying to increase access, and more pressure in cities to increase the quality and the size of parks. Parks in underserved neighborhoods are half the size, on average, than parks in wealthier neighborhoods, and five times more people go to them, so it is much harder to socially distance. The pandemic has increased the recognition that nature is one of the few things that’s been able to provide us with a lot of joy and restoration, and that those benefits are unequal.

I have also been encouraged to see that there are increasingly more educators who understand [the need to get kids out in nature], more families who understand it, and more pediatricians who understand it. We’re seeing more clinicians prescribing nature to their pediatric patients and their families and to adults. I love what the state of Oregon has done to make outdoor school mandatory for fourth and fifth graders in all public classrooms. Wouldn’t it be great if our educational system recognized nature as a necessary part of a human education? If children could learn to feel comfortable outside. Learning to connect early on to the natural world may be the biggest benefit of all, because curiosity and learning naturally follow from that.

**EU:** Tell me about your most recent book, Heartbreak. How did you come to write it?

**FW:** Right after I wrote The Nature Fix, my 25 year marriage imploded in a way that I wasn’t expecting, or wanting. Suddenly, I felt like I had to rely heavily on the lessons I’ve learned in The Nature Fix, not just about how to be happier, healthier and more creative, but actually to survive and to try to recover from pretty serious grief and emotional trauma. I wanted to throw everything I could at recovering, because I was starting to feel heartbreak in my cells in surprising ways, in my immune system. I didn’t want to lose my health as well as losing my husband.

**EU:** Did heading out into nature help you heal?

**FW:** Nature provided tremendous comfort, and it helped in many ways—but it also didn’t fully help in surprising ways. For example, when I went on a 14-day wilderness solo river trip, that wasn’t very helpful to my immune system, and I know that because we analyzed my white blood cells before and after. There’s a tremendous amount of benefit from feeling like you have some mastery of a skill. It can help rebuild your self-esteem after heartbreak, which is something that really suffers. But, being alone, I was hyper vigilant. I wasn’t really relaxed. I was not necessarily feeling ‘safe’, which is one thing you need in order to heal. Although it was a great place to do some serious reflection, I learned that humans aren’t really supposed to be alone in the wilderness. There’s safety in numbers, which is what we...
figured out a long time ago and why our species, which is hyper-social, has probably been successful.

EU: Much of Heartbreak focuses on the neuroscience of connection and attachment. What did you learn from that, and how did you combine those insights with what you learned from writing The Nature Fix?

FW: In my research for the book, I spent time with a mouse researcher named Moriel Zelikowsky, at the University of Utah, who studies how weird mice become when they’re lonely. They start acting sort of paranoid and aggressive when they’re forced into social isolation – it’s an example of how mammals aren’t designed to be alone. There’s so much that the western industrialized world has just gotten wrong, in terms of the sort of Emersonian pursuit of self-reliance, and independence. There’s a place for that, but more and more, I’m appreciating the science behind the need for us humans to experience emotions collectively. Including, by the way, awe, which is a more powerful emotion when it’s shared, and impels us together. When we see something really beautiful and awesome in the environment, it tends to make us feel more connected to other people, as well as to the world around us. Awe is a critical emotion in terms of our development as a species, because it enables this impetus for cooperative projects.

EU: It sounds like the process of research and writing the book was helpful in navigating this difficult transition in your life – but I’m guessing there’s not a tidy “end” to this story. Where did you end up, and what did you take away from the experience?

FW: In the book, I tried to follow the chronology of heartbreak. There’s shock, then you have grief and loneliness, and then, hopefully, meaning and some measure of recovery. The human brain really wants to put things in the trajectory of a story, with a beginning, middle and end. But of course, it’s not a straight line, and in fact, there is no complete closure.

[Instead], there are these layers that get sort of woven into our hearts, which are meaningful in and of themselves. Having this mottled, scarred heart can ultimately enable us to do what humans are really best at: loving. And so, yes, while I have learned about the benefits of nature and the benefits of togetherness, I think ultimately, it’s our capacity for love that really helps us be our best human and animal selves. And that’s something that I would never have learned if I hadn’t been so beaten up in my heart. That’s the irony, right? By losing love, we actually increase our capacity to love.


WHAT YOU CAN DO

CNPS members are a necessary and much-needed voice for plants as part of the 30x30 effort. Your participation is needed now, particularly to surface local important plants and places in need of protection. CNPS can also be an important ally to historically disenfranchised communities, to ensure they get an equal say in what happens to nature and how that impacts people.

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Questions?

Contact Christine Pieper at legacy@cnps.org or (916) 738-7622

Photo: Nancy Gilbert
Hunting for rare plants in the wake of wildfire

by AMY PATTEN, CNPS Rare Plant Treasure Hunt Manager
All photos by Amy Patten unless otherwise noted.

