FROM THE PRESIDENT

Lynn Miller, Volunteer President

This week I went for a walk in the Garden. I’d been away, and the best place for me to go for inspiration is right to the source, CalBG. By 11:00, it was 88 degrees and getting warmer, so I followed the shade. My goal was the Majestic Oak. When I stand under this wonder, I am humbled. It has weathered more storms than any of us can imagine, and under this wise and calming old tree, I can breathe deeply while the world seems to be spinning on its edge. Weaving my way up to the Mesa, teams of squirrels skittered everywhere. They were having a grand time. When one disappeared into a newly dug hole, I had to laugh because all of this was pure squirrel shenanigans. Our Garden offers so much. Respite, wonder, life, and humor. I found all of them during a simple walk.

By the calendar, September is still summer, but for most, recent travels and visits with friends and families are a fond memory. Although new volunteer opportunities slowed down from June to August, many helped with Magical Mondays. Volunteers worked as parking directors, ticket check in helpers, tram drivers, drink servers, and path guides. Thank you, all! In June, nearly 100 volunteers answered the Volunteer Survey, and many showed interest in becoming Garden Guides. Jennifer Scerra is contacting these volunteers and working on the details for training new guides. Recently, the Garden held two much-needed tram driver sessions, and coming up, Native Designs will start making grapevine wreaths the week of September 12th. Currently, there is a moratorium in place for new volunteer sign ups.

With renewed interest, I look forward to starting a new year in the Garden and to seeing you in the Fall. Stay well and go for a walk because you never know what awaits you at CalBG!

—Lynn
How did my crystal ball perform?

Hello volunteers!

I hope that you have had some very enjoyable downtime over the months that Oak Notes has been on vacation. I summoned my courage (I am not enthusiastic about catching covid) and went to Anchorage for Botany 2022 for the better part of a week in late August. People all around me were dropping with Covid but I somehow did not get it. My husband and I also went on a very enjoyable, very short vacation up to Morro Bay: three stacks and a rock indeed!

Because my last Oak Notes article to you revolved around my crystal ball perspectives as to what would take place over the summer, I thought that I’d devote this first article of the new season to seeing how well my crystal ball functioned! Here goes!

Crystal Ball (CB) said: We will host three great Magical Mondays for members and I hope to see a lot of you at these terrific events. CHECK. The Forest Pavilion functioned magnificently for this event, especially in July and August when we offered cold drinks there as well as in the Courtyard. Every time I think that I have experienced the ideal music form for the Pavilion, something else happens and I change my mind. For now: HARP music!

CB: We will have two—maybe three—master thesis defenses and the corresponding number of new alumni of our graduate program to be proud of! CHECK: both Marty Purdy and Nina House defended their master’s theses over the summer and are on to the next things in their careers. Employment in Marty’s case; our Ph.D. program in Nina’s. It will be great to have Nina continue with us.

Carolyn Mills is slated to defend her master’s thesis in a month or so.

CB: We will have an official planting plan in hand for the North Garden. This is the area north of Maintenance and east of the Majestic Oak. It was already a bit ‘open’ (mostly thanks to pine bark beetles) and the January windstorm tossed down some more trees—ALMOST. Indeed, the hort staff have done great work evaluating the area and preparing for fall planting. As it turns out, there are quite a few smallish plants in that area (planted as part of recovery from the first wave of losses) so not as much space as one might think just from surveying it casually. Still, we are hewing to our intentions to use the Garden’s diverse areas to provide the best possible micro-climates for the plants in our living collection.

CB: We will be close to breaking ground on the redesign of the entryway. INDEED we are closer but not quite there.

CB: We will have announced—or be ready to announce—one more new endowed fund for Graduate Education at California Botanic Garden. CHECK—although the announcement was only internal. A wonderful bequest from the Howard & Phoebe Brown Family added more than $300K to an already established fund for graduate education. With this addition, the fund holds close to $350K, which is enough to fund a full graduate student Research Assistantship (versus just a small research award). Two other gifts of comparable size are in the works.

