

Our New Crevice-Style Rock Display: A Showcase for Alpine Plants by Michael Uhler



A clear view of Mono Lake from the saddle between Parker Peak and Mount Wood. We were brought to our bellies to avoid the gale-force Washoe Zephyr winds. There are many alpine plant species doing the same, as they grow, bloom, and set seed in the short growing season of this demanding environment.

he incessant gale-force wind is howling as I crouch low to view a beautiful, prostrate, and seemingly delicate alpine plant. My wife, Ellen, and I are between two peaks at nearly 12,600 feet above sea level, exhilarated by the locally well-known Washoe Zephyr winds, and botanizing. We stand on an unglaciated ridge in the eastern Sierra, high above the Owens Valley between Parker Peak and Mount Wood. The ridge forms a topographic funnel that creates a venturi effect, greatly enhancing the Zephyr's speed before it rushes over the ridge and descends into a deep, glaciercarved canyon on its path east towards Mono Lake and western Nevada. Focusing on keeping my balance and too far above the diminutive rosettes at my feet, I am brought to my knees for a closer look. This is a true "belly-plant" as all those who have "botanized" it will attest. I am in the presence of a most intriguing variety of the otherwise common pussypaws (Calyptridium umbellatum); I have found the uncommon



This is the common variety of pussypaws found in the Sierra (*Calyptridium umbellatum* var. *umbellatum*). It bloomed a couple of years ago in the demonstration crevice trough I built in the Garden, then promptly died, suggesting this species is monocarpic.

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This is the strictly alpine and more showy variety of pussypaws, *Calyptridium umbellatum* var. *caudiciferum*. It reputedly has a polycarpic life history and is only found on the high, unglaciated alpine ridges and nunataks of the Sierra Nevada. Alas, it is not currently recognized by the Jepson Herbarium botanists. I will attempt to grow this and compare its characteristics with those of the more common variety shown on page 1.

alpine pussypaws (*Calyptridium umbellatum* var. *caudiciferum*)!

According to the flora I use in this region, Flora of the Yosemite Sierra by the eminent Dean W. Taylor, "This variant is an exclusively highaltitude expression of the highly variable C. umbellatum, but it consistently differs in growth form, the deeply seated roots being beset with old leaf bases, and the consistent polycarpic life-history." Classically stated and verifiably accurate; however, the current Jepson Manual places this variety in synonymy, simply lumping it into Calyptridium umbellatum. The plants I kneel over certainly appear distinct to me, as well as stunning in flower in this alpine setting. Predictably, I find no seed, as all the plants are still in flower; however, I am smitten by this taxon and have no reservations about returning. I am indebted to Dr. Taylor not only for elucidating the differences in the pussypaws' elevational expressions but also for providing us with his flora, the first and sometimes only one I use while in the area. It will be an honor to grow this

variety of pussypaws in the Sierra section of our Botanic Garden, in our new crevice rockery!

Why am I excited about building a new crevice rock garden? Because the alpine zone is one of the most interesting parts of California and the zone I visit most often. I did in fact return to collect seed of the alpine form of pussypaws, as well as seeds of many other true alpines; and I am thrilled to grow these out in the Garden so that you can share with us all the wonders found in the highest reaches of our state. To grow many of these plant taxa in the Berkeley Hills will require this type of garden crevice bed. It will be impossible to completely emulate the wind, the cold, the high level of UV light, and the lack of antagonistic organisms found in the high Sierra. Nevertheless, I am confident the new crevice rock garden will satisfy many of the conditions necessary. We want to

Vivid pink rockfringe (*Epilobium obcordatum*), along with coyote mint (*Monardella odoratissima*), photographed near Virginia Pass in one of northern Yosemite's meta-morphic crevice gardens.





An example of the Parker Creek-drainage crevice gardens. This metamorphosed sedimentary material is nearly vertical in orientation.

grow and display as many Sierran plant taxa as possible, preferably those of the alpine region.

