



NEWSLETTER OF THE RANCHO SANTA ANA BOTANIC GARDEN VOLUNTEERS

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The deadline for articles to be submitted for the February 2020 issue of OAK NOTES is Wednesday, January 15. Thank you for your prompt submission!!



## FROM THE PRESIDENT Marla White, Volunteer President

*"The spring, summer, is quite a hectic time for people in their lives, but then it comes to autumn, and to winter, and you can't but help think back to the year that was, and then hopefully looking forward to the year that is approaching."*  
—Enya

Friends gathering and sharing good times was the theme last month. Many work parties were held to create decorations for the Holiday Quarterly Luncheon and stars and candle bags for Luminaria Nights. Mistletoe packets and giant wreaths for Instagram photo opportunities by Linda Prendergast and Carol Lerew from the Native Designs team added to the beauty of December Nights in the Garden.

Our winter luncheon was well attended with delicious food and live music from Reed Gratz (Music Department Chair, University of La Verne). We celebrated the holidays and the awarding of Emeritus status to Peter Cherbak, who continues to serve as a guide for student tours. The outdoor classroom area was spruced-up by Hort staffer Damien, and by Rick Davis and the Wednesday/Saturday work crews, which further enhanced the "Conifer Confab" venue. Prizes were awarded, and pots of pinecones were sent home with attendees. Our utmost gratitude to the Hospitality Team for their setup and cleanup that day.

The diligence and great efforts of RSABG staff and Volunteers made the RSABG Membership Luminaria Night a very special evening. Guests ambled through the Garden with stars and lanterns aglow, listening to music, sipping cider and craft cocktails and roasting marshmallows in the warm firepits in the moonlit night. Subsequent evenings (in spite of the rainout) were enjoyed by all.

A new group of Garden Guides has completed training and will soon join ranks with the veterans. The commitment to lead tours of both students and adults is an important component of the Garden's Mission. Connecting children to nature in a powerful outdoor experience can be life-changing.

In this loveliest of seasons, may you find many reasons for happiness. Wishing you a very happy New Year and my gratefulness to you for all you do for our Garden.

—Marla

Link to video of the Volunteer Luncheon: <https://share.icloud.com/photos/0kc2iZtV-rF77Jb6j4lPkfAzw>



## FROM THE DIRECTOR

**Lucinda McDade, RSABG  
Executive Director**

Greetings volunteers! Winter Solstice, Luminaria and into the New Year! 2020 will be the year of the Forest Pavilion. I am curious as to who among you enjoys these dark, cool days near the winter solstice. They can be restful somehow, and they offer the opportunity to catch up on the indoor work at home — the sort of tasks that are just hard to focus on when longer days and warmer temperatures beckon us (or at least me!) outdoors. This year, we have the added, soul-calming fact that we have had rain — real rain — more than 5” here in Claremont by the end of the first week in December. Plants are rehydrating, the manzanitas are coming into flower: a giant sigh of relief from staff here at RSABG (and across all of California I am sure!).

In any event, we will be past the solstice soon and gaining back daylight, albeit very slowly at first. AND owing to a strange anomaly known as the “equation of time,” the solstice is *not* the day on which the sun rises latest and sets earliest. Instead, the earliest sunset day at our latitude is in the first ten days of December and the latest sunrise day is not until January. Don’t believe me? See: <https://www.timeanddate.com/astronomy/equation-of-time.html>

In my case, as the sun rises later and later on into January, I will soon be back to complaining that I cannot set off for my morning jog as early as I would like; I don’t fancy running in the dark when obstacles are not apparent!

Next, TURN off your irrigation system! If you own/control one, turn it off. Right now, our plants have what they need. If it should turn warm (80s) and dry (Santa Ana conditions) for ten days or two weeks or longer with *no* rainfall, you might consider turning the system back on with special attention to plants in pots, newly planted plants, and annuals that want to be kept moist as they germinate, get established

and prepare to reward us with spring/early summer flowers (*not* too late to plant these! Seeds for sale in the GNN!).

