“The beautiful spring come, and when nature resumes her loveliness, the human soul is apt to revive also.”

—Harriet Ann Jacobs

March Madness has taken on a new meaning at our California Botanic Garden. Sadly, the Coronavirus (COVID-19) situation forced the rescheduling of public programs including classes, our Jewels of Spring Luncheon, other events, and rebranding celebrations for the California Botanic Garden (CalBG). While delaying these opportunities, the Garden remained open as social distancing is easily achieved while walking the pathways. Mid-March offered a spate of much-needed rainy days. Several breaks in the showers offered a respite from cabin fever allowing many to visit CalBG. The rains will help our beautiful garden bloom this month.

The Panera Fundraiser in La Verne allowed some Volunteers to gather on site or take home a meal. Panera donated 20% of the sales, netting close to $200 for our organization. Thanks to those who came out on a balmy evening to support this effort.

While store shelves have emptied and public gatherings have abated, I hope April finds the epidemic curve on a downward trend and that you and yours have weathered this storm successfully.

I hope to see you around when the California Botanic Garden reopens!

—Marla
From the Director
Lucinda McDade, RSABG Executive Director

As most of you know, as of Friday 20th March, the Garden is closed to the public. It was with great sadness that we took this step but we really had to. We just do not have in place all that would be necessary to be able to stay open safely. Those of us who are still working—the skeleton staff of essential people—miss all of you!

For CalBG, this is a double whammy: obviously we are managing the COVID-19 pandemic crisis but we are also managing a financial emergency associated with the stock market crash and the diminution of our review streams. We are dealing with the very difficult implications of having a number of our areas of operation shuttered—including areas that are normally revenue generating. We are right in the middle of figuring out how we are going to manage all of this as I write this up-date.

In the meantime, I hope that you will watch and enjoy the videos that David Bryant is shooting—available through our Facebook page (and feel free to request topics that are of special interest). I shot one with David today on some of our rare plants and, while walking around, realized that there is an infinite supply of subjects that we can talk about and places that we can take you—virtually is better than not at all, right?

We are also working hard to get some gift shop sales and GNN sales available on-line / via pick-up only. It would be really terrific to draw down the stock in both of those areas. Need merchandise? Need plants? Now is the time to support your favorite botanic garden by buying something! Think about next holiday season and buy a few puzzles.... you will just have to remember where you stored them over the intervening months (for me, that would be a problem!). And now is the time to get your nostalgia RSABG apparel.

I want to tell you that we have a terrific leadership team here—including your staff leader, Kathleen Noll. We have had some heart rending meetings over the last few days and will have a few more before we get things lined up to weather this as best we can. Everyone is working incredibly well and effectively together, everyone with an eye on the prize of an intact CalBG when we emerge from this crisis.

PLEASE take care of yourselves and of each other! This is not “just” the flu—it is one nasty virus. I am an optimistic person but I fear that it is going to be quite some time yet before we have treatments for it that work (at present, medical professionals just try to support the patient as his/her body battles the disease) and some time after that before we have a vaccine. Our job—ALL of our jobs—is to stay healthy!

I would love to hear from you—emails/phone calls would be wonderful. You volunteers are so much of the fabric of our garden that we are tattered without you! But we WILL be back whole again!

Best to you all (and wash your hands)!

A Very Happy April Birthday to:

Jordyn Brase
Rachel Cheung
Maia Donadee
Katy Douglass
Alegria Garcia
David Gish
Alison Hansen
Bev Jack

Peter Kavounas
Betsy MacLaren
Al Noreen
Michael Shelley
Ingrid Spiteri
Janice Tsuma
Joe Vlietstra
Dear Volunteers,

These are challenging times. I take special solace in knowing that the Garden is here and will open again for us to enjoy and cultivate again once this health crisis passes. And as we stay safe in our homes and take caution in our communities, know that the Garden is buzzing—supporting countless butterflies and bumbling bees, a baby owl, and many more denizens. Nature is alive and well here, and it’s in many ways thanks to you.

As I write this, house finches are scrambling over the sages and verbenas outside my office in search of scrumptious seeds. A hummingbird is tending its nest along the ivory branches of a western sycamore. Wildflowers are bursting. Bees are wafting over to our California lilacs, where they’re so happily dancing around the blossoms and in such great numbers, that the eye is almost confused what’s a flower and what’s a bug! Much of this life and beauty has been made possible through the generosity of time, spirit, and support of our volunteers. Thank you.

In this difficult chapter, know that you have helped make a Garden of respite and nourishment for a world of California native plants and wildlife. Soon, it will provide the same again for Californians and other visitors. As we close our doors temporarily in response to Coronavirus (COVID-19) and in alignment with LA County and statewide orders, know that the Garden is still thrumming with nature.