Additionally, as a part of our Garden's mission we endeavor to display plant specimens in a manner that suggests a realistic setting in nature. To make the rock project look natural I referred to my favorite examples, those from the wild. For me, the most interesting alpine plants, and the most beautiful scenery, are located in regions of the Sierra that are comprised of geologic formations referred to as roof pendants. Simply put, a roof pendant is a metamorphosed formation, either sedimentary or volcanic, that was initially deposited before the most current Sierra uplift. By applying pressure and heat over time, the ensuing, uplifting granitic magma subsequently altered or metamorphosed the original material. High above Mono Lake, on the Sierra's east side, resides one of my favorite metamorphosed sedimentary, or metasedimentary, portions of the "range of light," the Upper Parker Creek drainage; it is also the area where I collected the alpine pussypaws. My desire to re-create

rock outcrops similar to this region is my inspiration for our crevice garden.

To get a feeling for the large project of building a full-scale crevice garden, I first assembled a smaller crevice trough. I wanted to gauge not only the benefits to alpine plant horticulture but also the receptiveness of the Friends, docents, and general public to the potential installation of a very large-scale version of this style of rockery. The trough is a roughly two-foot by three-foot rectangular planter with more-or-less vertically oriented flagstone that rises about 18 inches above the lip of the container and is backfilled with a very sandy, mostly mineral, growing medium. I am happy to say that several alpinessuch as rockfringe (Epilobium obcordatum), beaked beardtongue (Penstemon rostriflorus), gray chickensage (Sphaeromeria cana), and Sierra wild rve (Elymus sierrae)-have either bloomed here for the first time (rockfringe) or reliably bloomed (beaked beardtongue). Perhaps more importantly, almost all visitors, Friends, and docents have been extremely interested in the concept. These promising horticultural results and our receptive visitors have renewed my interest in growing even more taxa of these challenging alpines.

Preceding any groundbreaking there are many planning steps to attend to, and now that I had a natural model envisioned it was time to get started. The first task was to choose a location for the crevice-style rock garden. Fortunately, James Roof, our founding director, long ago had a series of successful alpine beds above our north lawn and below the Garden's Redwood section. This area provides great exposure for the alpines. It faces east and receives morning- to early-afternoon sun while staying cooler in the late afternoon as it is shaded by the Redwood section's overstory trees. It is important to avoid prolonged excessive heat in the root zone of alpines, as this will compromise their health. One way to do this is to limit the duration of direct sunlight, although that could compromise flowering. These historic alpine beds performed well until the overly aggressive root systems of nearby trees and shrubs invaded the root zones of the slow-growing alpines. Nevertheless, we agreed to site the crevice garden here, with a sound plan to exclude the tree roots by laving down two lavers of geotextile soil-separator fabric to impede or prevent their entrance into the new crevice-garden beds.

The stone we chose comes from a familyowned quarry located in the foothills of the

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Sierra Nevada west of the historic town of Mariposa. The appropriately named Mariposa-Yosemite Slate Quarry is owned and operated by David Butler, a very knowledgeable and capable descendant of early Mariposa settlers. The stone is likely the most beautiful I have yet worked with and is a remarkably close match to the high-elevation metasediments I adore around Tioga Pass. We used the quarry's largest "stand-up" pallets of slate and even larger and thicker quartzite slabs and boulders set vertically on edge to simulate an extreme uplifted and metamorphosed sedimentary deposit. This material is mined from a region known as the Mother Lode belt, not too far from Yosemite National Park. It is also metasedimentary, though likely not as old as the metasediment in Upper Parker Creek. However, in places, the Parker Creek rock outcrops look exactly like the new crevice garden's Mariposa slate with its rich browns and reds and vertically oriented crevices. The scree paths between the crevice ridges in the Botanic Garden are also identical to the trail surface in the Parker Creek drainage.

