



# CALIFORNIA NATIVE PLANT SOCIETY

## *San Diego Chapter Newsletter*

### **CNPS-SD FALL PLANT SALE 2020**

Mark your calendar! This year we'll be offering the same amazing selection of over 300 species **by PRE-ORDER only**.

- **Ordering will begin September 1**
- **Safe pickup of plants on the last weekend of October at a central location in the City of San Diego**
- **Special offers for CNPS members**

We're excited to bring these beautiful California native plants to your garden from multiple nurseries in southern California. Stay tuned for more details by newsletter, email, and social media!

### **HELP NEEDED: ONLINE PROGRAMS**

Would you like to help develop or host CNPS-SD Live Online Programs? We are looking to expand our crew. Roles include Scheduling, Communications, Technology, Social Hour Host, Presentation Host, and Support. Please contact [programs@cnpssd.org](mailto:programs@cnpssd.org) if you would like to volunteer some time to help the chapter put on great online programs.

### **MESSAGE FROM THE PRESIDENT**

Ordinarily, August is a month of rest here at CNPS-SD as it is for most native plants. When the heat sets in, the monkeyflowers shrivel, the annuals dry up, and the buckwheat begins to cover the hills in rust. Summer always has a pensive beauty to it, though it can be tough to see it through the sweat and discomfort. Native plant dormancy is a dangerous time for many species and vegetation communities. Many people get the impression that death has set in, or that the landscape is blighted when dry. Fire season becomes an immediate concern, and helping and harming can become blurred in many ways.

Resist the temptation to water your natural landscapes or rip out dormant plants that have dropped leaves. Summer water can kill a *Ceanothus* or long-lived manzanita by fooling it into transpiration during heat waves or inviting argentine ants into the root ball. In gardens that have consistently had irrigation, reduce the timing and set water to run only in the

middle of the night when temperatures are cool. Move any drip lines away from native shrubs. Each garden is unique, so be in tune with how yours is resting. Cut back the dry stalks, remove the shriveled leaves, and let them compost. Do not prune! A plant in dormancy will show new leaves at the axillary buds when it begins to awake in the fall. Get advice on the CNPS-SD on-line discussion group (see list on the address label page of this newsletter), or a certified arborist, before cutting trees and large shrubs too deeply.

For CNPS-SD, we're quite busy behind the scenes getting materials, plans, and programs together for the late fall and winter. We will not be holding our Fall Workshop this year, but intend to have two excellent plant sales, one this October 30-31, and another in April 2021. We're planning on a Spring Garden Tour to follow up on what we all missed this year.

To our members, remain safe from COVID-19, remain safe from the heat, and take care in clearing brush away from your house. Protect your animals with a plan for them, too, and that hopefully includes the wildlife that may need refuge in your backyard should a fire stop short of your neighborhood. As we look out for our native environment, we look out for each other.

~ Justin Daniel, President CNPSSD

### **IN MEMORIAM**

#### **Philip William Dempewolf**

I was saddened to find out one of my favorite Phil's has passed away. Here is picture of Phil down in front.



He was a hard core regular at our propagation mtgs for years and he came to many of our chapter meetings. Phil had a great sense of humor, appreciated hearing a good story and telling one. He would

make the joke that he removed the native plants from his

property in one day, not knowing any better, only to spend many years planting and enjoying gardening with native plants. Phil's life sounds like a great one. I had no idea of all the things he has done and accomplished as we were so busy talking about plants, sports and current events. I definitely would have hassled you for more stories, Phil. Thanks for all your time and attention, all of us at CNPS benefitted and enjoyed it and we will miss you buddy.

~ Torrey Neel, Programs Chair

## BOARD MEETING

**Wednesday, August 5, 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](mailto:president@cnpsd.org).

### July 1 Board Meeting Summary

To conform to the directive from the CNPS office, this meeting was held via Zoom. The Chapter Board voted to approve the following items.

- Because the safety rules for COVID-19 are changing over time, the Board had decided to review our annual budget quarterly and Connie had made revisions to it. The revised budget was approved as presented.
- Andrea Rae was appointed to the position of Chapter Treasurer and approved as a signatory on our financial accounts in place of Connie di Girolamo, who resigned as Treasurer on July 1, 2020. Andrea will assume the remainder of the 2020 term as a Board Member in place of Josué Campos.
- The Board Handbook was approved as presented. Some revisions are still needed.
- Volunteers of the chapter were approved to begin adding plant species, merchandise, and/or books to the [canativeseeds.com](http://canativeseeds.com) website in preparation to offer them for sale at the Spring Plant Sale in April 2021. Merchandise and/or books can be made available before that time.
- A donation of \$1,000 to the Plant Atlas project of the San Diego Natural History Museum was approved, and Justin was asked to write a note to Jon Rebman saying we will try to get more money for the project.