CB: We will be working on a design for a new butterfly garden. The Marilee Scaff Butterfly Garden will be east of the Outdoor Classroom in the space opened up by what the windstorm did to those giant sprawling hybrid *Fremontodendron* trees. UNDERWAY and a sneak peak is that we will be adding a bird ‘corner’ of the pollinator garden in tribute to another wonderful volunteer here. It will be a pollination complex, all supported by the infrastructure at the Outdoor Classroom and
extending the marvelously tended and almost always beautiful Native Designs Cuttings Garden.

CB: We will have deployed an additional ‘wave’ of interpretive signage across the So Cal and Mesa Gardens (perhaps extending into the communities?). NOT QUITE – in fact, the first wave of new signage may go into the Tongva Village.

CB: We will have moved the welcome pavilions for those garden areas to their new locations (explanation available on request!). IN PROGRESS. Will happen while Braeger Construction is here for a number of purposes (including the donor walkway between the Palm Oasis and the start of the Forest Pavilion complex). Walking along the E Mesa Trail just ENE of the admin building will reveal where the Mesa Gardens pavilion is to go. SOON you will see similar indication of where the So Cal Gardens pavilion is to go toward the N end of Fay’s Meadow.

CB: We will have had at least one volunteer orientation session. CHECK — with thanks to lots of staff and also to Lynn Miller and Julie Scheuermann for helping with the event. It seemed to be quite well received. We are currently taking a bit of a breather on accepting new volunteers applications as we find placements for those already on-board. As most of you know, Ming (and I) have taken over supervision of the volunteer program for now.

CB: The women’s room at the Forest Pavilion will have two hand wash stations. CLOSE. As for moving the welcome pavilions to the two southern Garden areas, this job will take place while Braeger Construction is on site. All necessary equipment (including the cool trough style sink with two faucets) is already on-hand.

CB: We will be preparing for a fall of closer to ‘normal’ levels of activity and that means volunteers! WE THINK SO. Life is feeling more normal even as most of us are still masking indoors and are still being pretty careful. I hope that you, too, faithful volunteers, will be careful. This is still a dangerous virus that loves infecting human beings!

And onward into fall! I hope to see all of you at the Garden soon.

Waterwise Community Festival
by Lauren Stoebel, Assistant Director of Visitor Engagement, Public Relations and Events

The visitor engagement/education department is excited to announce CalBG’s first large-scale event since 2020! Save the date, Sunday, November 13, 2022, and join us for the Waterwise Community Festival. The Festival will be a free event designed to provide information about waterwise gardening and to educate community members about drought and water use in the Garden, in our yards, and across California. We’ll have several stations of booths/tables featuring non-profit organizations, water agencies, and landscapers, as well as music, crafts and story time for children/families, workshops/lectures, concessions, and more. We’ll need lots of volunteer help for this event, so keep an eye out for sign-up opportunities in the coming months. Have any questions about or ideas for the Waterwise Community Festival? Feel free to reach out to Lauren Weintraub Stoebel at lstoebel@calbg.org.

Monarchs: Eternal or Ephemeral?
By Fred Brooks
Photos by Deb Woo

Populations of the monarch butterfly (Danaus plexippus), arguably the most recognized butterfly in the U.S., have declined sharply in the past few decades. There are two main populations: one east of the Rockies that overwinters in Mexico, and a western population that overwinters in California. Counts of overwintering populations in California since the 1990s have decreased from about 1.2 million monarchs to less than 2,000 in 2020.

In 2014, the U.S. Fish and Wildlife Service was petitioned to consider the monarch “threatened”
under the Endangered Species Act. On 17 December 2020, the USFWS said, “…we determined that listing the monarch under the Endangered Species Act is warranted but precluded at this time by higher priority listing actions.”

Now, a new study by the University of Georgia from Global Change Biology https://www.eurekalert.org/news-releases/955022 takes issue with the above findings. Not that the monarch populations in the U.S. aren’t declining, but that their increase during the summer breeding season, when they return from overwintering in Mexico, may compensate for the losses.

The study is based on more than 135,000 observations by the North American Butterfly Association between 1993 and 2018. The observers counted all butterflies in a 15-mile area over two consecutive days during the summer breeding season. The average increase in numbers of monarchs was 1.36% per year. The authors suggested that determining colony decline only by overwintering counts did not represent the whole monarch population.