I want the crevice-garden structure to inspire awe not only in our guests but also in me. I want the massive rocks to evoke the same feelings I get when I gaze upon the eastern escarpment of the Sierra Nevada from the Inyo Mountains or Highway 395. This requires walls that rise steeply and sharply from the base and edges of



In the Virginia Pass area of northern Yosemite resides a hidden population of this species, alpine spring beauty (*Claytonia megarhiza*). We hope this will be a long-time inhabitant of the Botanic Garden here in Tilden Park.



An exhibit I enjoyed at the Betty Ford Alpine Gardens in Vail, Colorado. Alpine spring beauty (*Claytonia megarhiza*) will appreciate our new crevice garden, as its roots may grow to six feet long. (Illustration used with permission.)

the project. Setting these large stones vertically and close to the edge of the paths is a perfect way to bring the diminutive alpine plants closer to the viewer's eyes; in the past, in the shorter beds, these significant and important plants were lost below the viewer. In addition this vertical orientation provides an excellent, perfectly drained, long root run for the many deeply taprooted alpines we intend to display. For example, alpine spring beauty (*Claytonia megarhiza*) could have a taproot that is four to six feet long in ideal conditions. Our crevice garden has close to six feet of rooting depth in its deepest portion of the center ridge. This makes me so happy—I hope it will make our alpines happy too!

This awesome, vertical, massive, crevice drama adds up, especially by weight! We purchased 116 tons of stone and an equivalent amount of crevice backfill (used as anchorage and rooting media among the stones) for a total of approximately 230 tons of material to be imported for the project. Also, we had to excavate and remove a considerable amount of clay soil and lawn for the sand base, as well as most of the old alpine bed's incompatible stonework. This required heavy equipment, and experts to operate it. Fortunately, in the Regional Park District we have one of the finest "roads and trails" crews I know of, and they were willing to help us out with the heavy lifting. I am indebted to both Rodney Smith and Bill Surges from Roads and Trails, as their expert equipment operation and hard work made this project possible. For me to be inches from an 800- to 1,000-pound suspended boulder requires trust and confidence in the skill and control of the operator. That skill and control can only come from a lifetime of training and experience. Bill and Rodney are masters at their craft and have this level of experience.



Rodney Smith deftly places one of the larger pieces of our Mariposa Slate at the apex of the crevice garden.

The final component of the project, and perhaps the most important horticulturally, is the backfill medium used to fill the crevices. For the alpine plants I want to grow, we need a growing medium that is well drained, well aerated, and largely mineral in content. To start the process of backfilling the crevices, more than 90 tons of washed river sand was purchased and transported into the Garden. The sand was primarily used as a leveling and anchoring base for the vertical slate and schist pieces that sometimes weigh more than 1000 pounds, but it is also a suitable medium for alpine plant growth. The sand was placed in the lower portions of the crevices and was gradually mixed with the next component as we continued to fill them.

Expanded shale is the next major component that we decided upon and is for me the "holy grail" of horticulture. It is formed when shale is crushed and heated in a kiln to 2,000 degrees Fahrenheit. This process causes the tiny air spaces in the shale to expand. The resulting product is called expanded or vitrified shale. Expanded shale can hold up to 40% of its weight in water and is excellent at retaining and then releasing essential plant nutrients as well as the water. It is lightweight and stable and has proven itself in many crevice gardens across North America. To the expanded shale we mix in a small amount of compost (10 % by volume). For additional alpine plant health, a graded 3/8-inch expanded shale gravel is placed around the root crown to ensure this vulnerable zone has the sharp drainage required to keep the stem and the root from rotting. This largersized expanded shale is also proving to be more resistant to washing out during rainfall and overhead irrigation. As I start to plant some choice alpines in the nearly completed beds, I am excited to see the positive results that they are already exhibiting. I have attempted to grow many of these species before, and they have never looked this good in the outdoor beds; others, we have never grown. I believe that this area of the Sierra section is the most suitable we've ever had in which to grow alpine plants, and I am very eager to start more of last year's seed collections in pots in the hope of planting them out as soon as this year.