- After much discussion, the Board approved the removal of the landscaper list off our website

CNPSSD had its first on line program on June 30. About 250 viewed it and many participated in the questions/answers. The next one, on July 16 (joint with the Orange County Chapter) was Bob Allen discussing The Flora of Caspers Wilderness Park in Orange County.

The goal is to do two programs per month indefinitely until we can start having meetings at Balboa Park again. Even if we begin to have meetings, we may still have one on line presentation per month.

The Garden Committee had an on line meeting in July.

~ Bobbie Stephenson, Chapter Secretary/Newsletter Editor

## GARDENING WITH NATIVES

### No Gardening Committee Meeting in August

### Note from the Gardening Committee Co-Chairs

We are excited to announce that **Nancy Levine, Christine Hoey** and **Judie Lincer** will be your 3 co-chairs for CNPS-SD's Garden Committee. We would love to see more people involved in the Garden Committee and will send out a survey/questionnaire to gather information so we can strategize how to organize garden projects that will best serve the community.

Keep your eyes open for this important survey/questionnaire in your inbox. The more responses received, the better this will help with making plans and prioritizing projects for the Garden Committee in the upcoming year.

The GC Co-chairs thank you for taking the time to fill out this questionnaire. Feel free to contact us at [gardening@cnpsd.org](mailto:gardening@cnpsd.org).

Sincerely,

**Judie Lincer, Nancy Levine & Christine Hoey**

## Seed Collection: A "Hindsight is 2020" Series

### ARTICLE FOUR: Seed Germination & Propagation Technique Overview

Now that the summer heat has set in and collecting season is winding down near the coast, a packet of harvested and cleaned seeds may have made its

way into a cardboard box in a drawer or been pinned to a board for easy perusal. The next steps are to plan out what to do with these seeds – the fall months aren't far off. Late fall to early winter is an excellent time to start the seeds outdoors, concurrent with the onset of cooler temperatures and the first rains of the season.

Let's consider first what the seeds

would have done had they not been collected. For many, birds, insects, and mammals might have made a hearty meal of them. During lean times, it isn't uncommon to come across coyote scat consisting mostly of manzanita berries. Many seeds have blown across the mesas and valleys, floated downstream and lodged in sand or mud, gotten knocked into nearby rocks

or shrubs, or carried tangled in fur across open spaces, or snugly placed in a woodrat larder. Some seeds will get burnt as a wildfire flares across the land. Wherever they get caught up, they lie in wait as the temperatures heat up during the day and cool down overnight, the humidity vacillates, and the elements take turns employing entropy. As time passes, the days and nights cool and the fall rains turn into winter storms. Snow and frost cycles in the inland foothills and mountains; grass and mosses turn open areas green again over the winter nearer to the coast. At some point when all the conditions fall into alignment, the dry seeds take in enough water to send out an exploratory primary root and thus a seedling sprouts.

When germinating native plant seeds, the best way to get them to sprout is to mimic those natural conditions, usually while trying to do so in an artificial or disturbed setting. Much time and study have been put into learning to propagate native plants, but there is still a lot left to learn. One way to germinate seeds is in situ, sown directly in the area that you would like them to grow. While this works well in many cases, like with our California poppy, other times it may seem like a waste of seed. Waiting two or three years might not work for everyone, but that's how some species propagate naturally. A lupine seed (not all) often needs a slow thinning of the seed coat in order for water to penetrate and trigger the embryo into action. Others will languish on the ground, never breaking dormancy.

For all species, research their known requirements first as a successful technique for one species may not work with another. The CalScape website has a section on Propagation for many species. Where no information can be gathered online or found in the resources below, the data may have to be created. I highly recommend the work done by CNPS Riverside Chapter's own Arlee Montalvo and Forest Service's Jan L. Beyers; articles are listed at [https://www.researchgate.net/profile/Jan\\_Beyers2](https://www.researchgate.net/profile/Jan_Beyers2). Here are two other good

references:

Book: Seed Propagation of Native California Plants by Dara E. Emery, 6th edition 2011.

[https://www.fs.fed.us/rm/pubs\\_series/wo/wo\\_ah727.pdf](https://www.fs.fed.us/rm/pubs_series/wo/wo_ah727.pdf)

If you've bought seeds from CNPSSD, the packet will have suggested methods on getting them to germinate. Much of that info comes out the links and books here. Remember that if seeds require treatment, the germination rates and survival of seedlings is often lower than for those that require none. Also bear in mind that germination rates fall every year a seed is kept in storage, as embryos eventually die during extended dormancy. Most seed older than two or three years is usually not worth paying full price for, if it is purchased at all. Over five years, the seed may be a waste of time and resources. Short-lived seeds are usually not available for sale at all. Salicaceae (often expires in hours) and Fagaceae (weeks) are families notorious for having a limited shelf life of their seeds and acorns. As always, exceptions exist.