There is a LOT going on at RSABG in these last days of December, beginning, of course, with Luminaria. By the time you get this, the event will be over and we will be debriefing on how it went. LOTS of new things this year including the string lights with paper lanterns, *many* fewer bags with candles, volunteer bake sale, wine & beer bar, special members’ night, special party for our higher level members (i.e., Family Plus, Acorn), and those gorgeous Native Designs wreaths! NOTE heavy involvement of volunteers in all of this: Luminaria is an event that we very genuinely could not do without you. **Thank You!**

As we round into 2020, we will be keenly anticipating the launch of construction on the Forest Pavilion. As there *will* be some disturbance, I thought I would remind all of us why we are doing this (I know that those of you who are Garden Guides scarcely need to be reminded!).

- The East Alluvial Garden area is the best part of our Garden for people and plants owing to earliest shade in the afternoons and cold air drainage *and yet we have no facilities there for guests.*
- Specifically, we need *shelter* for everyone — emphasis on our visiting school groups — when weather is



### A Very Happy January Birthday to:

Alina Bacha	Katina Vlastos
John Bradley	Francisco Benevides
Laura Burt	Jenny Knauf
Susan Gregory	Pat Hoppe
Linda Prendergast	Fraser Pemberton
Melissa Smith	Beverly Pemberton

inclement and we need *restrooms*. This project will achieve both of these amenities enabling the East Alluvial Gardens to ‘perform’ for us as it can and should.

- To educate visitors about the values of native plants for home landscapes *and* to teach them some basics about the importance of micro-site conditions (e.g., northern vs. southern exposures), we need demonstration gardens designed specifically to be educational in this way. The Forest Pavilion site will achieve this while helping us to remember and celebrate the lives of some very special people: Marilee Scaff, Sally Prussia, Mary Pierson. They will be with us going forward as they were so important to RSABG during their lives. These demonstration gardens will have wonderful interpretation to clarify the key aspects of design and functionality *and*, of course, they will be beautiful!
- I suspect that many of you are with me in cringing when you witness a disabled person attempting to negotiate some of our facilities (and remember, those of us who are not disabled are among the *temporarily able* by which I mean that accidents happen, life happens, etc.). In marked contrast, the Forest Pavilion site will be designed to be easily negotiated by people with disabilities – from nice smooth surfaces to genuinely ADA-accessible restrooms, we will be proud to offer our facilities to all!
- Many of you will have been at a special event in the Outdoor Gallery (aka Container Garden) or Cultivar Garden and realized the challenges that those sites present. These challenges include getting equipment

and any catered food/drink there, and getting guests to restroom facilities from those venues.

- These challenges exist for all sorts of events but they are especially limiting for *facilities rentals* events, which bring in people who largely do not know our Garden. These guests cannot get to the venues without help and cannot find the restrooms without guidance. You may have heard me joke that the Solar Roller which takes guests to the venues becomes the ‘bathroom bus’ once the guests have arrived and the event is on. And, of course, there is the problem that there is no Plan B in case of rain. The Forest Pavilion will solve all of those problems. Importantly, the new facility promises to increase support for core Garden programs by increasing our income stream from facilities rentals.
- Let me mention one more challenge that our present site offers for facilities rentals, emphasis on weddings. We have no rooms that can be used by bridal parties without impinging on normal Garden business. Think about the fact that the bride’s room is usually the Manzanita Room (aka West Conference Room) between my office and the business office—*i.e.*, right in the middle of vital Garden functions. And the other bridal party room is usually the Volunteers’ Library! The restroom facility at the Forest Pavilion should more correctly be called the “Support Building” in that it will also provide a flexible space that can serve bridal parties, provide a venue for a company retreat, etc.
- Over the summer, we moved the Support Building from behind — north — of the Forest Pavilion

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### **SUPER GRANT RECIPIENT \$50,000**

**Rancho Santa Ana Botanic Gardens** received a Super Grant of \$50,000 for their Demonstration Rain Garden. The Garden will demonstrate to Claremont residents, as well as visitors from neighboring communities, how to capture rain water while creating a beautiful and inviting feature in their residential and commercial landscapes. The goal is to inspire visitors to install

water retaining features in their home landscapes and to educate about the importance of local water retention for the long term security of our underground water resources.