As construction progressed, I could not stop envisioning how each stone placement was creating the perfect location to grow the beautiful Sierra Nevada alpine plants that I have always admired. I was constantly transported to my favorite Sierran haunts and imagined each crevice as a scramble up a steep couloir to look upon fine alpine plants. I longed to return to the mountains; and as soon as the heavy-equipment



My wife, Ellen Uhler, is with me on most of these incredible backpacking trips to the heights of our state. She is the best companion I could ask for! The metamorphic mountain behind us is Virginia Peak.

portion of the project was completed, my wife and I were on vacation and on our way to the alpine zone of the Sierra Nevada with my Inyo National Forest collecting permit in hand.

I am blessed to have a life partner who loves to vacation with me in the alpine region of the high Sierra and botanize. Carrying all our belongings on our backs and keeping as close to the earth as possible in what is, to me, the most pristine portion of California-there is nothing better in life! Stopping only once for gas and packing all the supplies needed for the ten-day backpacking trip: this was the perfect prescription for the pandemic blues of our two-person pod. Even during those gale-force winds, we continued to search together for the beautiful alpine cushions and celebrated the forces that helped create this wonderful alpine environment. We camped in one location for nine days, becoming intimate with the diminutive flora of this region's alpine zone, and I returned with several true alpines for the Botanic Garden.

Two years ago, when the construction portion of the crevice garden started, I compiled a list of plants I desired to grow upon its completion. Early last year I applied for the collecting permit with the Forest Botanist of the Inyo National Forest, describing our Sierra alpine crevicegarden project and including photographs of its first phase. I also included the list of choice alpine species that I felt we could successfully propagate and grow, and requested permission to obtain propagules. Below are descriptions of a few of the notable collections.

Rapidly rooted in the nursery under lights and over heat mats, three fine species of beardtongues (*Penstemon* spp.) are now planted out in the new crevice garden. We now grow five of the eight species of beardtongue that make it to at least 3500 meters (approximately 11,500 feet), the elevation widely considered by alpine ecologists as the lowest elevation for alpine species growth in the Sierra Nevada. Although it is not the stereotypic mat or cushion of the alpine, beaked



Davidson's beardtongue (*Penstemon davidsonii*) just past peak bloom on Kuna Peak. It is currently growing in the new crevice garden. I hope it is happy here in the Berkeley Hills.

beardtongue (Penstemon rostriflorus) is very fast to root from vegetative cuttings, and within weeks I had already planted out several barerooted propagules in the new crevice garden, with more to come. Beaked beardtongue had already bloomed profusely in the crevice trough for the last few years, and I am excited to see how this true alpine, with its intense scarlet flowers, develops in the new crevice garden substrate. Also planted out as a bareroot cutting is Davidson's penstemon (Penstemon davidsonii). This little gem fits the alpine flowering-mat profile, and its unusually large blue-violet to blue-purple flowers are always amazing to me. I suspect the few high-elevation pollinators that enter the corolla are amazed too! Davidson's penstemon is a veritable crevice-garden specialist, and one that is worth close inspection. The last of the three new beardtongues, Sierra beardtongue (Penstemon heterodoxus var. heterodoxus), is my favorite, as it is the one that ranges highest of all those found in the alpine zone. Found no lower than 2,700 meters (8,858 feet), it makes itself at home all the way up to 3,900 meters (12,800 feet). It is also easy to key out in the regional flora. I enjoy looking for its whorls of flowers with their interesting stalked glands, always worth magnified observation.

Another group of interest to me are the wild buckwheats (*Eriogonum* spp). This genus is one of the largest (and most diverse) in California. The Jepson Manual lists 117 species and 123 varieties. Only ten of these species and one variety make it to the rarefied altitude of 3500 meters (11,500 feet), and I was able to obtain seed of three of them. One of my all-time favorites is Lobb's buckwheat (Eriogonum lobbii). It has the most interesting habit of laying its flowering stems on the ground rather than growing in the typically erect posture of most buckwheats. I grew this species once to flowering maturity and then lost it to an herbivorous moth or butterfly larva-but not before I could take a photo. I hope the larva was from one of the beautiful "blues" (Euphilotes spp.) that are known to use wild buckwheats as larval food sources. I have collected seed again and believe that our visitors (both butterflies and humans) will be seeing more of Lobb's buckwheat in the new crevice garden.

