From the President
Cindy Walkenbach, Volunteer President

“Volunteering is the ultimate exercise in democracy. You vote in elections once a year, but when you volunteer, you vote every day about the kind of community you want to live in.”

—Author Unknown

We will be welcoming nine new Nature Interpreters to our ranks this month. It is always a pleasure to see their interest and enthusiasm, sometimes tempered with a bit of trepidation. “Will I know enough? Will I be able to manage the children, manage the tour time, and be able to convey the excitement I feel in being in this special place?” Time and a commitment to learning, and above all, lots of practice and patience are some keys to success.

Recently, Board Member and Volunteer NI Mary Perera provided trainees and current NI’s with a wonderful session on communication and presentation skills. As a final activity for the day, NI’s had the opportunity to lead six of our new recruits on a Garden walk where the seasoned veterans relayed tidbits of knowledge and things they do to successfully engage their charges. What a wonderful collaborative experience it was! And, I must tell you that a highlight of our walk was the discovery by new NI Joaquina Hernandez, a former Garden intern and current Cal Poly environmental studies major, of a hummingbird’s nest. She had listened to an explanation on how the hummingbird uses the fuzz on the underside of the sycamore leaves to build its nest and then immediately spotted a tiny nest in the tree under which we stood. An exciting discovery for all and a perfect culmination to this year’s training. Congratulations to our NI class!
Myth Busting Never Ends
A public service announcement: turn off your outdoor irrigation systems and, if you are comfortable doing so, encourage everyone you know to do so too. Given the rain that we have had, the only plants that may need supplemental water are those in pots (which dry out) and those just getting started whether as seeds or from containers. Once they have imbibed (taken in water), seeds/seedlings are very vulnerable and should not dry out. Transplants want water about once a week or every ten days as they are getting established, depending upon the weather. Stop paying the water company for water that your established landscape does not need!

By the time you are reading this, Luminaria will be in the rear view mirror. Sincere thanks—as always—for all that you have done to make the event successful. I feel like a broken record but it is so very true that we could not do it without you—and you bring such good cheer and enthusiasm to the tasks that you make the work lighter for staff as well!

I spent two days this week (second week of December as I write) in sessions to launch our master plan for interpretation. I hope that most of you have heard about this effort by now. We are seeking to extend our interpretive signage and other informational elements but—equally importantly—we are working to unify it, to design the thematic umbrella under which it will all be comfortably accommodated. It was a very interesting pair of sessions; I always enjoy working with my staff colleagues and spending two days with several of them was terrific!

In our discussions, we visited many topics among which were misconceptions about the Garden that are held by members of our community. Back ten years ago when we began to charge admission, we worked hard to correct the misconceptions that led many in our visiting public to the conclusion that RSABG was supported by someone/something/anyone else such that charging admission could not possibly be warranted. To be honest, I was a little surprised by reports this week that these misconceptions continue and how frequently they are encountered. I thus want to enlist your help in spreading the facts! Volunteers, if you have any questions about these points, by all means ask me. We need you to be well-informed ambassadors for RSABG: each one of you can be a wonderful multiplier of facts/slayer of errors.

Let me set forth three basic points:

1. Rancho Santa Ana Botanic Garden is not supported by the city, county or state, and we never have been. We do not receive any sort of funds on a regular basis from any government agency. We are not a line-item in any government’s budget. We do compete for grants and contracts from many such agencies but such funds are highly competitive, challenging to secure, and cannot be relied upon.

2. The Claremont Colleges do not support Rancho Santa Ana Botanic Garden and they never have. Our relationship with Claremont Graduate University (CGU) and The Claremont Colleges Services (TCCS, former Claremont University Consortium, CUC) calls for us to pay fully for any and all services that we receive, and we certainly do. This includes the graduate program which is not financially supported by CGU but rather entirely supported by the Garden. If you are interested in how we pay for services, please ask me—I am happy to explain.

[A nuance here is that certain aspects of academic life on the college campuses that are open to all members of the academic community (some to the public) are also freely available here. This includes

In all things of nature there is something of the marvelous.