Choose soil appropriate for the type of plant intended to be grown. Most natives do well with a mixture of 1 part potting soil, 1 part cactus and succulent mix (or decomposed granite for inland species), and 1 part equal portions of vermiculite, coir fiber, and/or peat moss to balance out water retention with optimal drainage rate. I like to add in some native soil to inoculate the mix with mycorrhizae, moss spores and microbes. Be careful on the native soil source since this method can introduce weed seeds and pathogens you do not want. A discussion on soils and soil biota will be articles for another newsletter.

#### **No Treatment vs. Treatment**

Whether sown in a deep flat, a nursery pot, or started on a clean, damp paper towel or agar plate, the temperatures and access to water ought to be consistent, and if possible, recorded. Always label the seed sown along with important dates! Some species need specific temperature ranges or hours of light, so if you're experiencing trouble

with some that don't need treatment, try mirroring the natural seasonal conditions of the species' native range in the months after starting the seeds. This may require some creativity and ingenuity. Using heat lamps or greenhouse frames, strategic placement in the sun, or use of crushed ice as a means of watering, are among methods that often work. Most of the time, at least some germination will occur in a normal backyard garden setup with daily care and consistent watering cycles.

Special treatments are needed to get better (or any) results when the regular sow and watering method fails. Thick seed coats, nutlets, pods, or cones often open up when pummeled, cracked, burnt, frozen, slowly dissolved with rain and minerals, or quickly dissolved in the stomach of an animal. Others are triggered by temperature or special conditions. Those in the nursery trade have found reliable alternatives to recreating natural conditions:

#### **Stratification**

Many seeds require a dormancy period of weeks to months where they sit in set temperatures. A small handful of montane and subalpine species need a cycle of temps below freezing. A small refrigerator/freezer combo is often the easiest way to do this. Some innovative people with enough space start seeds in starter trays inside the fridge and report better germination rates by doing so. Warm and cold stratification are used on a species by species basis, though most seeds prefer temperatures around 52°F/11°C, then germinate when the temps rise above 72°F/22°C after a period of a few months.

#### **Scarification**

For pummeling and cracking, some physical friction is needed. Using a file, sandpaper, gravel in a tumbler, or tools like a vice or pliers, help quicken the ability for water to get to the embryo and cotyledon. Some trial and error will be needed to examine how much force is enough or too much. Check the location of the embryo by dissecting a seed and go slow with the first few.

### Hot Water

When placed in recently boiled water (180° to 200°F/82°C to 93°C) and left to soak and cool overnight, the hot water kick starts the germination process by quickly expanding and softening the seed coat. Most Ceanothus seeds and larger seed like peas and wild cucumber have better rates using this method. This is often combined with other treatment methods, especially liquid smoke (below) and stratification.

### Fire, Charate, Liquid Smoke, & Dry Heat

Each of these techniques triggers fire followers by bringing the seed to a temperature or state where germination inhibitors are neutralized. If you are using fire, the technique can vary from species to species, but it is always an interesting practice to explain to the neighbors (and hopefully not the fire department) what you are doing. Non-combustible boxes and trays lined with aluminum foil do the trick if you don't have a grill, fire place or fire ring. Pine needles are often plentiful, and can be used; this is one way to recycle a dried out Christmas tree. Charate is a mix of dry ash and charcoal and little bits of unburnt plant material left over from a burn. Liquid smoke (unflavored) performs an equivalent action of charate and the remainder of the liquid smoke has an added benefit of being usable in marinades and BBQ afterwards. Few species need this type of treatment and consistency is hard to replicate, so bringing seeds to a high temperature in an oven and allowing them to cool in a mix of charate may work too.

### Acid Treatment & other chemicals

Harkening back to coyote's lunch at

the beginning of this article, some seeds of fruits, nuts, and berries do best when processed in a short ride through strong acids, such as through an animal's gut. There are a few commercially available acid compounds that the layman can pick up from the pool maintenance shop or general store that affect seeds this way. Timing and temperature are as important for the species as the strength of the acid, so be sure to follow every precaution before attempting any type of chemistry with strong acid. Sulfuric acid would be the most dangerous, and it comes in different concentrations as a drain cleaner. Muriatic acid/diluted hydrochloric acid is slightly less acidic, but also requires precautions. Gibberellic acid can alternatively be used as a hormone inducer for germination and is considered a solid choice, though the price per gram can be daunting. If home chemistry with caustic chemicals isn't for you, naturally acidic soils are formed with a deep layer of native mulch and hummus, watered in with rain water that forms carbonic acid out of the atmosphere. Species that need this type of treatment often grow out of iron rich soils that naturally oxidize and release ions, especially as other plant roots interact with soil chemistry.

### Light and Darkness

Finally, some seeds are photosensitive and require light to germinate, others complete darkness. For light sensitive species, sow on the surface under a clear plastic or glass cover that allows air flow in and water vapors out. Germination is triggered when the requisite hours per day of direct sunlight are met. For darkness, top the

sown growing medium with a thick layer of natural mulch or leaves to be sure the light is kept from the seeds.