**From the announcement of grants made by the Claremont Community Foundation! RSABG got the BIG ONE for the Forest Pavilion!**



to a location south of the pavilion and north of the palm oasis. In this location, the building will support the entire East Alluvial Gardens area very neatly. Garden Guides among you are thinking: Tongva Village, Acorn Festival, etc. Yes, the Support Building will be just a short walk from the village. Contemplate the Percy Everett Garden—I suspect you share my feeling that it is a gorgeous garden space that should be used for parties and facilities rentals of all sorts. Now contemplate how—at present—you would tell a guest there how to find the restroom. This problem effectively takes it off the table as a facilities rental venue. The Forest Pavilion project will enable the Percy Everett to take its place as the gem that it is! This is also true for the new Grafton Garden.

You volunteers have stepped up monumentally to be part of the fundraising effort for the Forest Pavilion. Not a part of that effort yet? Contact the Advancement Office to sign on! We would love to add your name to the list of Forest Pavilion supporters!

And onward to the longer days of latest December, January and beyond. May your winter solstice and holiday seasons be full of joy and the people you most love to be with!



**AMANDA BEHNKE**  
Director Of Advancement

### **Making a Difference**

The excitement of Luminaria is underway. As I write this, we are preparing for the second night, the first night for the public. What a beautiful tradition that gets better every year.

All of you make such a difference for everyone who enjoys the Garden. Without you, our fabulous volunteers, what we do would not be possible. Thank you for making the Garden a better place!

A decade is ending; a new one is beginning. At each year end, I spend time reflecting on what worked and

what did not, what I want to do differently, where I want to visit, and how I want to impact the world. The Susanna Bixby Bryant Council is an important step in making a difference at the Garden. Brochures with more information can be found outside the Advancement Office.

I can always be reached at [abehnke@rsabg.org](mailto:abehnke@rsabg.org), 909.625.8767 x. 222, or in Office 120.



**VOLUNTEER  
ENRICHMENT**  
**Eli Feldman**

If you are looking for a new approach to sprucing up your garden, be sure to attend the January 27th Enrichment talk given by Eli Feldman. Eli took over as manager of the Grow Native Nursery in the Fall of 2019. He indicated that one of his goals, and a goal of his team, was to improve customer experience in the Nursery and at home. As manager, he welcomes any and all questions, suggestions, and observations, particularly from the volunteers whose input he finds so valuable. His presentation will be about the GNN, and since it is the season to plant natives, his knowledge is timely.

Eli started working at RSABG in the library in 2016 where he learned about the history of the Garden and its current resources. While working as Production Nursery Propagator, he learned firsthand about the Living Collection as he “crawled through every bed in the Garden looking for seeds and cuttings.” Eli shared that while working in several capacities, he saw how much the Garden offers to the public as well as all who work and volunteer at RSABG.

With an academic and work background in landscape architecture, art, and agriculture, he hopes to further the reputation of the Garden as a place that balances hard-to-find-native plants with well-known selections. His interest in Southern California natives is keen, and with his enthusiasm and knowledge of native gardening, his January talk is sure to offer something for all who want to improve their knowledge about native gardening.