—Aristotle
our Friday afternoon seminars which are free and open to everyone (a person coming to seminar needs only to say so at the kiosk and she/he will be admitted for free). Just as our students are able to take classes at the colleges, 5Cs students are able to take any of our classes for no extra charge. Our research facilities (including the Garden grounds) are available for research use by colleagues and students at the colleges and elsewhere. When use by outside researchers entails an extra cost to us (e.g., when the scanning electron microscope [SEM] or some equipment in the molecular lab is used), we pass that extra cost on to the visitor. At least three outside researchers have, in fact, been using the SEM in the last year or so.

3. The funds in RSABG’s investment portfolio (including those that are permanently restricted endowment funds) are not adequate to support all of RSABG’s core programming. We cannot rely on proceeds from the portfolio if we want to do even the bare minimum of caring for the Garden and its resources. We are, of course, working hard to grow this fund but are working equally hard to secure funding for our programs via other means (including charging admission).

At this point, you may be asking, how then is RSABG supported? For last fiscal year (FY18, July 1, 2017–June 30, 2018), revenues came from: proceeds from the investment portfolio (including endowment): 41%; grants & contracts: 33%; development: 15% (including membership); earned income: 12%.

These are quite “coarse” categories, and I am happy to say more about any of them to those of you who are interested. I will, however, go ahead and explain that earned income includes: admission, plant sales at GNN, gift shop sales and facilities rentals. Grants and contracts come in largely to research (including the herbarium) and the conservation program.

Volunteers, I hope that you will help us to counter misinformation whenever you encounter it. I also hope that some of you will benefit from clarity on these points. As always, don’t hesitate to ask for further clarification/information.

Wishing each and every one of you a wonderful holiday season and the best of everything in 2019!

---

**Touring Programs**

**Judy Hayami, Touring Programs Manager**

Thank you, RSBG Volunteers, for supporting the Education Department throughout 2018. It was busier than ever and filled with successes worth celebrating. Together, we have gained another year of experience and confidence in what we do for the Garden and what the Garden does for the greater community. I appreciate you being a part of it all!

Volunteers who recently completed Nature Interpreter classes are building the confidence to lead tours, but currently active NIs can lend their support. Welcome them to the corps!

---

A Very Happy January Birthday to:

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yuwen Wang</td>
<td>Fraser Pemberton</td>
</tr>
<tr>
<td>Susan Gregory</td>
<td>Molly Freund</td>
</tr>
<tr>
<td>Katina Vlastos</td>
<td>Beverly Pemberton</td>
</tr>
<tr>
<td>John Bradley</td>
<td>Melissa Smith</td>
</tr>
<tr>
<td>Alina Bacha</td>
<td>Linda Prendergast</td>
</tr>
<tr>
<td>Laura Burt</td>
<td>Suzanne Kamler</td>
</tr>
<tr>
<td>Yuwen Wang</td>
<td>Fraser Pemberton</td>
</tr>
<tr>
<td>Susan Gregory</td>
<td>Molly Freund</td>
</tr>
<tr>
<td>Katina Vlastos</td>
<td>Beverly Pemberton</td>
</tr>
<tr>
<td>John Bradley</td>
<td>Melissa Smith</td>
</tr>
<tr>
<td>Alina Bacha</td>
<td>Linda Prendergast</td>
</tr>
<tr>
<td>Laura Burt</td>
<td>Suzanne Kamler</td>
</tr>
<tr>
<td>Yuwen Wang</td>
<td>Fraser Pemberton</td>
</tr>
<tr>
<td>Susan Gregory</td>
<td>Molly Freund</td>
</tr>
<tr>
<td>Katina Vlastos</td>
<td>Beverly Pemberton</td>
</tr>
<tr>
<td>John Bradley</td>
<td>Melissa Smith</td>
</tr>
<tr>
<td>Alina Bacha</td>
<td>Linda Prendergast</td>
</tr>
<tr>
<td>Laura Burt</td>
<td>Suzanne Kamler</td>
</tr>
<tr>
<td>Yuwen Wang</td>
<td>Fraser Pemberton</td>
</tr>
<tr>
<td>Susan Gregory</td>
<td>Molly Freund</td>
</tr>
<tr>
<td>Katina Vlastos</td>
<td>Beverly Pemberton</td>
</tr>
<tr>
<td>John Bradley</td>
<td>Melissa Smith</td>
</tr>
<tr>
<td>Alina Bacha</td>
<td>Linda Prendergast</td>
</tr>
<tr>
<td>Laura Burt</td>
<td>Suzanne Kamler</td>
</tr>
</tbody>
</table>
The newest NIs have been encouraged to post practice tours on the January tour board. Any practice tours posted will be included in the online NI calendar. If you are actively leading tours, please sign up to be an observer. Allow the new NI to conduct the tour with minimal interruption to their focus and flow. At the conclusion of the tour, take 15-20 minutes to debrief and complete an observation form.