Note: The places described in this essay are currently closed to the public, and were accessed by CNPS staff under research permits. Please check websites for public lands in the burn areas for updates on closures and current conditions before visiting.
In the northern hills of Big Basin Redwoods State Park, Yerba santa (Eriodictyon californicum), Pacific false bindweed (Calystegia purpurata subsp. purpurata), poison oak (Toxicodendron diversilobum), and California man-root (Marah foetida) have spread across open understories and bare ground in the chaparral, sprawling across charred tree limbs and skeletons of manzanitas.

I was delighted to find sweet-scented phacelia (Phacelia suaveolens) throughout the burn area. If you get close enough to the bold purple and yellow flowers, you can catch their signature scent of mint and honey. Brewer’s callandrinia (Calandrinia breweri, CRPR 4.2) is a rare fire follower that’s appeared in large numbers and exhibits a variety of shapes and sizes, with some rosettes reaching several feet wide!

Their hardy seeds look almost like the shells of small beetles—they are unusually large and shiny with remarkably hard shells, and it’s no wonder they are able to survive in the seedbank for so long between fires.

Despite the jarring appearance of their heavily charred trunks, many coast redwoods in Big Basin (Sequoia sempervirens) also survived, thanks to their thick, insulating bark that helps keep the core of the trunks cool and protects mature trees from succumbing to fire. New growth has emerged both from the roots at the base of the trees, called “stump sprouting,” as well as straight from the trunks of the redwoods, a pattern known as “epicormic sprouting,” giving them the appearance of a pipe cleaner or bottle brush.

In the Mount Hamilton Range, a part of the Diablo Range set apart from the surrounding mountains in Santa Clara County and Stanislaus Counties, recent wildfires also reawakened many rare plant species. In August 2020, the same lightning storm that caused the CZU Lightning Complex Fire ignited blazes across the Diablo range as well. This became the SCU Lightning Complex Fire, which burned nearly 400,000 acres across five Bay Area counties.

Despite the size of the fire, the steep and rugged topography of the area led to a patchwork-like mosaic of fire effects across the landscape. The fire cleared bare ground, making way for increased germination of species lying dormant in the seedbank, and deposited extra nutrients that allowed for increased growth in many plants.

This presented a unique opportunity to see fire followers and rare plants that haven’t been seen or recorded in a long time, if ever.

Last spring, on an unusually hot day in late April, I stood on the shaded valley floor below Mt. Stakes, a peak on the north side of Henry Coe State Park. Zac Harlow, director of the Blue Oak Ranch Reserve, and Mason Hyland, an environmental scientist with the state park, stood beside me, looking up at a steep, brush-covered slope. We’d driven for several hours to reach a remote and inaccessible part of the park with the goal of searching for rare plants in the footprint of the fires. Somewhere on that slope, we hoped, was Mt. Diablo phacelia (Phacelia phaceloides), a minute plant endemic to the rock outcrops of the Diablo Range. In 1987, a population had been found on an exposed outcrop of chert somewhere on this mountainside in 1987. But the data were approximate, and we didn’t know exactly on which outcrops they might be hiding.

As we gazed at the wall of talus and chaparral, we chowed two auspicious-looking patches of rocky habitat and began the trek. We picked our way over the loose scree, periodically taking a break to look at other plants that had sprung up after the fire, like whispering bells (Emmenanthe penduliflora). This classic fire follower was all over the SCU Complex Fire burn area. Their delicate cream-colored blossoms are downturned and hang in rows along the stems. We marveled at the different patterns inside the flowers of the butterfly mariposa lily (Calochortus venustus), which stood out from the dusty rocks.

At the first exposed outcrop, we found the rare Santa Clara thornmint (Acanthomintha lancifolata, CRPR 4.2.), its delicate white flowers surrounded by halos of sharp spines. It was a promising start, but we still didn’t see any of the rare phacelia we were looking for. Spotting some gray rocks jutting out of a ridgetop, we decided to try our luck. The fire had cleared some of the brush, but many patches of chaparral were still intact. We bushwhacked through toyon, gooseberry, and manzanita, climbing to the ridgetop. At last, we made it to the rocks. While taking in the oaks and gray pines down below...
was last documented in 1931. The population of Mt. Diablo phacelia that observatory grounds. She led me to a data on some of the rare plants on the conditions to rise again. In April of in the seed bank, awaiting the right chance for new life—seeds from moved on quickly. With the fire came the observatory's structures and the fire damaging some of the buildings and through the observatory grounds, of Mt Hamilton. The 2020 fire blazed Observatory, which sits at the summit

We also decided to visit Copernicus Peak in hopes of finding Mt. Hamilton coreopsis (Leptonyne hamiltonii, CRPR 1B.2), a member of the sunflower family that inhabits a very small range in the Diablos. As Elinor and I climbed the loose talus slope beneath an old fire lookout, we saw a flash of yellow. At first we assumed it was one of the more common local asters, but it was indeed Mt. Hamilton coreopsis! Past survey efforts had missed this population; it hadn't been seen since 1996. It's likely that the fire opened up habitat on the talus and awakened the seeds from the seed bank. Now, the plants were growing straight out of the ash and rock. Surrounding by charred soil, their yellow flowers looked like stars in the night sky.