## DIRECTOR OF VISITOR EXPERIENCE

**David Bryant**

This past October, the Board of Trustees voted to officiate and move forward with the rebranding of Rancho Santa Ana Botanic Garden to California Botanic Garden. This is a truly momentous occasion in the history of our institution. With this bold step, we will align our brand with the scope and magnitude of our California native plant mission and engage wider audiences, propelling us towards the public limelight. Our legacy is just as storied, collections just as invaluable, and conservation initiatives just as cutting-edge as the top echelons of public gardens across our country. Chicago Botanic Garden, New York Botanical Garden, Missouri Botanical Garden, and Denver Botanic Garden are luminaries in our botanical community, in their respective regions and the nation at large. They hold treasured living and research collections, conduct

botanical research, engage in evermore important conservation programs, and cultivate the community through lauded public programming. This coming spring, we will assume the mantle of California Botanic Garden. As California stands as a global leader in environmental conservation and with one of the most superlative floras, California Botanic Garden—our garden—will take the stage as an icon of plant science, conservation and cultural relevance.

As volunteers, you have helped to steward our institution's legacy to this pivotal moment. I am thrilled to be part of this engaged and committed community as we assume the mantle of California Botanic Garden and step into a profound future for our institution and for native plant conservation. This new name will signal wider public recognition and a deserved cultural magnetism. On the public stage, we will aim to use this moment to bring in bigger audiences, increase our membership, drive our fundraising, boost our public programs, and much more.

With an official public announcement scheduled for March 2020, in the midst of wildflower season, we have much to do. We are working with Cardwell



## ANN MORGAN Visitor Education Committee Co-Chair

I've been volunteering at RSABG for four years, since retiring as a librarian at Cal Poly Pomona. This is my third year on the Visitor Education Committee, which I'm co-chairing with Katy Douglass. I'm a Garden Guide doing two-hour tours with the Friday team and subbing on the Thursday team. I also work at special events such as Bump in the Night and the Acorn Festival.

I grew up in a very small town (pop. 1,500) in central Iowa. Looking back, it seems I was always interested in what was growing. My parents always had large vegetable gardens and we regularly visited relatives living on farms. When I moved

to California I was thrilled to take advantage of our great climate and experiment with everything that grows so well here. Living in Claremont, I was aware of RSABG. I visited the Garden a few times but never thought about volunteering until I ran into John Biddle on campus a couple of years before I retired. When he told me about his volunteer work here I realized that would be something I'd enjoy doing, something that would get me outside and out from behind a computer. A few months later I ran into another fellow Garden Guide, Chris Caenepeel. He too mentioned how he enjoyed volunteering here, and now here I am.

Working with the age group we get on the two-hour tours is fun and satisfying, but one of the greatest things about being a RSABG volunteer is that it's a fantastic learning experience—learning from fellow volunteers as well as the staff. I also appreciate how friendly and welcoming the staff are to volunteers.

Beach, a design agency, to steward a new logo and corresponding style guide. Marketing plans are being assembled and we are exploring opportunities with PR firms. If you have any ideas or suggestions as we push forward, please let me know.

Thanks for all you do for Rancho Santa Ana Botanic Garden, and soon, California Botanic Garden!



## VOLUNTEER PROGRAMS

**Kathleen Noll, Manager  
of Volunteer Programs**

### Happy New Year!

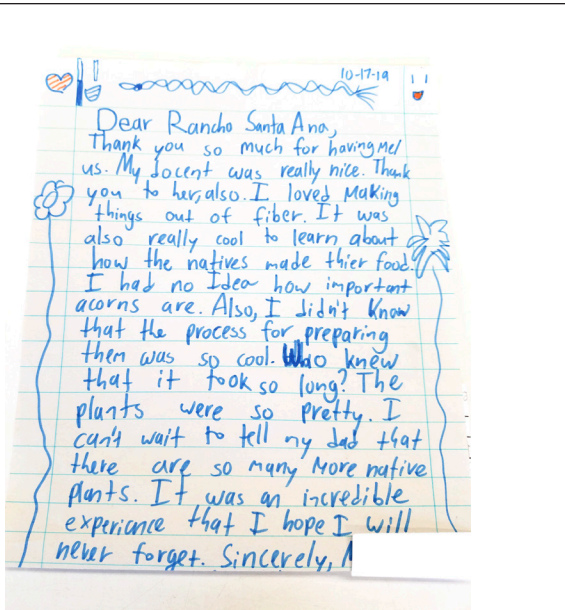
Thank you, everyone for the terrific effort in reporting your volunteer hours in the Garden with your Volgistics account. Please note that when using the self-scheduling platform to sign-up for volunteer opportunities, you still must record your hours; the self-scheduling component is not the same as recording your hours for Garden events or work parties where sign-up is requested. Your time spent in service to the Garden is most appreciated! And in case you didn't know, the average of your volunteer hours, collectively, is equivalent to ten full-time staff, annually.