Though the Xerces Society for Invertebrate Conservation in California saw fewer than 2,000 monarchs in 2020, in 2021 they counted over 247,000. A Washington State University entomologist said butterflies spreading along the coast, instead of clustering at traditional locations, may have caused the low overwintering count. Coastal California residents reported monarchs reproducing in their yards and other green spaces.

Factors causing a decline in monarch and other insect populations include: habitat loss, a changing climate, pesticides, and less available milkweed—the monarch caterpillars’ essential diet. It’s complex, say the study’s authors: some insect species will survive, even multiply, others will not.

Addendum: On 17 July 2022, the International Union for the Conservation of Nature added the Monarch to its “red list,” considering it “endangered.” This listing has no connection with the USFWS and the federal Endangered Species Act.

Quercus and the First Californians
by Shaunna Gygli

The Pomo Indians say that in the long-time past, Blue Jay, who lived on acorns, knew where oak trees should grow. He planted acorns in these locations. The great variety of oaks “planted” throughout California by this mythical character have adapted to their particular environment: foothill, valley, canyon, chaparral, or mountain.

Because acorns were so plentiful, most California Indians favored gathering them over farming. Why work in fields when Nature provides! The acorn was their most important staple, being rich in carbohydrates and fat. They could also be stored for use throughout the year. But there was a catch: tannic acid, an extremely bitter chemical. Again, these ingenious Californians devised a 7-step way to process and cook them.

First, they gathered the acorns, normally in October. It was a communal effort to avoid loss to birds and animals. Men climbed the trees and knocked down the acorns while the women and children gathered them.

Drying was the next important step. Undried acorns cannot be ground into a flour.
Storage granaries that resembled large baskets helped keep the nuts safe from animals.

Hulling was done to remove the shell and the testa, or skin.

Pounding the dried nuts into flour in a stone mortar or on bedrock outcroppings was done daily by the women.

Leaching is the process that makes the acorn edible. The flour was placed in a scraped-out, circular depression in sandy soil. A cedar bough or a soap root brush was placed over the meal to prevent it from splashing when hot water was poured gently over it. After the water percolated through the sand, the process was repeated up to 10 times.

The acorn meal was then cooked in a watertight basket. Children were often stumped (adults too!) and asked why the basket didn’t burn up. Shatterproof steatite (soapstone) rocks were heated in fire, and then placed into a basket of water and acorn meal using a lifting stick. The rocks were stirred to prevent them from burning through the basket. The mush was eaten straight from the basket or formed into a patty and cooked on a steatite comal.

Blue Jay certainly left his mark on California and the lives of the First Californians.

**California Native Vines by Steve Bryant**

These plants can cover fences and trellises, or be left to crawl and clamber. Most have stems 5–10 m long.

*Aristolochia californica* (California Pipevine). Flowers like a small Meerschaum pipe, dehisced fruit like a large lily flower. Toxic to most animals except the Pipevine Swallowtail butterfly. Available.

*Calystegia macrostegia* (Morning Glory). Pinkish to whitish small Morning Glory flowers on a delicate vine grow from a swollen, woody caudex. Available.

*Clematis lasiantha*, *C. ligusticifolia* (Clematis or Virgin’s Bower). Flowers creamy white to yellowish, diameter 20–40 mm. Climb by stems and twining petioles. Smaller leaves and flowers than the hybrids sold in nurseries. Available.

*Cucurbitaceae*: the species below form a large perennial root, are generally summer dormant on rainfall, but may continue growing with irrigation. Mostly monecious.

*Brandegea bigelovii* (Desert Starvine). Small white flowers. Commonly enshroud trees and shrubs in the desert.
Cucurbita foetidissima, C. palmata and C. digitata (Buffalo Gourd, Coyote Melon, Finger-leaved Gourd). All with yellow 3–10 cm flowers that last only one day; fruit softball-sized. *C. foetidissima* with large stinky leaves is locally common; *C. palmata* common in the desert. *C. digitata* has handsome foliage.