Santa Cruz Cypress

The Santa Cruz cypress is rare and only found in the Santa Cruz Mountains. The cypress also has serotinous cones and follows a similar life history to the Monterey pine; it is dependent on fire. Monterey cypress inhabits ridges and openings in nutrient-poor sandy soils derived from ancient marine deposits. Each of the seven extant populations occur within the footprint of the CZU Lightning Complex Fire. Despite near-complete mortality of adult trees in patches that burned, seedlings have germinated out of the characteristic sandy soils where the trees grow.

Santa Cruz cypress (Hesperocyparis abramsiana)

Arcuate Bush Mallow

One of the most exciting finds in the CZU burn area so far is a robust stand of arcuate bush mallow. Many Malacothamnus species are fire followers, and their remarkably hardy seeds can likely remain dormant in the seed bank for 100 years or more. This species was known from an undated record from the chaparral on the north side of the park published in 1937. This population of fire followers likely emerged after the last major wildfire in 1906 and disappeared in the following decades as succession continued and the chaparral became dense and overgrown.

Arcuate bush mallow (Malacothamnus arcuatus)
GRAPPLING WITH THE CANNABIS INDUSTRY’S GROWING PAINS

by ISABELLA LANGONE, CNPS Conservation Program Manager

California legalized recreational cannabis through Proposition 64 in 2016. Five years later, California’s budding cannabis industry and regulatory landscape is still working out significant kinks. The illegal market still rivals the legal market in size, and California's confusing labyrinth of local and state regulations makes it difficult for growers who want to operate legally to become fully licensed.

Why does CNPS care about the cannabis industry? Because cannabis cultivation—both legal and illegal—can have devastating effects on the environment. According to the California Department of Fish and Wildlife (CDFW), documented impacts of cannabis cultivation include water diversion, water pollution from sedimentation, petroleum, pesticides, and trash, loss of ecologically sensitive habitats like oak woodlands and riparian areas, and light and noise pollution. The impacts from illegal cultivation, which are unchecked by any kind of government oversight, tend to be worse than those from legal cultivation.

The legalization of recreational cannabis in 2016 created hope that increased regulation and a shrunken illegal market would help minimize the industry’s harmful environmental impacts. Prop 64 included a requirement that growers comply with environmental laws such as the California Environmental Quality Act (CEQA), the California Endangered Species Act, and the Porter-Cologne Water Quality Control Act. It also requires cannabis growers and retailers to be licensed at both the state and local level. Within this dual licensing system, CEQA environmental impact reports are generally supposed to occur at the county level.

To the dismay of CNPS chapter volunteers, Prop 64’s potential for providing robust environmental review that would reduce harmful environmental impacts has yet to be fully realized. Many CNPS volunteers have seen their counties fail to incorporate thorough environmental review of cannabis enterprises into local ordinances. For instance, in March of 2021, Sonoma County tried to pass an ordinance that would increase ministerial permitting for cannabis (a ministerial permit means the project is excused from CEQA review altogether). CNPS’s Mike Baker Chapter and other organizations urged the Board of Supervisors against such a decision, and the law ultimately did not pass. Instead, the county will complete a comprehensive update of its cannabis program, which includes the review of and potential update to the County Code, and the preparation of an Environmental Impact Report to comply with CEQA.

Most cannabis cultivation licenses in California are still provisional, which raises concerns about their CEQA compliance. As of 2021, more than 80% of the state’s cannabis licenses were provisional, which means the license-holder can operate without having completed CEQA review, so long as they show evidence that they are in the process of fulfilling CEQA’s requirements. As such, many cultivators operating under provisional licenses have not fully quantified or mitigated the adverse environmental effects of their operations.

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CNPS chapters are concerned that counties are so focused on the economic potential of cannabis that they are overlooking the immediate and long-term environmental costs of an expanding cannabis industry.

Today, both legal and illegal cannabis cultivation is widespread across the state, in habitats as diverse as the North Coast and the Mojave Desert. Controlling the harmful environmental impacts of cannabis cultivation will be possible only if governments impose...
and enforce environmental review as part of the permitting process. As CDFW told the Mendocino County Board of Supervisors during a board meeting presentation in April 2021, “Allowing cultivation in sensitive areas without appropriate protections can lead to many of the same impacts as unpermitted cultivation.” California is still a long way from controlling the environmental impacts of cannabis cultivation.