### Coming up next:

**Grapevine Harvest and Wreath-Making will take place on Monday, January 20 (Martin Luther King, Jr. Day).** We will meet at 8:00 a.m. in the Horticulture Complex. Bring your own pruners, gloves, and a refillable water bottle. Refreshments will be provided. Look for an email notice by Native Designs with the wreath-making schedule and additional details.

**Family Bird Festival: Sunday, February 16, 10:00 a.m. to 3:00 p.m.** Volunteer opportunities for the Garden's winter family education event, **Family Bird Festival**, will be posted in Volgistics this month. Be sure to stop by and see Lisa [lpritchard@rsabg.org](mailto:lpritchard@rsabg.org) or Kathleen [knoll@rsabg.org](mailto:knoll@rsabg.org) and let us know if you would like to be involved with an educational and fun-filled citizen science event that has folks flocking to the Garden.

I look forward to seeing you in the New Year, and thank you for your ongoing support of the Garden.



Above is one of the many handwritten letters the Education Department at RSABG receives following a school tour of the Garden. Usually detailing some of their favorite parts of the Garden, including a thank you to our volunteer Garden Guides, the students give a hint of what truly appeals to their young, impressionable minds. Whether it's a squirrel that ran across the path, a dissection of an owl pellet, or the learning of a Tongva child's game, it's nice to hear what they remember from their day at the Garden.

We are thankful to receive and share the notes and drawings that accompany them, a wonderful reminder of why we do what we do!

**Lisa Pritchard, Community Education Coordinator**



# KNEE-DEEP IN DIGITIZATION

**Mare Nazaire, Herbarium**



Lauren Wright carefully places an herbarium specimen into the imaging lightbox, takes an image, scans the specimen barcode, and then removes the specimen from the lightbox. Lauren will

perform this task 60 times in the next hour, taking pictures of specimens of California's native plants. Since June 2019, when Lauren started as a Curatorial Intern in the RSABG Herbarium, she has imaged more than 13,000 specimens for the California Phenology (CAP) project.

The CAP project, funded by a National Science Foundation (NSF) grant, is one of several digitizing projects in the Herbarium. The CAP project will use the specimen images to assess how climate change may be influencing flowering and fruiting times in California's native plants. To date, the Herbarium has imaged more than 40,000 specimens for the project.

Curatorial Intern Dylan Layfield works alongside Lauren on an adjacent lightbox, and is imaging specimens for the Southern Rocky Mountain project, recently funded by NSF. Aimed at digitizing nearly 61,000 specimens, this project will use the images to better understand species diversity and ecological niches in the southern Rocky Mountains.

Digitization of herbarium specimens takes place in the context of growing awareness of the importance of herbaria and digital access to their information. Access to these digitized specimens means that the data will have immediate application to a suite of research areas, including ecology, biogeography, phenology, and plant conservation.

Both projects have outreach components involving students and volunteers. Through coordinated efforts with Dr. Edward Bobich of California State Polytechnic University, Pomona (CPP), undergraduates are barcoding specimens as a first

step of the digitization process. Recently, 37 students barcoded more than 6,000 specimens. Students also toured the collection and learned about the importance of herbaria. We surveyed the students and found that 95 and 98% of the students had never been to the Garden or natural history collection, respectively. One positive outcome of our approach to crowdsourcing students is that it offers opportunities to recruit students as volunteers or interns. We recently hired three student interns from these barcoding events.