*Marah macrocarpa* (Chilicothe or Prickly Cucumber). Small white flowers. Fruit like a large, prickly, inflated cucumber. Toxic, black, toy-marble-sized seeds emerge from the distal end of dry fruit. *Funastrum* (vining milkweeds). Flowers 3–7 mm wide, usually pinkish. Host for Monarch and especially Queen butterflies; *F. cynanchoides* is local, three others are from the deserts.

*Lathyrus* (Wild Pea) and *Pickeringia* (Chaparral Pea). Numerous species. Flowers generally whiteish to pinkish, smaller than the domestic sweet pea. Annual or perennial. *L. vestitus* locally common in chaparral and higher elevations.

*Funastrum* (vining milkweeds). Flowers 3–7 mm wide, usually pinkish. Host for Monarch and especially Queen butterflies; *F. cynanchoides* is local, three others are from the deserts.

*Lonicera subspicata, L. interrupta* (Honeysuckle). Flowers whitish to yellowish, 1+ cm long; older stems may have woody bases. Available.

*Vitus girdiana, V. californica* (Grape). Flowers insignificant. These wild species have typical grape foliage; some cultivars have reddish leaves in fall. Small, somewhat sour berries. Generally cool-season dormant. Available.

*Rubus* (blackberry, raspberry, etc.). Flowers whitish to pinkish, 1–2 cm. Stems covered in prickles. Grown as a defense and/or for fruit. *Rubus ursinus* is a parent of boysenberry and loganberry.
For gardeners who live near the California Botanic Garden, September is a time for planning ahead. We’ll be hoping soaking rains will begin by November and looking forward to putting in some new native plants when they become available.

In *Gardening in Summer-Dry Climates*, Nora Harlow explains why we’re reversing the routine of a gardener who lives in a four-season climate and looks forward to planting in the spring. “In summer-dry climates, rainless summers are not drought; they are normal…. Summer-dry climates of the world tend to be on or near the west coasts of continents where temperatures are moderated by proximity to the ocean and where semipermanent atmospheric pressure systems influence the path of approaching storms. In these regions, summers may be cool, warm, or hot, winters are mild, and rainfall is concentrated in winter. Annual rainfall…can vary dramatically. Variability is one of the few constant features of the summer-dry climate.”

*Gardening in Summer-Dry Climates* focuses on the west coast of North America, from Vancouver to San Diego. Nora Barlow is a landscape architect and garden writer. Her co-author, Saxon Holt, is a photojournalist and took almost all the stunning photos that illustrate the book.

The first sixty-five pages provide information about climate and landscaping. The remainder of the book is a compendium of plants for summer-dry climates. The plant entries are listed alphabetically by scientific name, followed by a common name, and “nontechnical” description. Each entry ends with the USDA hardiness zone, Sunset climate zone, and estimated water use from California’s water use (WUCOLS) database. The plants come from like climates worldwide and each plant is illustrated by a photo. An index is included.

*Gardening in Summer-Dry Climates: Plants for a Lush, Water Conscious Garden* is in the Volunteer Library.

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**A Very Happy September Birthday to:**

- Win Aldrich
- Naomi Baler
- Donna Bedell
- Brenda Bolinger
- Herb Boss
- Patricia Brooks
- Laura Christianson
- Peggy Constantine
- Linda Des Marais
- Jayden Galvan
- Alan Jack
- Sara Kelly

- Marga Loncar
- Judy Maciariello
- Dean McHenry
- Ann Morgan
- Kathleen Mulligan
- Fran Neu
- Maddox Park
- Cathy Reaves
- Benjamin Schulz
- Mike Smith
- Susan Spradley
- Rosie Trax
MAGICAL MONDAYS
Photos by Marla White

California BOTANIC GARDEN

Photos:
1. Group of people at a table in the garden.
2. Group of people standing outdoors, smiling.
3. Person in a blue shirt standing in front of a table with a woman in a blue shirt.
4. Person in a green shirt sitting in an electric cart.
5. Person in a blue shirt standing next to a car.
6. Person in a green shirt standing next to a woman in a blue shirt.

Images:
1. A group of people standing in front of a table in the garden.
2. A person in a blue shirt standing in front of a table with a woman in a blue shirt.
3. A person in a green shirt sitting in an electric cart.
4. A person in a blue shirt standing next to a car.
5. A person in a green shirt standing next to a woman in a blue shirt.