Getting seeds to germinate is a process that is as rewarding as it is at times frustrating. Personally, I've found on occasion that some seeds only germinate after recycling the soil into a new batch the next growing season, where they come up alongside another equally desired plant. In any case, now that there are seedlings, keeping them alive is a whole other story. Keep an eye out for future articles on native plant nursery trade skills and secrets, talk with your friends at the nurseries, and especially talk to each other!

If you are able and interested, please consider joining the Propagation Committee as we use tried and true methods, as well as experimentation, with our favorite native plants. Email [propagation@cnpsd.org](mailto:propagation@cnpsd.org) to get on the mailing list.

Cheers!

**Justin Daniel**, Grower, Collector, Field Trips Chair, President 2019-20



Seedling *Dudleya lanceolata*.

Seedling *Phacelia campanularia*.



## CONSERVATION

### Conservation Committee Mtg

Contact [conservation@cnpsd.org](mailto:conservation@cnpsd.org) for information.

### Conservation News

Some good news on the conservation front. Hopefully.

First, in July, the Board of Supervisors decided not to appeal the California Appellate Court ruling on June 12, so San Diego County's Climate Action Program is history. As you may

remember from last month, the problem is CAP mitigation GHG-1, which allows developers to buy offsite mitigation for emissions they produce. In Otay Ranch Village 14, for example, offsets would be used to deal with 72% of the emissions the project would create.

The second good part about this is that any project that relies on its consistency with mitigation GHG-1 to deal with its greenhouse gas emissions is automatically invalidated. A number of General Plan Amendment projects tried to get around this by coming out before the CAP was issued, and

then claiming that they weren't bound by the CAP, even though the wording of how they're dealing with greenhouse gases is essentially identical to the CAP. This "coincidence" happened because the County issued official advice on how to deal with greenhouse gases prior to issuing that CAP itself, and oddly enough, the advice and the CAP are largely identical. It's reasonably likely that the courts will look askance at this bit of sophistry. Unfortunately, that means that the environmental community will have to sue first to get the courts to read it in the first place.

The "hopefully" addendum to this is that the County now has to come up with a Climate Action Plan to replace the one just thrown out. There are a couple of ways this could go, and it depends largely on what happens in the November election. If the Board of Supervisors has a more liberal majority in 2021, then County Planning will hopefully get directed to come up with an honest CAP that deals with the problem of GHG-1 through emissions reductions as much as possible. If the Republicans maintain their 3-vote majority, GHG-1 will probably be recycled and this whole thing could end up in court again. This turns, in large part, on whether Terra Lawson-Remmer unseats Kristin Gaspar in District 3 in November. If you're expecting a recommendation in that race, I can't give you one. CNPS is a 501(c)(3) organization, and we cannot endorse candidates, only issues. This is simply an analysis to remind everyone reading that elections do matter, and so does your vote.

The second bit of good news is that the Board of Supervisors turned down Lilac Hills Ranch 4-1, with only Supervisor Desmond voting in favor of it. Thanks to all those who helped by emailing the Board against this project. Your comments made it clear to certain supervisors that voters across the county really did not like this project, and that the Supervisors needed to follow the will of the people who elected them.

What was interesting about this one is that County Planning & Development Services recommended that the Supervisors vote against it, and CalFire Chief Meacham, who previously was reliably pro-development, spoke out against it. It's possible that this unusual ruling was a one-off, due to the voters voting against it in 2016 and people reminding the Supervisors of that. It's also possible that the Chief's change of heart was due to the Elfin Forest Harmony Grove Town Council versus County of San Diego, which overturned the Harmony Grove Village South and Valiano developments. Part of the reason given by the judge was "[t]he fact that the Fire Marshall concluded that the alternative measures are consistent with the intent of the Fire Code is not the same as saying the Project will not have a significant impact on evacuation times." Perhaps that affected the Chief's testimony? Hopefully.

Still, this ruling was good news, not just for the Elfin Forest Community, but for the environmental community in general. One reason is that the General Plan Amendment projects we have been fighting for years tended to use similar strategies for dealing with the problems they all share: fire hazard, greenhouse gas emissions from long commutes, and (what we care about the most) loss of native plants. As these projects

fall, they make it easier for judges to rule against other projects with the same problems.

In case you're keeping score, so far, Newland Sierra was voted down, Lilac Hills Ranch was voted down by the voters and by the Board of Supervisors, and Valiano and Harmony Grove got fused into one super-project that lost in court. CNPS is part of the coalition suing over Otay Ranch Village 14.

That leaves Otay Ranch Village 13, which was rescheduled to be heard by the Supervisors on August 5. If it gets approved by the Supervisors...well, it has the same legal deficiencies as projects that have already had problems in court, so we will see what happens. Hopefully, it will get sent back for a supplemental EIR to deal with greenhouse gas and fire problems, but it's not wise to predict how the Supervisors will vote on this just yet.