Volunteers have also helped with barcoding specimens: herbarium volunteers David Gish, Patricia Brooks, and Grace Clark barcoded >1,000 specimens in one session. Lisa Broderick regularly helps with our barcoding efforts, barcoding several hundred specimens over the last year. We plan to hold future barcoding events for volunteers, so stay tuned for announcements if you are interesting in helping!

## LINDA PRENDERGAST

### NATIVE DESIGNS

**by Susan Spradley**



Have you ever looked at a beautiful Native Designs arrangement and thought about where all the material came from? Well, the easy answer to that is from the Garden, of course. Often, we load up a cart or the tram with water buckets and go through the Garden, harvesting from a list to create our works of art.

But we also have our very own Native Designs garden from which we harvest. In it we have planted seeds and young plants; we have planned, hoed,

raked, trimmed, dead-headed, watered, and weeded, weeded, weeded.

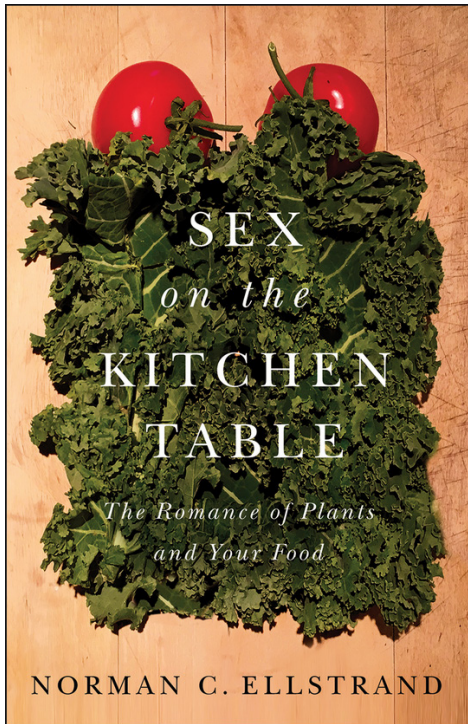
We are the group that tends our garden most Tuesday mornings. We start around 9 a.m. and work for a couple of hours. It's informal, and not everyone can come every Tuesday, or stay all morning. And if it's too hot or too cold, or raining, we just don't meet. There are tools in the shed, and there is someone who can give direction. And tell a weed from a not-weed (usually). All we need are more hands. If you might be interested in joining us, please send our leader, Carol Petty, an email at Native Designs,

[nativedesigns@rsabg.org](mailto:nativedesigns@rsabg.org). Or bring your hat and gloves on any Tuesday. You might find yourself enjoying this part of the creative design process, and I promise we'll make you feel welcome!

## BOOKS OF THE MONTH

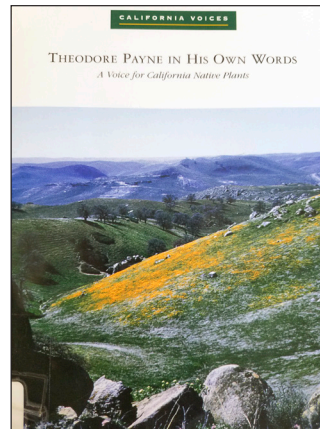
**Joan Sweeney,**  
**Volunteer Library Committee**

The Volunteer Library offers two entertaining memoirs about life in 19th century California by writers with connections to Rancho Santa Ana Botanic Garden.



On **Sunday, February 9 at 1 p.m.** in the **Sycamore Room** (formerly the East Classroom) we will be hosting Norm Ellstrand, a former Research Assistant at RSABG and now Professor of Genetics at UC Riverside. He is author of the new book, ***Sex on the Kitchen Table, the romance of plants and your food.*** Lucinda McDade will join him as he explains what this book has to do with native plants. Afterwards, his book will be in the bookstore for purchase and book signing.