Nature Interpreter Touring Preference Questionnaires were broadcast via email in mid-December by this semester’s Education RA/TA Maria Jesus. If you have not already done so, please check your Inbox for the message with an attachment from Maria mjesus@rsabg.org or pick up a copy from the tour board. Return the completed Touring Preference Questionnaire to Maria Jesus by January 7, so we may include your name on the spring roster of Nature Interpreters. Please do not be left out or left behind. Spring team duty begins February 1, 2019. Spring will be busy, and we will need YOU.

The Family Bird Festival at the Garden is set for Sunday, February 17. We will need a flock of volunteers to get this fun and educational event off the ground! Please check the Volunteer Opportunities Board and Volgistics. Sign up to help with an information or activity or craft station. Experience is not necessary for many of the positions. Event orientation is set for February 15 at 1 p.m. in the East Classroom. As part of a worldwide citizen science project, The Great Backyard Bird Count (GBBC), bird counts are recorded in the Garden and reported to Cornell University’s Ornithology Department. Native and migratory birds are attracted to California native plants. It’s a beautiful thing.

You are cordially invited to the first materials prep work party of the year on Wednesday, January 9, 9–11 a.m.

Best wishes for a fantastic 2019!

–Judy

**Volunteer Enrichment:**

**Alluvial Shrub Environments**

Lynn Miller for Linda Clement, Enrichment Committee

Please join us on Monday, January 28, at noon in the East Classroom to hear Steve Bryant’s presentation on alluvial shrub environments that must balance water accessibility with the risk of being washed away. Local areas include the recently visited Whitewater Preserve as well as coastal alluvial habitats. Steve is an emeritus professor from Cal Poly Pomona (biology and liberal studies) who likes to grow California desert and coastal sage plants, as well as all species of Fouquieria (Ocotillo family). This will be a worthwhile follow up to our November field trip.

See you Monday, January 28 at noon for this presentation. You are welcome to bring your lunch, and coffee, tea, and cookies will be provided.

**Community and Family Education Volunteers**

Are you a volunteer interested in helping with Community Education in the New Year? The Garden is offering new programming for children preschool – 4th grade, as well as family programs that will need assistance with curriculum, set-up and being that extra person in the audience “just in case”!

Programs include:
- Preschool Nature Hour (Wednesday and Saturday mornings).
- Yoga in the Garden (first Saturday of the month).
- Nature Monoprints.
- Japanese Tea Ceremony
- Second Sunday’s paper folding activities.

Contact Lisa Pritchard for more information: lpritchard@rsabg.org
Volunteer Programs
Kathleen Noll, Manager of Volunteer Programs

Happy New Year!
Rancho Santa Ana Botanic Garden could not do the work that we do to fulfill the Garden’s mission to inspire, inform and educate the public about California’s native flora without the countless hours given by individual volunteers. It is true that volunteers are the driving force of our organization. Our goal is to match volunteer interests and skills with the needs of the Garden to create meaningful and fulfilling experiences for all who partner with us.