As I noted last week, if you want to write your supervisor and ask them why they're wasting money fighting losing legal battles instead of grappling with climate change, please do so. So far, they're not doing very well against these challenges. Hopefully, they will change course

Oddly enough, I've been pulled into a state CNPS effort to respond to a big sprawl development up in Lake County, north of Calistoga. It's a big mixed use sprawl project, primarily with low density housing, around vineyards and a golf course, with the major access by a two-lane canyon road. The issues are (wait for it) damage to native plants, greenhouse gas emissions from commuters, and increased wildfire risk.

Unfortunately, legal cases in San Diego County don't determine what a judge in Lake County might do, but they likely will take them under advisement. So, I'm working with a coalition of CNPS conservation people scattered around the state, because, well, we're all dealing with the same set of issues, and we're starting to put together a common statewide playbook of what works.

Hopefully, if it continues to lose in court, sprawl development will finally disappear from the California development playbook. I'll believe that when I see it, but if it does, we will have issues more like what the City of San Diego is currently dealing with, or the County General Plan if it gets more actively implemented. In these, communities will work to adapt to climate change by increasing density, making it easier to get around without burning fossil fuels, and having parks and other things closer to home, so that less commuting is needed. It's a laudable goal.

Unfortunately for us, San Diego (City and County) were developed around easy automobile commuting, so it's going to take substantial rebuilding, rethinking, and reconnecting to make this County functional without carbon-based fuels. CNPS will continue to advocate for native plants in open spaces and around homes, but we also have to be sensitive to everyone else's serious issues. Everything will need to change, and as with the pandemic, we will all have to do our share to deal with these challenges. Hopefully, we will.

~ **Frank Landis**, Conservation Chair

# BOTANY

## Jacumba Mountains

It is sometimes difficult to comprehend how large Anza-Borrego State Park is. Most people are familiar with the fact that the park surrounds the town of Borrego Springs and that it extends a long way to the south, but the amount of the terrain to the west of the S-2 highway and the areas between that highway and McCain Valley, and the Cleveland National Forest to the west and northwest, creates a vast wilderness in every sense of the word.

The southernmost mountains in the park are the Jacumba Mountains, which extend northward from the town of Jacumba, and the In-Ko-Pah Mountains that lie to their west. It is interesting to note that In-Ko-Pah County Park is not actually located in the In-Ko-Pah Mountains but just south of the southern end of the Jacumba Mountains. Northwest of the In-Ko-Pah Mountains are the Sawtooth Mountains that lie to the east of Mount Laguna. The Carrizo Canyon with its Carrizo Gorge divides the land between the In-Ko-Pah and Jacumba Mountains.

Geologically, the eastern portion of the In-Ko-Pah Mountains and Jacumba Mountains are formed from early cretaceous plutonic rocks, namely, granitic rocks associated with the La Posta Pluton formed about 95 million years ago, and older metasedimentary rocks, which include metamorphosed sandstones that form gneiss (Todd, et al. 1985, Clinkenbeard and Walawender 1989). The La Posta Pluton is one of the larger masses of granitic rock that cooled very slowly far beneath the surface and eventually became exposed at the surface through millions of years of erosion. The granitic rock forms massive boulders of lightly colored tan rock in very picturesque formations, hills and mountains. As one drives east on I-8, before approaching the Jacumba turn off, the road passes through a vast area of the beautiful granitic boulder fields. The gneiss is a more brittle type of rock that forms hills and mountains covered with broken rock fragments that show compressed layering of sandstone and fine grain sparkly mica.

An obscure trail extends northward from Jacumba along the western slopes of the Jacumba Mountains and all the way to the flat, low desert. This long trail passes through a transition zone that includes elements of chaparral in the higher elevations and lowland desert creosote bush scrub nearly a thousand feet lower at its northern end. The trail is approximately 16 miles long; however, the usual means of traversing the trail is half at a time, turning around at the middle and returning to the original starting point. Walking it that way serves two purposes. First, it prevents the need to arrange for two cars, one at the beginning and one at the end, and second, and it allows two passes of a spectacular area so that if you miss something on the way out, you have the opportunity to see it on the way back.

Early in spring of 2020, I began a hike to the north of Jacumba by 7 am. It was a surprisingly cold morning with frost on the grass. I quickly put on my boots and two layers of socks, and checked my load of water. My pack was heavy with water and two bottles of Gatorade. I toyed with bringing along a warm jacket; however, the temperature projection for Borrego Springs was 80 degrees so I figured it would warm up, but it was cold at the time. I just brought a light blue denim shirt in addition to the thin long sleeved shirt I was wearing. The sun was warm but the air was cold, especially in the shade. The sky was crystal clear as the frost glistened on the low plants. Rain had fallen as recently as the Friday before, with snow in the mountains, too, but it was much higher up. Jacumba is about 2,800 feet in elevation and they do occasionally get snow, but not this time.