A second *Eriogonum* species, and the most taxonomically interesting to me, is the frosted wild buckwheat (*Eriogonum incanum*). It is one of only three species of wild buckwheat in California that is dioecious, meaning functional male and female reproductive parts are found on separate plants. Recall that there are over 200 *Eriogonum* taxa in California, so this is a rare condition in the genus. It is interesting to note



Sierra beardtongue (*Penstemon heterodoxus* var. *heterodoxus*) is the highest growing penstemon in California. It is currently growing in the new crevice garden. Here it is in the wilds of the Sierra.

that when the two sexes are mature one can see inflorescence differences, as the female plants develop more red in the corollas and tend to become more prostrate, while the male flowers are noticeably branched and maintain a more yellow, spherical, upright inflorescence. I look forward to displaying both male and female plants of this unusual alpine buckwheat for all to enjoy at the Botanic Garden.

A third and more challenging Eriogonum collection was that of an adorable Sierra native, the raspberry (or White Mountain) buckwheat (Eriogonum gracilipes). While it is known to grow in the Sierra Nevada, I have only seen it in the Inyo and White Mountains of far-eastern California, and it is here that I was able to find good seed of the species. Ellen and I spent a windy November weekend avoiding the first snowfall in the Sierra by heading up Mazourka Canyon in the rain shadow at Badger Flat in the Inyo Mountains. It was the perfect location to escape the pandemic-weary crowds for our ninth wedding anniversary, as we saw no one else on our trip. This late-season collection trip yielded a few choice taxa, including the ripe raspberry buckwheat seed. I hope we get to see these rich red spheres of flowers soon!

Let us not forget the carices (the sedges)! I have heard it uttered by otherwise fine botanists that "life is too short for Carex." I respectfully disagree. Carex is a vast genus with over 2,000 species worldwide. It is also the most diverse genus to be found in my beloved alpine zone, not to mention a favorite food for those cute rabbit relatives, the pikas. The genus Carex has 29 species growing to at least 3,500 meters (11,500 feet). (The next most diverse genus is Draba, with fewer than half the species, 14 in this alpine zone.) One of the sedges, the Tahoe sedge (Carex tahoensis) is particularly intriguing to me as it belongs to the taxonomically tricky sedge group known as the "Ovales section." The Ovales include species that are remarkably similar to the trained eye and generally identical to the untrained observer. In the crevice garden we are growing several plants from a collection made over three years ago at the type locality on Lake Tahoe's Mt. Tallac. I have fairly



Lobb's buckwheat (*Eriogonum lobbii*) below Koip Peak. I collected seed from this population two weeks after this photo was taken. This species bloomed for me once in the granite mound (Bed 612) in the Garden. I am confident we now have a better home for it.



Frosted buckwheat (*Eriogonum incanum*). Seed of this beautiful dioecious alpine species is being sown in our nursery this season.



Cloud sedge (*Carex haydeniana*) near Koip Peak with Mount Lewis in the background. This species is now growing in our Garden's Sierra collection. I am very interested in all the alpine carices of the Sierra Nevada, and this season we acquired several new ones.

confidently keyed these to Carex tahoensis. Records indicate that the type specimen for Tahoe sedge was housed at UC's Jepson Herbarium, but alas it is apparently no longer there. Additionally, Tahoe sedge was ranked by the California Native Plant Society (CNPS) as being of limited distribution (California Rare Plant Rank [CRPR] 4.3). Having a missing "holotype," along with its rarity, was more than enough justification for me to grow Tahoe sedge at the Garden. This year I also collected in the Parker Pass region what appears to be particularly good Tahoe sedge seed-exciting! And now, at last, the sedge I am most thrilled about has been recognized as extremely rare and is ranked by the CNPS as CRPR 1B.3. Not only were we fortunate to obtain a small amount of seed, it was also a great opportunity to conduct rare plant monitoring and submit the results to the botanist in charge of the

Inyo National Forest as well as the rare-plant botanists at the California Native Plant Society.