We will be checking in regularly and doing the best we can to share life in the Garden—from what’s in bloom to what animals are enjoying this special place—throughout this time. Department supervisors will let you know how things are going and that we miss you! Expect to hear official memos from Garden leadership each Friday about our status.

I can’t wait to see each of you again at California Botanic Garden—your Garden.

Volunteer Programs
Kathleen Noll, Manager of Volunteer Programs

Share the Garden’s Mission Safely at Home!
In spring, I am typically recruiting volunteers to staff outreach tables at various events at the Garden and around the community. The Garden depends on volunteers to contribute to plant conservation and education and your service to the Garden is outstanding! Although many events and regular activities are being postponed, and with the unprecedented order to “stay home” by our state leaders, we will keep in touch via our telephones, email and social media, communicating with family, and friends and neighbors as we practice even greater measures for health and wellness.

Through the month of April or until the state-directed health mandate is over, all volunteer organization activities and meetings on-site at the Garden are on hiatus. These are unique times and we are all facing difficulties we have never faced before. I am most proud of California Botanic Garden’s resolve to keep visitors, staff and volunteers safe and healthy. Keep an eye on emails from the volunteer office for the latest information about the Garden and reach out with any inquiries and any items needing clarification in an uncertain time. I look forward to seeing you in the Garden later this spring. Please be safe and be well!
The collaborative nature of our garden community is especially seen in the work of our grounds crew volunteers. Volunteers and horticulture staff are literally side by side in tasking, and constantly cross-pollinating in garden vision. We are blessed to have a mix of experienced veteran and enthusiastic new volunteers. It is gratifying that we get a mix of weeding, planting, deadheading, pruning, and every kind of horticultural chore with a full range of physical exertion available. The experience and discussions have been of extraordinary value in my gardening and I have heard the same from my volunteer compadres.

The Wednesday work crew from 8:00–11:00 a.m. (or just drop in), is of many years standing and directed by the grounds manager, Ashlee Armstrong. The volunteers, Ashlee, and the horticulture staff combine on projects where the critical mass of the group accomplishes previously identified needs. Routinely, the morning starts by observing a seemingly
insurmountable task and finishes with it happily accomplished.

For the last several years, the garden has offered work crews led by me on the 2nd and 4th Saturdays, 8:00–11:00 a.m. We tend to specialize in multi-week projects selected together with Ashlee and the horticulture staff. Recently, for example, we cleaned up the Abilene Way garden boundary.

There’s very little as satisfying as walking through the garden and seeing a planted or cleaned up section that you did with your volunteer friends.

**Volunteer Spotlight:**
**Donna Bedell**
Curated by Marla White, Volunteer President

Many volunteers probably know that Donna loves to photograph the plants and critters at the Garden. Her Great Horned Owl photo was shared via email last month. She became a volunteer with the class of 2004 as soon as she retired from teaching. Over the years Donna has helped at the plant sales, Native Designs, special events, signup tours, and drove the tram during the summer concerts. She regularly helps out in the research library and served on the Volunteer Board as co-chair for the Enrichment Committee.

The signup tours are a favorite for Donna to lead. She finds each adult tour to be unique and especially enjoys the spring wildflower tours. She shared, “I’m always pleased when I get positive feedback at the end of the adult tours. They seem to have a good time and look forward to coming back to visit the Garden at other times. I’m always surprised that some Claremont residents know nothing about the Garden and this was their first visit!”

**Edible Native Plants**
**Marla White and Eli Feldman**

Eli Feldman of GNN shared some edible native plants (greens, herbs and fruits) with me that can be seen scattered in the garden that you may want to look for on your next visit. Caution: possible personal food allergies.

Coyote mint (*Monardella* spp. and cultivars)
Cleveland sage (*Salvia clevelandii* and cultivars)
Purple sage (*Salvia leucophylla*)
Saltbush (*Atriplex* spp. and cultivars)

When asked what Donna likes best about our Garden, she replied, “The people. It’s the nicest, most interesting group of volunteers, students, and staff. And of course, the Garden itself is very special to me. When I’m not here volunteering, I just come to walk, take photographs, and enjoy nature.” Donna loves our California Botanic Garden (CalBG) and helps out whenever possible.