I walked briskly in the crisp air. The mountains to the west were composed of the large granitic boulders. The vegetation in the riparian area nearby was all leafless. It is a broad area that is visible from I-8 and I have always wondered what the dominant plants were that were growing there. I did not see any willows or cottonwood, just *Senegalia greggii* (previously known as *Acacia greggii*; Catclaw acacia) and tamarisk (*Tamarix ramosissima*), at least for what I could tell with no leaves, and the large grass, *Phragmites australis* (Common reed). Along the trail was *Ericameria brachylepis* (Boundary goldenbush) and what appeared to be the succulent needle-like leaved *Suaeda nigra* (Bush seepweed).

The first part of the trail was a long straight stretch that passed the riparian habitat. The bright purple *Astragalus palmeri* (Palmer's locoweed; below), flowering in profusion, began to appear along the trail as I walked north. It is one of the 27 species and subspecies of native *Astragalus* that we have in San Diego County.



The trail then passed between hills that were formed of the granitic rock boulders. The pale tan color of and the rounded boulders themselves were striking. This is the rock type that I mentioned earlier. A month and a half previous to this hike I traveled from the north end with Jonathan Dunn. At one point we got off the trail and crossed over a steep hill composed of this granitic rock. I was actually looking forward to hiking among the hills composed of this beautiful rock. These rocks have the appearance of smooth,

rounded boulders that would be fun to climb on. Well, I found out that wearing gloves on this rock type is a good idea. The surface of the boulders is not smooth as one might expect, but very coarse, like the roughest sandpaper, with little quartz microshards over the entire surface that provides plenty of traction for climbing but also cuts into ones hands, leaving tiny blisters.

Shrub-sized *Juniperus californica* (California juniper) grew along the edge of the trail, as well as *Rhus ovata* (Sugarbush) and other chaparral plants, plus *Cylindropuntia ganderi* (Gander's cholla). Because it was still so cold and the sun was not yet bright on these areas, the wildflowers were not as prominent; however, I did see patches of *Lasthenia gracilis* (Goldfields) creating yellow color between the gray leaved shrubs of *Eriogonum fasciculatum* var. *polifolium* (California buckwheat) and *Rhus ovata*.

Continuing northward, the trail veered to the east and up a hill. I followed the tracks of two dirt bikes and saw *Mirabilis laevis* var. *retrorsa* (Desert wishbone bush) with round white flowers open in the early morning and appearing much different than the pink-flowered coastal form. I also saw *Ipomopsis tenuifolia* (Slender leaved ipomopsis; below), a plant from Baja California that comes up into the Jacumba Mountains. It is a beautiful plant with deep-red flowers on the end of gray-green stems and is pollinated by hummingbirds. It was a great treat to find it here considering it is also on the CNPS sensitive plant list. The prostrate yellow-flowered *Eriophyllum wallacei* (Wallace's woolly daisy) with felt-like gray-green leaves was also there and more patches of *Lasthenia gracilis*. The temperature was still quite cool. I followed the dirt bike tire tracks that went out and back. The knobby tires had chewed into the soil and dug into the wetter spots since the soil was still moist from the previous week's rains.



The trail went east up a hill, then north across a low ridge, and then west again before

continuing north. The flowering situation was interesting but it still seemed a bit early in the season.

The vegetation along this trail is a mix of high desert and chaparral transition, a type of habitat not seen in regular low deserts or normal chaparral areas. Scattered along the trail and in other locations were an interesting mix of species including *Opuntia basilaris* (Beavertail cactus), though its brilliant pink flowers were not yet open; *Pholistoma racemosum* (San Diego fiesta flower); *Amsinkia intermedia* (Rancher's fiddleneck); yellow-flowered *Senecio mohavensis* (Mohave groundsel); *Eulobus californicus* (aka *Camissonia californica*, California primrose or false mustard), a plant in

the Onagraceae with delicate yellow flowers that appear like a mustard; *Plagiobothrys collinus* (Cooper's popcornflower); *Ephedra californica* (California ephedra); tiny white-flowered *Pectocarya linearis* (Sagebrush combseed); *Lupinus bicolor* (Miniature lupine) that seems to be everywhere; white-flowered *Cryptantha intermedia* (Clearwater cryptantha), which often has masses of small flowers; and the white- and yellow-flowered sunflower *Perityle emoryi* (Emory's rock daisy) in the rocks.

Other plants in the area of the trail provide a concept of the vegetation. *Sphaeralcea ambigua* (Apricot mallow) was also flowering with bright orange petals. *Phacelia campanulata* (Desert bells) with beautiful deep-blue bell-shaped flowers was growing along the trailside, and the shrubby *Bahiopsis parishii* (aka *Viguiera parishii*; Parish viguiera), was displaying moderately sized yellow sunflower inflorescences. Another one of the wildflowers was *Emananthe penduliflora* (Whispering bells) with its pale-yellow bell-shaped flowers. A real treat was seeing *Boechea pulchra* (Beautiful rockcress) with its pink/maroon clusters of flowers at the end of tall flower stalks.