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Cannabis plants eradicated by Forest Service law enforcement officers.

WANT TO HELP?

Encourage your city and county to include robust environmental review in local cannabis laws, and support efforts to repair the harm of illegal cannabis cultivation such as the Cannabis Removal on Public Lands (CROP) Project (cropproject.org), which seeks to remediate and prevent trespass grows on California’s public lands.

CNPS continues to monitor cannabis at the local and state level, advocating for environmentally responsible cannabis laws and policies. The governor’s 2021–22 budget created a program to provide $100 million in grants to help local jurisdictions more swiftly transition provisional licenses to annual licenses, which hopefully will help boost CEQA compliance in the industry. Other positive changes to cannabis policy might include increasing remediation and restoration programs within resource agencies like CDFW, increasing enforcement to prevent illegal cannabis operations, and ensuring that decision makers do not cut corners on environmental review for the sake of expediting the permitting process. While the cannabis industry is still in its infancy, CNPS is optimistic that a robust legal and administrative framework can still be established that successfully protects consumers and the public, is fair to business owners, and adequately safeguards California’s rich natural resources.
FEATURED GARDEN

Despite the chilly, overcast December weather, Amelia Garduño exudes warmth as she welcomes new visitors to Tanama Garden, a community garden in Oak Park, Sacramento. Passing through a cheerful pollinator garden, she leads us over soft mulch to a circle of oak stumps. We sit down to talk about how the garden—named for “butterfly” in Taino, the language of the people indigenous to Puerto Rico—came to be, and what it means to Amelia and the community.

Surrounding us are rows of mostly dormant plants, a few still-blooming flowers, and children’s toys, meant for the families who come here to play, attend storytime, and take classes like yoga. “There’s a sense of peace here,” Amelia says. “You come in and you hear the birds. You see your friends, you smell the flowers, and you feel peace—that’s what I feel, I hope you all do, too.”

A community organizer and personal trainer who leads the Always Growing Foundation, Amelia grew up in another historically marginalized Sacramento neighborhood, Del Paso Heights. “As the oldest of seven kids, I would have loved to have a place like this,” she says. Growing up off 44th and Broadway, she adds, it wasn’t easy to access spaces where she felt safe playing outside.

Like many other vacant lots in Oak Park, this garden used to be used as a dump site after a house burned down on it. Rather than treating the land as merely a real estate investment, however, owner Alána Miranda-Sondheim wanted to invest in the city where she grew up. “Owning land can be uncomfortable, especially owning occupied Miwok and Nisenan lands,” she says. “Who has been allowed to own land and who hasn’t? Whose rent is going up, who has access? If I can do something to have a positive impact in this neighborhood, I would like to try.” Leticia Morris, a local community member and consulting ecologist, describes the love and belonging she feels in this place: “It’s not just a garden. It’s our community.” Alex Hoang, who founded the garden with Amelia and others, explains how he’s used his knowledge of permaculture to restore the garden’s soil and grow healthy local vegetables in a food desert.

The path to creating Tanama Garden, which launched in spring 2021, hasn’t been easy. But with the help of other community members and organizations, they won the support of local officials. They started a nearby chicken-powered composting site called the Oak Park Eggery, and more recently, Tanama Garden.

Most plants for the garden are donated, making progress gradual; next, the group is going to work toward getting Tanama Garden, The Oak Park Eggery, and other local partner gardens certified as a wildlife habitat. Many people doubted that they could accomplish what they have so far, says Amelia, but already they’ve started converting more of Oak Park’s 200 vacant lots into green spaces that support both physical and mental health for all who visit, she says. “We are the little community that could.”

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Follow @oak_park_eggery and @TanamaGarden

LEFT TO RIGHT: Community organizers Alex Hoang, Amelia Garduño, Leticia Morris, and Alána Miranda-Sondheim.
GROW NATIVE PLANTS

Try searching Calscape (calscape.org) or asking your local CNPS chapter members for recommendations on native plant nurseries.

Walking into a nursery can feel like being a kid in a candy store. It’s exciting, but it can also be overwhelming, even when you know what you’re looking for. Have you ever gone into a nursery and completely forgotten about your list? Have you gotten lost looking at plants and ended up distracted by all of the possibilities? Have you ever purchased plants only to realize that they aren’t suitable for your site?

Laura: Let your planting site be your guide! Take note of your sun exposure, soil type, and water delivery system (drip irrigation, spray from your neighbor’s sprinklers, etc.). Limit yourself to looking at plants that are compatible with your site.

Ron: If your native plants are from the summer-dry areas of California, plant them during the dry season. But, if the native plant is from a summer-moist area, they might be as happy going in during the drier half of the year. In other words, know your plants’ natural growing season and let them guide your shopping.