**Lisa Pritchard, Community Education Coordinator**

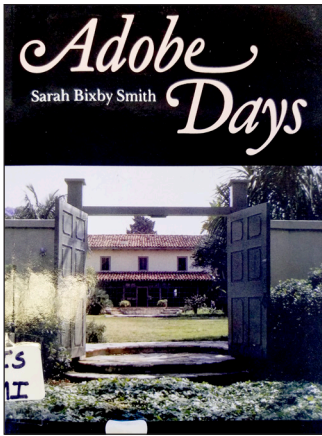


***Theodore Payne In His Own Words***  
223 pages. Illustrated.  
New Moon Press. Pasadena, California.  
2004

Elizabeth Pomeroy edited the contents of this book from Theodore Payne's papers in the collection of the Theodore Payne Foundation. Only his memoir of the Modjeska ranch had previously been published. In addition to his lighthearted essays, a chronology of his remarkable career as a nurseryman and landscape designer is included.

Theodore Payne was born in England in 1872. After attending a Quaker boarding school, he was apprenticed to learn the nursery business. By the time he emigrated in 1893, he had "complete training" as "both a nurseryman and a seedsman." His first job in California was at a ranch in the Santa Ana Mountains owned by the actress Helen Modjeska where he was "enchanted with the beauty" of native California wildflowers. He became a pioneering advocate for California native plants, and the Theodore Payne Foundation is his legacy.





***Adobe Days***  
 By Sarah Bixby Smith  
 148 pages. Illustrated.  
 University of Nebraska  
 Press.  
 1987

This version of *Adobe Days* is a reprint of the 3rd edition published in 1931. Sarah Bixby Smith first wrote vividly about her childhood “in old California.” As more information about her parents’ generation became available to her, she revised her book to include narratives about them.

In 1853 the Bixby brothers and their cousins drove 2,000 sheep from Illinois to central California, helping to start the commercial wool industry in the new state. In the 1860s, Flint, Bixby and Company bought 110 thousand acres in Southern California. Sarah Bixby Smith was a cousin of Susanna Bixby Bryant, who created Rancho Santa Ana Botanic Garden in memory of her own father. The world Sarah and Susanna knew has vanished, but two historic sites where they grew up, Rancho Los Cerritos and Rancho Los Alamitos, are open to the public.

## INSECT ADAPTATIONS TO TOXIC MILKWEED

Fred Brooks, *Garden Guide*  
 Photo by Debbie Woo



An article on warning coloration in the September 2019 issue of *Oak Notes* reported that monarch butterflies were able to consume toxic chemicals (cardiac

glycosides) present in milkweeds (*Asclepias* spp.) without harm. But how did resistance to these glycosides develop—gradually, or all at once?

A partial answer to this question surfaced in 1957 when Jens Christian Skou discovered the sodium-potassium pump. This enzyme (ATPase) is embedded in the cell membranes of animals and actively pumps sodium and potassium ions into and out of cells. In 1997, while Dr. Skou, was receiving half of a Nobel Prize in Chemistry for his discovery of this pump, other researchers were reporting differences in the pump among insects resistant or sensitive to the glycosides in milkweeds. They found that by substituting the amino acid asparagine in the pump gene with a histidine amino acid, the insects’ resistance to the toxin increased.

The same researchers recently identified three different sites on the sodium-potassium pump gene involved in glycoside resistance. Next, they used genetic engineering to sequentially change the same amino acids in a fruit fly. After the third substitution the fruit flies were not only able to feed on milkweeds, they could also retain some of the glycosides in their bodies. Like the monarchs, they were now toxic to their predators.

Another group of researchers have applied a different gene-editing method to advance our knowledge. They determined that not only did each additional amino acid substitution increase glycoside resistance, the order in which the substitutions occurred was important. If the amino acids were substituted in the wrong order, damaging mutations occurred. Evolutionarily, the first amino acid substitution increased the ability of these insects to adapt to a changing environment. This mutation allowed time for other favorable substitutions to occur, further improving survivability of the species.