While thinking of this relatively recently described sedge, I am especially saddened. The Tioga sedge (*Carex tiogana*) represents a species discovered and formally described by one of my botanical heroes (and the author of my favorite flora), Dean William Taylor. Tragically, Dr. Taylor passed away this last November. I will always remember him and will always refer to his work; and I will do my best to grow his *Carex* here in the Garden.

The construction of this crevice garden has been a highlight of my 15 years at the Regional Parks Botanic Garden, and I am privileged to have been present and involved at every moment of its creation. It is a fitting addition to our Garden and is already generating a healthy amount of attention from the horticultural community. The



My all-time favorite sedge, Tioga sedge (*Carex tioga-na*), blooming in its type locality. It was discovered and described by one of my favorite botanists, Dean Taylor. I am deeply saddened by our recent loss of the eminent Dr. Taylor. I will always carry his *Flora of the Yosemite Region* when walking in this superlative country, and I will put all my efforts into growing the Tioga sedge for our visitors to admire in the Garden.

project is a wonderful testament to the vision and dedication of our Garden's director, Bart O'Brien, and of the Garden supervisor/ horticultural specialist, Liz Bittner, as well as of all our Garden staff. It is also a great example of the commitment and generosity of the Friends of the Regional Parks Botanic Garden; without your financial contribution specifically for the crevice garden, this bold project could not be accomplished. I look forward to stewarding the new crevice garden long into the future, and I thank you all for your critical support.

Sincerely, Michael Uhler

Michael Uhler is the gardener at the Regional Parks Botanic Garden responsible for the Sierran and Seabluff sections.

All photos by the author.

I was so excited to visit this wild crevice garden in the alpine zone below Koip and Kuna Peaks. This is a rock gardener's inspiration.





ON THE 25TH ANNIVERSARY OF THE FRIENDS

These handsome new railings are only one example of the many improvements in the Garden made possible by the generosity of the Friends.

If you are reading this article, chances are you are a member of the Friends of the Regional Parks Botanic Garden, someone who generously makes an annual donation to support the Garden. But newer Friends, and perhaps even longer-term Friends, may not realize how intimately the Friends relate to the Garden as a whole—to its history and to the work that it does in service of California's native plants. 2021 is the 25th Anniversary of the Friends. We offer this article as an anniversary tribute to the organization and hope it may shed some useful light on the topic of "who are the Friends and what do they do?"

The Botanic Garden has inspired passionate support all through its history. In the mid-1960s, with a change in the administration of the East Bay Regional Park District, the Garden's first director, James Roof, was fired, and a plan was hatched to establish a 400-acre ecological study reserve on Lake Chabot, making use of plants from the Regional Parks Botanic Garden. These threats were parried by a group of influential citizens, among them Marion Copley, who started Citizens for Tilden Park in response; Leo Brewer, Professor of Chemistry at UC Berkeley and an avid native-plant enthusiast; and Jenny and Scott Fleming, noted for their wonderful private native-plant garden. Due to their and others' intervention, Roof was reinstated and the Botanic Garden stayed in place. Those early advocates went on to found the California Native Plant Society, the statewide organization dedicated to preserving native plants through education, advocacy, and stewardship.