How can I safely transport my plants home?

Nicole: Pack them into sturdy boxes that are open on top but offer support on the side so that the plants don’t tip over in the car.

Ron: Compare the plants in the bed and look for those with more uniform and well-developed branching. Obviously, observe the general health of the plant, but be sure to distinguish between a plant that is unhealthy versus one that is simply unattractive. It’s also a good idea to strap them in or cushion them so that they don’t fall over while driving.

Any preparations I should make before I buy new plants, to ensure their chances of survival?

Nicole: Remove weeds from the area. Consider sheet mulching the planting area to help suppress weeds, retain moisture, and increase organic matter in the soil. Plan ahead for how you will get water to the plants, especially during the establishment phase when they need more frequent care.

Laura: Keep in mind that the watering frequency depends on your soils, time of year, and habitat conditions.

Plants can be so expensive. What’s the best way to economize when buying native plants?

Laura: Sign up for email lists to be notified of plant sales, use plant species that spread or can be divided to fill spaces, and plant your garden one section at a time.

Nicole: Start small! Four-inch and one-gallon plants are the most economical. A one-gallon plant will often catch up with its five-gallon counterpart if they are planted side by side at the same time.

Ron: A common misconception is that a bigger plant is the better plant. Smaller (younger) plants are less rootbound, will acclimatize to your soil environment more quickly, and will almost always grow to be bigger and healthier than the four-foot plant you originally passed up on.

How can I pick out the best plants from the batch?

Nicole: Some plants may only be available on and off throughout the year. So if you’re looking for specific plants, contact your local native plant nursery in advance.

Ron: Are there certain times of year when I should plan to go to a nursery?

Nicole: Look healthy, are free of weeds, and one could look for include plants that look healthy, are free of weeds, and placed above ground so that they are not exposed to sitting water.

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Every year, I look forward to the arrival of “farewells-to-spring”—one romantic common name for flowers in the genus *Clarkia*. I first saw their fuchsia petals unfurling in the Marin Headlands in 2017, and have been enthralled by these heralds of summer ever since.

When I learned of efforts by a Bay Area native plant nursery to change the plant’s common name to Yorkia, the story behind the name change deepened and complicated my love for the genus, and made me think about my own power and privilege as a white land steward working in the Presidio of San Francisco.

The renaming efforts began in late spring of 2020, after the brutal murder of George Floyd. As Floyd’s name became a rallying cry for racial reckoning, native plant nursery professionals at San Bruno Mountain Watch’s Mission Blue Nursery began to consider changing the common name of their large stock of *Clarkia purpurea* as a possible means of expressing solidarity.

The genus name *Clarkia* is an honorific for William Clark of the Lewis and Clark expedition. In light of revelations about Clark—published in January 2020 by the *Washington Post*—however, the name rankled. York, a Black naturalist enslaved by Clark, made invaluable contributions to the expedition. But when York asked Clark for his freedom after the expedition concluded, Clark refused. York was freed only years later.

The nursery staff planned to rename their Clarkia stock Purple Yorkia and distribute it for free to community members, writing #BLM in Sharpie on their pots in support of the Black Lives Matter movement. “We acknowledge the erasure of Black people in environmental spaces,” the nursery staff wrote in a letter to their community members in Brisbane, as well as on the organization’s Facebook pages and website. They invited other local nurseries, botanical gardens, and botanists to join in, referring to these species as “Yorkias” going forward. Several local native plant nurseries, including Oaktown in Berkeley, Sutro Stewards on Mt. Sutro in San Francisco, and the nurseries of the Golden Gate National Parks Conservancy, expressed support for adopting the new name.

The ensuing conversations, both in person and on social media, were rich and fraught. One source of complexity came from the fact that people often use “Clarkia” interchangeably as both the common name and the Latin name for the plants. A common name is relatively easy to change, but it is no simple matter to change a plant’s Latin name, which is intimately tied to the history of the scientific publications and descriptions of the species.

Many community members reached out in support of changing the plant’s common name to Yorkia, and some offered examples of other California plants with offensive common names that have been changed. One example is *Pinus sabiniana*, which many people used to call “digger” pine, a slur against Native peoples. “Today, the trees are more commonly referred to as foothill pines or gray pines.