Our volunteers have enthusiastically embraced the Garden’s online volunteer management system, Volgistics. The system is designed to simplify your volunteer experience by allowing you to independently schedule volunteer service and report service hours. I encourage you to set-up your Volgistics account if you haven’t already done so, and utilize the iPads located throughout the Garden at the Kiosk, Horticulture Building Break Room and the east hallway of the Administration Building.

Special thanks to all for volunteering for Luminaria Nights. The Garden was stunning with Origami sculptures illuminated with lanterns and the sound of beautiful music. Luminaria Nights is a true labor of love, and we thank you all for your effort with this very special winter tradition.

Coming up next:
• Grapevine Harvest and Wreath-Making event will take place on Monday, January 21 (Martin Luther King Day). We will meet at 8 a.m. in the Horticulture Complex. Bring your own pruners, gloves and a refillable water bottle. Refreshments will be provided. Native Designs schedule wreath-making shifts. More information to follow.

• Family Bird Festival: Sunday, February 17, 10 a.m.–3 p.m. Sign-up sheets will be flying into your inbox this month. Be sure to sign up on Volgistics or send an email if you would like to help.

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

Notes from Advancement
Anne Scott-Putney, Director of Advancement

The Forest Pavilion: An Education Hub for the Garden!
Have you heard about the new Lewis Family Forest Pavilion + Center for Sustainable Gardening at Rancho Santa Ana Botanic Garden?

The Forest Pavilion + Center for Sustainable Gardening will be the new hub for community educational programming, school tours, demonstration gardens and events at RSABG—all sited in a beautiful, inviting and shady space adjacent to the Tongva Village. Remember the old caretaker’s house next to Maintenance? That dilapidated old house was torn down in the fall of 2017 and the site prepared for this exciting new multi-purpose project.

Fast forward a year to right now, and we are proud to announce that we have approved the project concepts and raised more than half of the funds necessary to build the project. We would like to share the architects’ renderings, model and case for support with you, and invite your participation.

Learn more about the Forest Pavilion by taking a look at:
• a display of the Forest Pavilion architectural model and architect’s renderings—this is on display just under the staircase that goes up to the RSABG library.

• website pages about the Forest Pavilion project, with photos, renderings, the case for support, and information about how you can get involved. You can visit these pages at: https://www.rsabg.org/support/forest-pavilion

Information about the Forest Pavilion project is available at the Advancement Offices. We have a beautiful case for support about the project.
that includes information about how you can get involved in supporting the RSABG educational and horticultural mission through your campaign support.

Karina and I are available to answer any questions, to take you on a walk to the site and show you how it is being designed, and to share with you how multiple groups will be able to use it. I know that you will be excited to see how this space is being transformed!

Thank you,

Anne

**American Elm**

(***Ulmus americana***)

**And Slippery Elm**

(***Ulmus rubra***)

Rudi Volti, Nature Interpreter

Non-native trees have once again infiltrated my ongoing arboreal saga. However, during the early history of Claremont the fact that elms are not native to California may have been perceived as a virtue. From its foundation in 1887 our city was projected to be a West Coast version of a New England town, and what could be more appropriate than a street lined with stately elm trees? In this case the chosen street was Alexander Avenue, which was renamed Indian Hill Boulevard in 1960.

The elm family **Ulmaceae** contains 15 genera that encompass 140 species; our subject, the American elm, is a member of the genus *Ulmus*, which includes anywhere from 30 to 40 species, depending on how hybrids are classified. It is easily recognized by its spreading, open branches that form the shape of a vase. Full-grown American elms typically reach a height of 25 m (80 ft) to 30 m (100 ft), and a width of 20 m (65 ft) to 36 m (118 ft). They range widely in eastern North America, extending from Newfoundland to Florida, and as far west as Montana and Texas. Their lack of innate suitability for places like Claremont lies in their preference for well-watered sites, even those prone to occasional flooding.