We might call that the "pre-history" of the Friends. Three decades later, the torch was picked up by a group of docents from Glenn Keator's second docent class (1996). With Glenn's encouragement and the blessing of then-director Steve Edwards, they founded the Friends, and in the first year formed a board, drafted bylaws, and developed a membership brochure. In the 75th Anniversary issue of *Manzanita* (Winter/Spring 2015), Katherine Greenberg, the Friends' founding president, describes that beginning:

Our aim was to "make a difference" by taking on projects in the garden that otherwise would not have been funded, such as renovation of the pond and improved paths. We invited a group of distinguished native plant horticulturists, including Bart O'Brien and Wayne Roderick, to join our Advisory Council, with Glenn Keator as chairman. Noted botanical illustrator Peg Steunenberg created an enduring logo for the Friends. We published the inaugural issue of our quarterly newsletter *Manzanita* in the summer of 1997, featuring the genus *Arctostaphylos*. We soon launched a website, **nativeplants.org**, as well as a program of classes and workshops. We also organized several native plant symposia. With additional support from the Regional Parks Foundation and CNPS, our membership grew rapidly over the first few years.

Pond, paths, a logo and a publication, a website, classes, workshops, and symposia? That is already a huge achievement in the first few years! And without the financial support of the ever-growing Friends membership, it would simply not have been possible.

Starting with a group of about 15, the Friends now number more than 400. Most of us live in Alameda and Contra Costa counties, and many of us are in fact docents. Others, of course, have visited the Garden from out of town and have expressed their support with a Friends membership. The quarterly Manzanita is a way to stay in touch; and to further spread the word, the Friends Board established a monthly e-newsletter that goes out to more than 3500 people from all over the U.S. and as far afield as Bulgaria and Brazil! Friends receive it automatically with a membership, but anyone can sign up for it at the Garden's Visitor Center or on the Garden website, nativeplants.org. It's free.

The lifeblood of the Friends is volunteerism. The two publications mentioned above are produced by volunteers, as are the classes, field trips, and occasional symposia. Large numbers of volunteers turn out to help staff with the traditional Fall and Spring plant sales (currently on hold due to COVID-19, though plants are being offered online); they work on everything from preparation to sales and clean up. The docents (at this point over 100 of them, all volunteers), lead tours for Garden visitors and school groups and also assist the Garden Director with program development, training, and administration. And while people volunteer at the Garden without being Friends, most of the volunteers are Friends, giving not only financial support but also many hours of their time and energy.

Rosie Andrews, who recently stepped down as president of the Friends Board, describes the Friends with the word "community." Friends support the Garden with their financial contributions, but they also meet like-minded plant enthusiasts while volunteering. From the classes and field trips they take, other groups are formed. There is a book group, a group that meets to key out plants, a birding group—"expanding circles of community," as Rosie put it, "where enduring friendships are formed."

Director Bart O'Brien explains that "through their support of publications, classes, field trips, and the docents' offerings, the Friends are the Garden's primary interpretive and educational arm." He points out that the Friends are unique in the entire East Bay Regional Park District (as is the existence of a botanic garden at all). Field work (collecting trips) by the garden staff, nursery renovations, mitigation of *Phytophthora* in both the nursery and the Garden—this ongoing work is supported by the Friends. Recently they

The Manzanita design has changed over the last 25 years.





Gardener Theo Fitanides takes notes on a collecting trip in Southern California.

have paid for several new nursery benches, handsome new railings for two bridges, and the bulk of the out-of-pocket expenditures for the now planting-ready crevice garden (described in Michael Uhler's article in this issue of *Manzanita*). "Since 1996, almost everything major that happens, the Friends have had a role in it," Bart said. "And while fundraising was never their main objective, the Friends have always raised money. Our Friends group is of critical importance to the Garden."

At the end of 2020, the Friends leadership underwent a major change: it was replaced with a combination of the Friends Board and the Docent Steering Committee. The resulting body is called the Friends Leadership Council, and it takes advantage of the energy and insights of the docents, a group that is replenished with fresh volunteers every year through the docent training classes.

The FLC will carry forward the Friends goals of education, outreach, and support of the Botanic Garden and California's native flora.

The new co-chairs of the Friends Leadership Council are David Sherertz and Rosalie Gonzales, both long-time docents. David is also one of the Garden's webmasters; and Rosalie is an original member of the Outreach Committee of the California Native People and Plants program and a long-time propagation volunteer. In December, David and Rosie, along with Rosalie, hosted a digital "Holiday Big Ideas Potluck," inviting all docents to join the Friends Leadership Council via Zoom for a non-judgmental idea fest. With the resulting list of ideas large and small, practical and aspirational, the new FLC is primed to lead the Friends into 2021.