Unsettling and uncomfortable debates arose about the haze between names that are merely inaccurate—such as *Xerosyphium tenax*, a non-grass in the Melanthiaceae family whose common name is beargrass—rather than derogatory. Some comments veered into the gib or lewd, reinforcing underlying prejudicial stereotypes or asserting that such a name change was taking matters far into the territory of so-called social justice warriors. Shelana deSilva, Steering Committee member of the California Landscape Stewardship Network (CLSN), disagrees that the renaming was more performative than substantive. She says, “The practice of discerning when I myself am doing something performative versus something meaningful is centered on awareness. Are you orienting yourself to something real, to something that will make a meaningful difference in terms of the way we relate to each other individually? Are you changing a policy? Are you undoing a harm? Awareness about those types of questions is what moves us beyond performative gestures.” She adds, “The re-casting is intended to spark a conversation. That is a deeply important gesture that we need to all be doing in this work,” insofar as it is the platform for actionable change.
The conversations reminded me of similar dialogues I had joined in 2017, while working as a park ranger in Muir Woods, the old-growth redwood grove just north of San Francisco. The story of William Kent—the heroic, wealthy “founder” of the forest—had gone largely unchallenged by rangers tasked with engaging the public in the history of the National Monument. But Kent’s own speeches and writings revealed him as a vehement fomenter of anti-Asian sentiment, one strain of the racism that pervades conservation’s history in the United States.

Finding language to name this history—which challenges the deep-seated paradigm of white supremacy—took some effort. We revisited primary sources; we worked new verbiage using guidance from justice, equity, diversity, and inclusion resources; we talked to each other. Doing this work helped me and my coworkers connect visitors to the story of the forest, and to each other, building community and making space for visitors to share their personal connections to the land.

In the arguments and counterarguments about the new renaming effort, I noticed a similar arc to the dialogue as I observed in Muir Woods. Many people rejected outright the notion that there was a legitimate premise for changing the common name. Others scoffed at the effort or expressed confusion about what was being proposed, since the change to the common name was not precluded by the International Code of Botanical Nomenclature, a document updated by the International Botanical Congress, where taxonomic history and principles govern the Latin names of plants.

“There are rules for naming species,” wrote one user, “that ought to be preserved.”

As a general rule, the International Botanical Congress changes Latin names only if the first botanical description of a species in an herbarium is inaccurate; for example, if two specimens that botanists initially identified as different species are actually the same species. Some botanists argue that formally changing problematic Latin names for ethical reasons could be disruptive to botanical research, since so many species names are honorifics.

While preserving taxonomy rules may be vital because of the understanding they facilitate between scientists, deSilva, who also serves as co-chair for the California Landscape Stewardship Network’s Diversity, Equity, and Inclusion roundtable, says that the bureaucratic hurdles of overhauling the botanical nomenclature system should not preclude us from inventing a new schema that better encompasses the rich, fraught legacies of people’s interactions with plants.

“People are leaning on their inertia in these moments,” she says. Compared to changes that can occur at an interpersonal level, “At an organizational or societal level, there’s more complexity around addressing these harms because you have to change policies, you have to change laws. There are so many different ways people say, ‘It’s too hard.’”

Nick Jensen, conservation director of CNPS, agrees with deSilva, and says the scientific community should thoughtfully consider calls to change problematic honorific names. “It’s worth revisiting the ‘why’ of naming conventions and evaluating whether they too need to evolve,” he says.

To be clear, pursuing a formal change of the Latin name was not the aim of the Bay Area effort, according to Robin Dingle Binaoro, associate manager of the Presidio Nursery of the Golden Gate National Parks Conservancy, which engages community volunteers in the restoration of native plant habitat in the Golden Gate National Recreation Area, in cooperation with the Presidio Trust and National Park Service.

Instead, he framed dissemination of the name change as a tool for engaging the wider community in challenging dialogues that develop a more expansive understanding of history.

Other community members posited that giving primary to and honoring a Black person on the Lewis and Clark expedition, the new common name still implicitly endorsed violent colonial power dynamics toward Indigenous communities. If a name change were to occur in the interest of decolonization, wouldn’t it make the most sense to return to the Indigenous name or names for these plants, centering and uplifting Indigenous experiences? In answer, some community members wrote that solidarity is not a scarce resource—and that having a Black experience does not require disregarding Indigenous narratives.

The problem of honorific names is not unique to the native plant community. Concern over similar issues has prompted members of the ornithology and birding communities to begin a movement called Bird Names for Birds, which aims to see all eponymous common names altered in favor of common names that refer to specific features of the individual species. After an initial surge of grassroots energy—resulting in at least one name change, from McComb’s longspur to thick-billed longspur—that had been previously proposed and rejected—the campaign has slowed.

Yet the discussion has succeeded in spurring new dialogue: In June of 2021, the American Ornithological Society announced that it was forming a committee that will standardize a process by which “to identify and change harmful English bird names” through soliciting and incorporating varied stakeholders’ opinions.

How such a standardized process might work for plants is unclear, given the training and tools that are sometimes required to observe physical distinctions between species. There’s value, Binaoro notes, in having shared, specific language that can be used for plants by people “across different regions, different lands, [and] different languages, so that we’re on the same page and can work together.”