The trail continued on, at first in low open areas, but then along the side of a very steep slope above a deep canyon. Plants observed here were *Phacelia distans* (Wild heliotrope) with pale-blue flowers; yellow-flowered *Acmispon glaber* (Deerweed); *Diperstemon capitatum* (aka *Dichelostemma c.*, Wild hyacinth) with its blue flowers and new name; *Chaenactis artemisiifolia* (White pincushion), a small densely packed fern; *Myropteris clevelandii*, (Cleveland lip fern; left); *Salvia columbariae* (Chia) with little flower heads and tiny blue flowers; *Thysanocarpus curvipes* (Lacepod); the shrubby yellow-flowered *Peritome arborea* (Bladderpod); *Ambrosia dumosa* (White bursage), a silver ferny leaved shrub found in desert scrub; and gray-leaved and white-flowered *Salvia apiana* (White sage).



In some places Junipers were numerous around the bouldery granitic rocks. *Yucca schidigera* (Mohave yucca) was also common and *Simmondsia chinensis* (Jojoba) was seen regularly, as well. Bright-red *Castilleja foliolosa* (Woolly paintbrush) and *Ferocactus acanthodes* (Desert barrel cactus) were also present. The yellow flowers of the barrel cactus were beginning to open at the upper part of the trail. Even *Arctostaphylos glauca* (Big berry manzanita) grew in a few locations, as well as *Ziziphus parryi* (Lotebush) with round berries that were turning red. *Ziziphus* is drought deciduous so the spring growth is a set of fresh, bright, green spatula shaped leaves on thorny stems. Other plants in this chaparral and desert transition zone were *Quercus cornelius-mulleri* (Desert scrub oak), *Corethrogyne filaginifolia* (Sand aster) and even in some places *Agave deserti* (Desert agave) with its large, sharply pointed gray-green leaf rosettes.

The shadows were still long over the east side of the mountains. As the trail continued, I could hear water rushing down in Carrizo Creek. The stream flow sounded significant and I could see water in open areas. The trail had been climbing so that the stream was now far below. At first it was even and then at this point, 150 and 250 feet below.

The scenery was dramatic. Carrizo Gorge to the west became deeper and deeper as it cut down into the desert. The mountains were jagged edged, with sparse covering of shrubs. The morning light created shadows and bright areas emphasizing the stark topography. It had the strong appearance of desert but not as barren as the typical Mojave or Anza-Borrego low desert. This was a mountain range that seemed not as dry or maybe not as hot as the low desert areas. The entire experience was invigorating.

After a long trail section that hugged the hills, the trail changed direction to the west to cross a high ridge. This provided an unobstructed view of the gorge below. *Encelia farinosa* (Brittlebush) was becoming in flower along this trail and some specimen examples of *Cylindropuntia bigelovii* (Teddy bear cactus) were also growing next to the trail, several over 6 or 7 feet tall. The yellow flowers on the *Encelia farinosa* shrubs were growing against the dark rust and tan colored metamorphic rock that composed this part of the mountains. It was not the beautiful granitic boulders but more of a broken up, angular rock-covered slope with cuts for the trail.

The trail climbed and reached a point that was higher above the Carrizo Gorge with a view extending far to the north, south and west. The mountains on the west side of the gorge were especially steep and jagged. Eventually, the trail turned back east, carving around a ridge point and heading back to the main mountain area. Junipers that were somewhere between large shrub and small tree size grew on the north slope, as well as more *Ziziphus* shrubs. At one point, the yellow-flowered chaparral scrub *Keckiella antihrrinoides* (Yellow bush penstemon) grew on the north slope. That was not expected in this desert setting.

The trail became very narrow in a few spots where erosion had caused a collapse. A slip would be disastrous, but there were plenty of rocks to hold onto. The temperature had been rising but it was cool and moist in these pockets on the north facing slopes. White flowered *Rafinesquia californica* (California chicory) was growing there as well.

The trail continued on where it was partially overgrown with *Encelia*, which created a line of color. I had heard several species of birds, including at least four species of wrens. There were cactus wrens with their low dur-dur-dur song, rock wrens with their twee-twee-twee call, Bewick's wrens with their call that ends with a high swee-swee-swee-swee, and even Canyon wrens with their song of cascading notes. I also heard a rich, warbling song I did not recognize immediately.

As I walked along farther, I saw more species of plants, including *Physalis crassifolia* (Thick leaved ground cherry); *Nolina bigelovii* (Bigelow's bear grass); the large strap leaved "shrub" *Dudleya pulverulenta* (Chalk dudleya) on rocky banks; *Condea emoryi* (aka *Hyptis emoryi*; Desert lavender) with sweet-scented flower clusters; and *Lupinus excubitus* (Grape soda lupine) that smells like grape soda and has flowers the color of grape soda.