Claremont is one of the few places where elms have not been exposed to Dutch elm disease, a usually lethal disease that beginning in the 1930s has affected 98 percent of elms across North America. Unfortunately, the disease resistance of Claremont’s elms did not ensure their long-term survival. Eleven of the iconic trees along Indian Hill Blvd. had to be removed in 2016, victims of drought, old age, and a debilitating tree bacteria, *Xylella fastidiosa*. New elms have been substituted for the ones that were removed. Fortunately, elms are fast-growing trees; young individuals grow at the rate of 3 to 6 feet a year. But it will be quite a while before the newcomers spread their branches over Indian Hill Blvd.

A similar fate befell the trees in Scripps College’s Elm Tree Lawn, the site of its annual commencement ceremonies. The college agonized over the removal of the beloved trees that had graced the campus since 1938, but the debilitated 70-year-old trees were deemed an increasing safety risk. The college removed them following commencement ceremonies in 2008 and replaced them with 24 specimens of the more resilient Princeton elm.
Although Claremont is identified with the American elm, another member of the genus, slippery elm (Ulmus rubra), deserves a mention. Its inner bark can be chewed for relieving sore throats and several other maladies. When chewed, its ability to produce a mucilage-like substance was valued by a few baseball pitchers who threw a spitball from the 19th century up to the first three decades of the 20th century. The application of this substance affected weight distribution and wind resistance on different parts of the ball, which caused the ball to break in an unpredictable manner. The pitch was banned in 1920, but pitchers who were active in the major leagues before the ban were allowed to continue throwing it. The last pitcher to legally employ a spitter was Burleigh Grimes. He retired in 1934 with a 270–212 won-loss record, but in subsequent years several pitchers have been suspected, with plenty of justification, of occasionally throwing wet ones.

HELP WANTED
READY TO TRY SOMETHING NEW AT THE GARDEN? WE NEED YOU!
Weekly Volunteer Positions Available
Contact Kathleen Noll for more information: knoll@rsabg.org

Herbarium Specimen Mounter:
We are looking for a volunteer who can assist with mounting pressed plant specimens on Thursday mornings.

Herbarium Sewing & Repair:
We are looking for volunteers who can assist in the afternoons with specimen repair and sewing. This involves reattaching damaged specimens to mounting paper or sewing woody specimens to mounting paper to prevent specimens from detaching.

Grow Native Nursery Assistant:
Volunteers are needed to greet nursery customers, direct inquiries to GNN staff and assist with nursery operations. Thursday – Sunday, mornings and afternoons available November–May.

Garden Shop Assistant:
Volunteers are needed to greet guests, perform cashier duties, and interact with visitors to the administration building—be the “Face of the Garden.”

Bench Brigade:
Four volunteers are needed to assist with bench keeping every other week on a day of the week of your choice.
Nature Interpreters often stop at the Palm Oasis and show owl pellets to their groups. Owls cannot chew their prey, so must either swallow them whole or tear them into pieces. This means swallowing indigestible animal parts like bones, fur, feathers, teeth and claws, and then regurgitating them in a pellet. Hawks and other raptors also form pellets, but the pellets are usually smaller and contain fewer prey parts.

Owls do not have a crop like most birds, where swallowed food can be stored temporarily. Instead, owls have two stomachs. The first is a glandular stomach (proventriculus), an enlarged part of the esophagus, where gastric juices begin the digestive process. The partly digested mass then moves to the muscular stomach (ventriculus), or gizzard. This stomach contains digestive juices and grit that the muscles of the stomach use to grind the meal. Parts of the prey that can be digested safely continue on through the digestive system. The bones, fur and other indigestible materials are compressed into a pellet the shape of the ventriculus, and then moved back to the proventriculus.

When the pellet is in the proventriculus the owl cannot feed; the esophagus is blocked. The owl usually returns to its favorite roost and may wait almost a day before regurgitating the pellet. During regurgitation the bird appears uncomfortable and reluctant to fly. It then stretches its neck up and out, letting the pellet drop. There is no gagging or forceful ejection and afterwards the owl is ready to eat again. Owls may eject a pellet every one or two days.