# GINKGO (*GINKGO BILOBA*)

By Rudi Volti

Photo by Patricia Brooks



A few months ago, an article on the oldest living tree, the bristlecone pine, appeared in *Oak Notes*. For this issue the focus will be on the oldest tree family, the ginkgo. Today, only one species remains, *Ginkgo biloba*, sometimes called the

maidenhair tree due to a vague resemblance of its dual-lobed, fan-shaped leaves to the maidenhair fern (*Adiantum pedatum*). Often described as a “living fossil,” the ginkgo’s origins can be traced back to the Permian period, which extended from approximately 300 to 250 million years ago. Today, it stands as the sole surviving representative of an ancestral line that, according to fossil evidence, had a range encompassing North America, China, the Mediterranean, and the Arctic Circle.

The tree’s name comes from the Japanese *ginnan*, which in turn was derived from the Chinese *ying guo* (*silver fruit*). As sometimes happens with the transliteration of languages that do not use the Latin alphabet, its spelling has not been consistent, being rendered as both “ginkgo” and “gingko.”

Ginkgoes or gingkoes are large trees, normally attaining heights of 20–35 m (66–115 ft), while some specimens in their Chinese homeland are said to reach more than 50 m (160 ft). They also are long-lived; some individuals are thought to be 2,500 years old. Testifying to the tree’s hardiness are the six ginkgoes that were still standing after the atomic bomb attack on Hiroshima obliterated all other living things in their area.

Ginkgoes are most prominent today for their medical applications. They have been employed in Chinese

medicine since the late 15th Century, where they were used for treating hemorrhoids, asthma, and diarrhea. Today, extracts of Ginkgo biloba leaf are sold as dietary supplements that are claimed to improve cognitive functions such as memory and attention, as well as being a promising treatment for Alzheimer’s disease. It has been hypothesized that these benefits derive from the promotion of improved blood circulation in the brain, along with the reduction of free radicals and blood viscosity. Ginkgo also has been offered as a potential palliative for a host of other maladies, including tinnitus, impotence, peripheral arterial disease, macular degeneration, glaucoma, and altitude sickness.

Unfortunately, as with most herbal remedies, ginkgo-based therapies have not been subject to a sufficient number of rigorous clinical trials. However, one randomized, double-blind, placebo-controlled clinical trial found that none of the supposed cognitive benefits were verified. Other, less rigorous studies have been at best inconclusive. It is important to note that taking ginkgo extract can be harmful to individuals with blood circulation issues and to those using certain blood thinners.

Rather than looking to the ginkgo as a potential cure for cognitive disorders, it may be better to simply enjoy it as a tree and nothing more. Ginkgoes are excellent urban trees because they grow slowly and are not much bothered by pollution. They do, however, have one drawback. Ginkgoes can be either male and female. Males trees pose no problems, but during the autumn, females drop their berries (which technically are cones). When the outer layer begins to rot it emits butyric acid, which produces a most unpleasant odor that is often likened to vomit or rancid butter. It has been hypothesized that long ago this odor attracted certain dinosaurs, whose ingestion, digestion, and elimination of the seeds helped the tree to propagate. This once may have been so, but sightings of brontosaurus munching on ginkgo berries are quite uncommon today.



# GOINGS ON IN THE GARDEN

Top right: Peter Cherbak receiving Emeritus award from Kathleen Noll.

Middle right: Native Designs volunteers create Holiday arrangements and wreaths.

Top left: Library committee: Amy Baumann, Chris Ilgen, Joan Sweeney, Barbara Nakaoka, Gene Baumann (missing Julie Scheurermann).

Bottom: December Volunteer Luncheon.







# LUMINARIA NIGHTS

Above: Native Designs centerpiece.

Top right: Volunteers assemble lanterns for Luminaria Nights.

Middle right: Checking in at the Luminaria Nights.

Bottom right: Setting up the stars for RSABG members.

Bottom left: Wanda Ewing lighting Luminaria bags