Despite the challenges of shifting organisms’ names, the process can catalyze necessary dialogues about the true violence of colonialism, as well as offering the opportunity to remember and celebrate the contributions of Black, Indigenous, and people of color.

“I think the acknowledgment [of York’s legacy] is helpful,” says Matesah “MJ” Jackson, former communications and development coordinator at the Hoyt Arboretum in Portland.

When such acknowledgment is part of the conversation, she says, “At least then you know that you’re not coming into a space of willful ignorance. If we’re able to acknowledge the history, that’s the first step toward people not being able to pretend they didn’t know better.”

Renaming efforts are just one way to expand the botanical community and re-shuffling power over who tells the stories of science. Jackson adds, “It’s a statement of how willing this industry is to include people who are outside of the mainstream white, male hegemonic norm,” she says, and that the sciences—which we too often think of as static—“are not objective.”

I asked Jackson her opinion about the renaming effort’s genesis with white people, rather than emerging from people of color.

“Does it have to be a person of color putting in labor for these things to happen, or is it worth it for communities, especially the communities that do have more power and social capital in our country, to go ahead and start making these decisions, proactively instead of reactively?” she asked me in return. “This could be the beginning of more kinship, the opportunity to say, ‘I can do that’ because of the story you’ll have to tell when you talk about the name.”

Likewise, deSilva says, “I would categorize this as a ‘change needs to come from everywhere’ moment.” While some actions need to arise from communities themselves to retain legitimacy, she added, “This is one that I think is at the right scale to have people stepping in, irrespective of their need for background. And I think we need more white allies to do some heavy lifting like this.”

For me, the value of the Yorkia renaming lies in how I teach and share my love of native plants. Recently, while leading a San Francisco Conservation Corps crew at one of my restoration sites, I was exhilarated when a student asked me, “What’s your favorite plant?”

It brought me joy to share my love for a plant I now call Ruby Chalice Yorkia, with its showy, vibrant colors and delicate habit. Sharing the conversations this plant has sparked between myself and my colleagues continues to be a powerful node of connection as we attempt to become more thoughtful members of society.
Dear Kids’ Corner readers,

For this issue, we wanted to hear directly from you! Everyone has their own way of connecting to native plants. What are your answers to the questions below?

WHAT DO YOU LIKE MOST ABOUT NATIVE PLANTS?
“They are colorful and it gives the room some life. Also, you can enjoy them and care for them. They give you something to care for and love.”
— Camila, Age 12, LA County
Favorite CA native plant: Mountain yarrow (Achillea millefolium)

WHAT CAN PEOPLE DO TO HELP PROTECT NATIVE PLANTS?
“You should always try to be careful where you step.”
— Dillyn, Age 3½, Northern CA
Favorite CA native plant: California poppy (Eschscholzia californica)

WHAT DO YOU THINK MAKES NATIVE PLANTS SO UNIQUE?
“I like how peaceful plants are, how simple their life is, but how complex it is in order for them to survive. I like the challenge of understanding the wonderful chaos that creates their lives.”
— Tilley, Age 4, Torrance
Favorite CA native plant: Bladderpod (Peritoma arborea)

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EXAMPLE HAiku

A mystery smell
Could it be the plant near me?
White sage in the air

ACTIVITY TIME!

Are you inspired by the beauty of nature? Try writing a haiku!

Haiku is a traditional form of Japanese nature poetry that is made up of short lines that do not rhyme. A typical haiku has three lines. The first and last line contain five syllables and the middle line contains seven syllables. Haikus are a fun way to express your observations about nature through words!

WRITING A HAiku

Pick a topic, like a plant or critter. For example, you may want to write about a puddle or the way the wind blows through leaves.

Take a few minutes to make close observations. Think about the colors, movement, textures—anything that draws your attention!

Create a word list based on your observations. Which words can you use to describe what you are seeing?

Go through your word list and pick the ones you’d like to use. This is a great time to check how many syllables the word has.
Richard and Kathy at Kearsarge Pass in the Sierra Nevada.
Photos courtesy of Kathy and Rich LaShure.

Since they first met in Claremont, California—and spent one of their first dates looking at native plants together—Kathy and Rich LaShure have moved ten times, following Rich’s career as a church pastor all the way to their current home in Chico. As they’ve moved across California, they’ve documented more than 140 occurrences of rare native plants, contributing to their protection. By making a bequest to CNPS, they’ve also chosen to protect our state’s flora far into the future. We talked to them about why they’ve decided to include CNPS in their plans.

Q: How were you first introduced to native plants?

Kathy: Growing up in Arizona, my family liked to take picnics in the desert. We knew all the trees and cacti, and we liked to garden, but no one grew native plants. When I went to college in Claremont, I discovered California Botanic Garden [previously Rancho Santa Ana Botanic Garden]. The day after my first date with Rich, I took him there.