Owl pellets are used for things other than to fascinate tour groups. Scientists can use pellets to indicate the species of owl, its diet, and how often it feeds. Others use DNA from the bones to identify small mammals, their distribution, and changes in population.

**Book of the Month**

Julie Scheuermann, Volunteer Library Committee

“100 Plants to Feed the Bees: Providing a Healthy Habitat to Help Pollinators Thrive” by The Xerces Society. 239 pages, Storey Publishing, North Adams, MA, 2016

The author of this book, the Xerces Society, is an environmental organization that focuses on the conservation of invertebrates considered to be essential to biological diversity and ecosystem health. 100 Plants to Feed the Bees addresses the environmental concern of the loss of pollinators in the environment and is a guide to plants that can be used to create a pollinator garden.

The introductory section of the book contains basic information on how plants are pollinated, how they attract pollinators, and the benefits to the pollinators.

The book indicates that two basics of a successful pollinator garden are to be pesticide free and to use plants native to the area. By using native plants, the invasion of weeds is less likely and the plant’s moisture requirements are more easily met.
There is a detailed entry for each recommended plant. The entry includes the plant’s common and scientific names, a large color photo, a list of pollinators attracted to the plant, bloom period, how to use the plant in a landscape, exposure and moisture requirements, size, color, and distribution of the plant throughout the United States. The entries also contain interesting facts about the plant.

The book covers all areas of the United States, but many of the plants listed are native to California.

The Xerces society intends for the book to be useful to a wide variety of people. Their information can be used by homeowners converting their yard to a pollinator garden, farmers creating hedgerows or field borders, and urban planners landscaping intercity corridors.

This book makes it easy to envision a solution to the pollinator crisis. It is available for check-out in the Volunteer Library.

---

**JANUARY CALENDAR**

**Events**

**January 21:** Grape Vine Harvest—Wreath-making, Martin Luther King Day, Monday, 8 am–2 pm

**Ongoing—Classes—Workshops**

**January 5:** Garden Walking Club, Saturday, 8 am, Admission Kiosk

**January 6:** Pomona Valley Audubon Society Beginner’s Bird Walk, Sunday, 8–9:30 am, Kiosk, FREE

**January 7:** Volunteer Library Committee Meeting, Monday, 10:15–11:45 am, Volunteer Library

**January 8:** Public Relations Committee Meeting, Tuesday, 9–10:30 am, Volunteer Library

**January 9:** Education Materials Work Party, Wednesday, 9–11 am, Lenz Horticulture Classroom

**January 10:** Volunteer Organization Board Meeting, Thursday, Noon–1:30 pm, East Classroom

**January 12:** Garden Walking Club, Saturday, 8 am, Admission Kiosk

**January 13:** Second Sundays at Origami in the Garden², Sunday, 8–5 pm, free admission for Claremont residents

**January 17:** Visitor Education Committee Meeting, Monday, 1–2:15 pm, Volunteer Library

**January 19:** Garden Walking Club, Saturday, 8 am, Admission Kiosk

**January 19:** Family Bird Walk—Wild Birds Unlimited, Saturday, 8 am, Admission Kiosk, FREE

**January 20:** Medicinal Plants of California Herb Walk, Sunday, 10 am–1 pm, $20 members/volunteers (pre-registration required)

**January 21:** Martin Luther King Jr. Day FREE ADMISSION DAY

**January 21:** Grape Vine Harvest—Wreath-making Event, Martin Luther King Day Monday, 8 am–2 pm

**January 26:** Garden Walking Club, Saturday, 8 am, Admission Kiosk

**January 28:** Education Materials Work Party, Monday, 9 am–10:30 am, Lenz Horticulture Classroom

**January 28:** NICE Walk with Maria Jesus—Rare and Endangered Plants, Monday, 10:30 am, meet at Admission Kiosk

**January 28:** Volunteer Enrichment: Steve Bryant, Monday, Noon–1 pm, East Classroom

**January 31:** Volunteer Time Service Hours due in Volgistics, Thursday, 8 am–5 pm