Is there any way to sum up this rich

relationship between the Friends and the Botanic Garden? "You could call it mutualism," said Rosie. Like the yucca and the yucca moth, or the bleeding heart and the ant (and this writer thanks her docent training for that information), both parties get something out of it. "The Friends are indispensable to the Garden," Rosie continued. "In return they receive the benefits of friendship, community, and opportunities to learn from the best, and the gift of viewing the outdoors with different eyes." €

Doris Kretschmer is a docent at the Regional Parks Botanic Garden and a member of the Friends Publications Committee.

Peter Thomas



Friends members enjoy early access to the bi-annual plant sales, one hour ahead of the general public.



Without the Friends' generous financial commitment specifically to the new crevice garden, this visionary project would not have been possible.

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The Garden is scheduled to reopen to visitors on February 18th, by free online reservation only,

on Saturday, Sunday, Tuesday and Thursday. We hope you can visit the Botanic Garden soon.

Remote plant sales with curbside pick up are still available! You'll find many plants, lovingly propagated by garden volunteers, that are difficult or impossible to find elsewhere.

The Botanic Garden's free e-newsletter is a terrific source of information about the Garden, its plants and features, and its natural history. Please consider subscribing!

REGIONAL PARKS BOTANIC GARDEN ZOOM CLASSES, FEBRUARY TO MAY, 2021

Prominent California Trees, Tuesdays, February 23 through April 27, 10 am to noon. Instructor: Glenn Keator

Island Botany: Why are Island Floras Special? Sundays, February 28, March 7, March 14, 10 am to noon. Instructor: Glenn Keator

The Franciscan Manzanita Story: From Saving "one last plant" to Protecting California's Bountiful Biodiversity, Saturday, March 20, 10:00 to 11:30 am. Instructor: Dan Gluesenkamp Free! Registration required.

> Mediterranean Regions of the World Part 1: The California Floristic Province, Sundays, April 18 and 25, 10 am to noon. Instructor: Glenn Keator

Gardening in Summer-Dry Climates, Featuring California Natives, Tuesday, April 20, 7:00 to 8:30 pm. Instructor: Saxon Holt

Mediterranean Regions of the World Part 2: Western Australia, Sundays, May 2 and 16, 10 am to noon. Instructor: Glenn Keator

To sign up for classes, purchase plants, make reservations, subscribe to the e-newsletter, and more, visit the Garden's website at www.nativeplants.org.

Thank You to these Nurseries for Providing a Discount to Members

Annie's Annuals and Perennials (510-215-3301), 740 Market Avenue, Richmond, www.anniesannuals.com Bay Natives Nursery (415-287-6755), 10 Cargo Way, San Francisco, www.baynatives.com Berkeley Horticultural Nursery (510-526-4704), 1310 McGee Avenue, Berkeley, www.berkeleyhort.com California Flora Nursery (707-528-8813), 2990 Somers Street at D Street, Fulton (north of Santa Rosa), www.calfloranursery.com Central Coast Wilds (831-459-0655), 336 Golf Club Drive, Santa Cruz, www.centralcoastwilds.com (please call before visiting) East Bay Wilds Native Plant Nursery (510-409-5858), 2777 Foothill Boulevard, Oakland, www.eastbaywilds.com East Bay Nursery (510-845-6490), 2332 San Pablo Avenue, Berkeley, www.eastbaynursery.com Flowerland Nursery (510-526-3550), 1330 Solano Avenue, Albany, www.flowerlandshop.com Larner Seeds (415-868-9407), 235 Grove Road, Bolinas, www.larnerseeds.com Mostly Natives Nursery (415-663-8835), 54 B Street, Unit D, Point Reyes Station, www.mostlynatives.com