At one location, a *Penstemon clevelandii* (Cleveland's penstemon; below) was in full flower with deep, dark, pink-red flowers that contrast against the dark rocks.



*Eschscholzia parishii* (Parish's poppy) was also in flower with its yellow poppy flower form.

Finally, I arrived at the point where I was going to turn around. It was located at the top of a high side canyon that dropped northward and steeply down into Carrizo Gorge. At this point, the gorge was roughly 800 feet below. I was hungry and thirsty so I sat in the shade looking northward down the gorge and into the mountains in the distance that appeared to go on forever as though there was no habitation for miles and miles, which there wasn't. It had taken me about 4.5 hours to get there. I needed to get back. I ate my warm and smashed peanut butter sandwich and a half, and drank 2 bottles of Gatorade because I knew I had lost much moisture and salt. Warm peanut butter sandwiches and the sweet-sour taste of blue Gatorade really seems good when I am hungry and really thirsty. The light, the fresh cool warmth of the area, the shade of the rocks and the deep, deep gorge below with rugged mountains around generated a feeling that was etched in my mind, like a national park destination.

I walked briskly, going back on the trail. After quite a while I decided to video walking on the trail with the steep, deep drop off to the gorge bottom. I heard a bird sing that rich, warbling song again and I saw a flash of a bird of moderate size with black wings and a yellow body. It had to be the one making the song and it had to be a Scott's oriole.

I began to feel like I was getting leg cramps and in fact, I did get a cramp in my upper left thigh. I was really worried what would happen if I had strong, painful cramps and could not walk. It was very painful. I drank another bottle of water to try to get better hydrated. The pain fortunately subsided and I continued to walk at my quick pace without it returning at least while I was walking.



As I walked back along the area that I passed earlier in the morning, the flowers were more open due to the effects of the sun being higher in the sky. The *Lasthenia gracilis* were more open now. The *Mirabilis laevis* var. *retrorsa* were now all closed. I was looking for the *Ipomopsis* again when I spotted a patch of red on the slope above. I walked up a



steep slope of coarse sandy soil to see it and recognized that it was *Astragalus coccineus* (Scarlet milkvetch; left). This is a beautiful plant with silver leaves appearing as if it were cultivated for the color of its leaves as well as its flowers. I found several of them.

Finally, after passing the large desert riparian area, I arrived back at my vehicle. It took more than 4.5 hours to get to the turnaround point but 3 hours to walk back.

The Jacumba Mtns are yet another indication of the diversity of habitats in San Diego County. They cross the line between chaparral and desert scrub, and upper lower desert. It is an unexpected landscape that is neither full desert nor chaparral habitat. The landscape is of a grand scale with bouldery granite mountains and dark, fractured metamorphic material. They support patches of wildflowers in brightly colored displays as well as specimen-level cactus shrubs that are well over two meters in height. It takes an effort to visit this area, but the species here makes it worthwhile.

~ Tom Oberbauer, Past President

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## CNPS BRYOPHYTE CHAPTER ONLINE PRESENTATIONS

Chris Wagner of the Bryophyte Chapter is preparing a series of nonvascular plant online presentations for Southern California. These talks are geared towards education about lichens and bryophytes. Since there is so much interest in lichens and bryophytes, but not enough people to learn from, he decided to reach out to others who are interested.

The talks will begin August 14 and be every 1st and 3rd Friday evening of every month and be either on zoom or teams. Three talks are ready and will be presented on:

**Aug 14** – Moss anatomy and moss terms

**Aug 28** – Lets key a moss! (Step by step keying)

**Sept 4** – Common and rare bryophytes of Southern California

To hear these talks, contact **Chris Wagner** at [mossgeek@yahoo.com](mailto:mossgeek@yahoo.com) and give him your email address so he can send you the information to participate.

## RELATED ACTIVITIES

### Sikes Adobe Historic Farmstead Volunteer Opportunity

The Sikes Adobe Historic Farmstead is seeking volunteers to help maintain the gardens and surrounding River Park habitat. Your expertise would be greatly appreciated and all volunteering can be done at a safe physical distance. Duties include watering, planting, and weeding the gardens, orchard, grape vines, native plant gardens and nursery. No experience is required - great for people who enjoy working outside and are looking for a way to give back to the community. Work can be done on your own schedule. They're also looking for volunteers on Sundays to help run the Sikes Adobe Farmers Market booth.

For more information please contact Leana Bulay directly at: (760) 716-1214 or [leana@sdrp.org](mailto:leana@sdrp.org).

**Cal-IPC Symposium Online**  
**October 27-30, 2020**  
**Recovery & Resilience: Confronting Fire,  
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<https://www.cal-ipc.org/resources/symposium/>

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### CNPS-SD Activities Calendar August 2020

**8/5: Board Meeting via Zoom, p.2**  
**9/1: Plant Sale Ordering Begins, p.1**

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