Rich: I was raised in Nebraska, where we had a lawn and lots of corn! Walking around the botanic garden was a new thing for me. The diversity of the plants is the thing I remember most.

Q: How did you first connect with CNPS?

K: When we lived in Highland Park we went hiking in the San Gabriel Mountains. We realized we didn’t know a lot about what we were seeing on the trail. So we joined CNPS in 1991 and I’ve been involved in many ways over the years— I edited the newsletter and helped start the plant sale. We organized the Cressote Ring subchapter of the Bristlecone chapter. We even hosted a chapter council meeting at our church.

Q: You two seem to have a knack for finding rare plant populations. What’s your secret?

K: First, do your homework. Know a plant’s key features, what habitat it likes, and what species it might be confused with. Then it’s about persistence. You need to go back multiple times over several months, and sometimes years, especially if you’re looking for annuals. Philip Munz documented the Nine Mile Canyon phacelia (Phacelia novenmillenosis) in 1954—we searched so many drainages until we found the type locality again in 2015. Turns out we could see the canyon from our living room window! Then there was an ill-conceived solar project on BLM land near Ridgecrest in 2010, so we volunteered with CNPS Rare Plant Treasure Hunts to document all the plants we could find. Our group found prime plant habitat at the site for the desert tortoise and the threatened Mohave ground squirrel. The California Energy Commission’s report to BLM cited our fieldwork and recommended that the project not be built—and it wasn’t. It was really exciting to be part of that outcome.

Q: Why did you decide to include CNPS in your estate plan?

K: After 30 years of involvement with CNPS, we’ve seen it blossom into a proactive, well-respected organization. There wasn’t any question that CNPS would be one of our beneficiaries.

R: When we started supporting CNPS, global warming was an emerging issue. And now CNPS is on the front lines, fighting for biodiversity in the face of climate change. That’s where we need our forces right now.
Upcoming Events

Join our events from the comfort of your home or with your local chapter. You can find more upcoming events, including our highly anticipated spring plant sales and garden tours, at cnps.org/events. Your chapter website and newsletter also provide details on upcoming events.

FEBRUARY

February 18
Keying with Natives: Basics of Plant Taxonomy
Santa Clara Valley Chapter
Learn plant keying by practicing on plant samples. Dee Himes will share basic principles of taxonomy, which inform how we learn and look at different plant families.

February 25
Photo Sharing Meeting
Santa Clara Valley Chapter
No photos? No problem! Join to see gorgeous native plant pictures and hear photo tips. Sign up for a time slot if you would like to show pictures from your native plant adventures.

February 26
Seed Sale at Spring Fling
San Diego Chapter and Louie’s Nursery
Come on down for a Saturday filled with plant shopping, education, artisans, giveaways, and more at Louie’s Nursery, located in Menifee, California.

MARCH

March 5
Ninth Annual SBBG Conservation Symposium: After the Fires: Recovering California’s Wild Spaces
Santa Barbara Botanic Garden
Keynote speaker Dr. Carla D’Antonio is a professor at UCSB whose groundbreaking work has been published in top journals including Science, Nature, and Ecology. Purchase tickets at: sbbg.org/symposium2022
March 9
Resilience in a Bee, a Forest, and a People
North Coast Chapter
Botanist, native bee expert, native plant farmer, and ethnobotanist Brian Dykstra spent last summer looking for an endangered bumble bee in the Trinity Alps. Now he will share his journey and the hopeful trend he found—things are bouncing back.

March 10
Using Paintbrushes to Study Species
Yerba Buena Chapter
Sarah Jacobs, PhD will broadly cover the biology of *Castilleja*, what we do (and don’t) know about its evolution, and how Jacobs’ research is aiming to fill in the gaps. She will also highlight the challenge of defining species in lineages like *Castilleja* and what that means for systematics and taxonomy in the group.

APRIL

April 7
Native Gardening 101: Nursery 101
CNPS
Join us in this webinar to expand our definitions of “gardening.” We’ll discuss traditional stewardship, restoration sites, public parks, and more growing spaces. Bring this inspiration to your plant community.

April 14
Climate Smart Restoration
Yerba Buena Chapter
Healthy riparian forests provide many critical services to humans and wildlife, including clean water, protection from flooding, wildlife habitat and refugia, and climate change mitigation. Unfortunately, the majority of riparian forest habitat across California has been lost or degraded.

MAY

May 5
Backyard Community Science
CNPS
Community science is just as vital in our backyards as it is in our wildlands. Through community science, everyone is invited to contribute to a deeper understanding of our shared environment. Learn how native gardens and growing spaces are contributing to community science projects across California, providing critical windows into the biodiversity of our cities and residential areas.
Present at the largest conference devoted to native plants!

We invite professionals across disciplines and plant lovers everywhere to present on native plant themes and topics

conference.cnps.org