Donna has taken her knowledge gained from the Garden and applied it to her community at Mount San Antonio Gardens (MSAG). She is part of the Sustainability Committee, which promotes ways to help the environment by reducing the use of electricity and water. Donna reached out to Peter Evans to recommend native drought-tolerant plants to use at MSAG. Her committee researched them and purchased many at Grow Native Nursery. They also supervised the planting and watering of this community showcase of California native plants. The plants included: toyon, flannelbush, ‘Ray Hartman’ and ‘Anchor Bay’ ceanothus, ‘Midnight Magic’ woolly bluecurls, purple three-awn, ‘Pacific Mist’ manzanita, and the ‘Desert Museum’ palo verde. Donna reports “the new plants are doing well and we look forward to new growth this spring.”
Sagebrush (Artemisia californica and cultivars)
Grape (Vitis sp. and cultivars)
Golden currant (Ribes aureum)
Woodland strawberry (Fragaria vesca)
Oregon grape (Berberis aquifolium and cultivars)
Prickly pear (Opuntia spp. and cultivars)

More plants may be found at these websites https://www.laspilitas.com/classes/edible.htm https://yoursocaltapwater.org/2014/02/24/drought-busting-edible-garden-the-real-california-cuisine/

Here’s a recipe to try:

**Ingredients:**
2 cups loosely packed sage (Salvia clevelandii cultivars*)
1 cup pine nuts
3 allium (onion) bulbs (or garlic as a substitute)
3/4 cup extra virgin olive oil
salt and pepper to taste

**Directions:**
1. Blanch the sage leaves for 45 seconds in boiling salted water (to make tender).
2. Let leaves drain, pat dry and let air dry for 5 min.
3. In a food processor, process sage leaves, pine nuts, and allium bulbs until coarse.
4. Add a steady stream of olive oil to the mixture and process until smooth.

*Allen Chickering, ‘Aromas,’ ‘Pozo Blue,’ ‘Santa Cruz Dark,’ and ‘Whirly Blue’ are hybrids with similar qualities.

Eli offers a garlic-amended recipe substituting ¾ cup pistachio nuts and ¼ cup almonds for the pine nuts, ½ head roasted garlic instead of onion, and a little more olive oil for a smoother pesto. I can’t wait to try this version.

**Book of the Month**

Gene Baumann,
Volunteer Library Committee

**Book cover: Amazon.com**


This book is a profile of 25 pioneering women naturalists, often told in their own words. Each pioneer is covered in about 10 pages that offer a brief, and yet very engaging and honoring sketch of lives dedicated to nature and science. The women profiled range from the well known, like Rachel Carson, Alice Eastwood, and Ynes Mexia, to the lesser known whose works remain mostly hidden and unpublished. The first profile tells of Susan Fenimore Cooper (1813–1894). Her famous book, Rural Hours, was dedicated to her father, James Fenimore Cooper, and remained in print for 40 years. The final profile is about Rachel Carson (1907–1964), a trail-blazing icon of the environmental movement. Each profile includes a short biography, mentors, research methods, and the meaning that each woman’s work had for them and society.
Especially noteworthy for our volunteers are entries about Alice Eastwood, Ynes Mexia, and Rachel Carson. Each of these women is given additional attention in the Volunteer Library section dedicated to Pioneering Naturalists. An edifying and enjoyable approach might be to read the brief profile about a person of interest in *American Women Afield*, and then dig deeper by checking out books by that naturalist from the Pioneering Naturalists section in the Volunteer Library.

*American Women Afield* is worth your attention. You will be amazed, delighted, and encouraged as you read about these 25 dedicated women. Enjoy!

**Are Lichens Mutualistic?**

*Fred Brooks, Garden Guide*

*Photo: Orange crustose lichen, by Debbie Woo*

Lichens are classified based on their mycobiont, of which ninety-eight percent are “sac” fungi (Ascomycota). Lichens are often grouped, however, by their appearance: crustose, foliose, or fruticose. They commonly reproduce asexually when pieces containing the myco- and photobiont break off and establish elsewhere. Only the mycobiont can reproduce sexually, producing spores that must land on a particular species of photobiont, and then germinate.

Pierre-Joseph van Beneden was first to describe mutualism, a form of symbiosis where both organisms benefit from their association (*Animal Parasite and Messmates*, 1876). An example is the relationship between mycorrhizal fungi and plant roots. Mutualism differs from commensalism, where one organism benefits and the other is unaffected, and from parasitism, where one organism benefits and the other is harmed.

That all lichen interactions are mutualistic has been questioned for decades. As researchers study various lichen associations, they are describing more commensal and parasitic relationships. For example, most algae can survive severe environmental stressors, so is the protection of a fungus worth the loss of carbohydrate? This is commensalism if the fungus benefits and the alga is not harmed. If the loss of carbohydrate harms the alga, however, or if its extraction damages or destroys algal cells, it is parasitism. When characterizing a lichen symbiosis, consider that photobionts are facultative, able to live independent of the mycobiont, whereas mycobionts are usually obligate and unable to survive on their own.

“In all cases it [symbiosis] results advantageously to one of the parties, and we can never be sure that the other would not have been nearly as well off, if left to itself.”

—Roscoe Pound, 1893
GOINGS ON IN THE GARDEN

Top right, Volunteer Board Members
Middle right, View of the mountains from the California Plant Communities
Bottom, Volunteers preparing bulk mailing