Local art legend David Lance Goines created a new poster for the Garden this year

The focus of this new poster is on the Japanese Pool, an iconic spot in the Garden with an interesting history. When the 1939 Golden Gate International Exposition on Treasure Island closed in 1940, its Japanese exhibit was donated to the Garden on behalf of the Japanese government, with the aid of a donation from the UC Japanese Alumni Association.

The Treasure Island exhibit was comprised of stone from Japan, including lanterns and a bridge displayed as a Japanese garden and pool. Kaneji Domoto, a prominent landscape architect in the San Francisco Bay Area, assisted in designing the Japanese gardens at the Exposition. He also designed the reinterpretation of the display and supervised Japanese workmen as they placed about 150 boulders to create the waterfalls and pool in the UC Botanical Garden.

Posters are available for purchase in The Garden Shop.

Newsletter Cover

The photograph on the cover of this Newsletter is of the much beloved Japanese Pool. The Yukimi-gata (snow viewing) lantern, framed by fruits of a lovely sedge (Carex baccans), is an original piece from the Golden Gate International Exposition. The Japanese Pool is a favorite of many Garden visitors for its plantings and overall beauty and tranquility. It is also a draw for the wildlife, providing a home for birds, newts, snakes, frogs, and many invertebrates.

Photo by Marketing Student Assistant Joanne Gong, a UC Berkeley senior in Media Studies.
CONTENTS

3 DIRECTOR’S LETTER
5 COLLECTION UPDATE
8 CONSERVATION & RESEARCH
11 ANNUAL REPORT
13 EDUCATION
14 PROGRAMS & EVENTS
17 GARDEN ADVISORY BOARD
19 VOLUNTEERS
20 GARDEN STAFF
21 DONOR THANK YOU

PLAN YOUR VISIT

HOURS

Open 
9 am - 5 pm
No entry after 4:30 pm
Mather Redwood Grove 
9 am - 4:30 pm
Glasshouses 
9 am - 4 pm
Garden Shop & Plant Deck 
10:30 am - 4:30 pm
Closed 
Thanksgiving Day, December 24, 25, 31, January 1, MLK Day.
See our website for closures.

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Staff photo credit throughout Newsletter: Vanessa Handley, Holly Forbes, Delanie Lowe, Christine Manoux, Deepa Natarajan, Joanne Gong.
As I begin my new role as director of the Garden, I look ahead to the challenge and satisfaction of leading this remarkable institution. In these times of political turmoil, climate change, and virtual realities, the Garden offers a respite from life’s daily trials.

Underlying my objectives and activities as director is the view that we as humans need to partner with plants. Not only is the future of humanity contingent on such a partnership, many plants rely on human intervention for their continued existence.

Stewarding the collection is my top priority. Under the care of its very talented and dedicated staff, the Garden has prospered. Working together, Garden staff members consider what new plants to add to the collection and evaluate what plants to remove. In this regard, I am happy to report that a successful collaboration has been established between our Director of Collections and Research Dr. Vanessa Handley and colleagues in Mexico. We are particularly excited about the fieldwork in which she acquired Mexican cloud forest plants. These are already being planted in the Garden.

Hindering such efforts, and indeed affecting the entire collection, is the aging infrastructure of the Garden, including outdated irrigation systems and deteriorating greenhouses. Hence, much of my effort as director will be focused on securing funds to modernize the Garden’s infrastructure. The Garden recently assumed management of the Jane Gray Greenhouse (JGGH), and its adjacent headhouse, which will provide us space to re-house collections that are currently located in deteriorating facilities.

Before relocation of these vital collections commences, we will need your support to help restore and modernize JGGH and other special greenhouses in the Garden. Starting in 2020, you will see us initiate critical renovation of the iconic Tropical House, which has been made possible by a generous donation from Glenn Haldan in memory of his wife, Virginia Zane Haldan. In addition, we would greatly appreciate your help and financial support so we can update the heating system and the interior of the Tropical House. Stay tuned for more details about our other greenhouse projects. I promise this will be a very productive year for improving the infrastructure of the Garden.

As a Berkeley faculty member, I have taught the plant section of Introductory Biology for many years. From this experience, I have come to understand that most of our students and indeed
the wider public perceive plants mainly as a green backdrop to their lives. For this reason, I view the Garden as having an important role in public education and outreach. Building on the remarkable and successful education program at the Garden, I would like to expand our public education efforts. Towards this goal, I will work towards developing new teacher training programs. In one model, teachers would come to the Garden for a week during the summer to be exposed to lectures and lab exercises on plant biology. They will take what they learn from these experiences and incorporate them into their teaching.

Another important emphasis of my work as director is increasing overall attendance at the Garden, with a special effort towards expanding the diversity of Garden visitors. We need additional lures to draw individuals who bring varied cultural perspectives to the Garden. I believe that, once they see the Garden, many will become members. Some of the proposed enticements include interpretation of a large petrified log near the Tropical House and development of a pollinator garden. Several volunteers have also suggested developing plantings that will attract more birds, especially hummingbirds. I am open to your ideas on building Garden membership, so feel free to contact me.

A major, though not widely recognized, role of the Garden is its deep involvement in conservation, with an emphasis on conserving species native to the Bay Area. These activities not only make the Garden an important resource for northern California, but also serve to bring public attention to the Garden. I hope to build and expand on the Garden’s conservation and outreach efforts by seeking additional extramural funding and, just as importantly, enlisting Berkeley undergraduates as partners in these activities. I invite you to join me in supporting these important initiatives at the Garden.

Lew Feldman, Executive Director
Tropical forests are the most biodiverse ecosystems on Earth, collectively harboring roughly 60% of the world’s species. Tragically, these cradles of biodiversity are also among the most critically imperiled. Current estimates indicate that tropical forests are being lost at the alarming rate of over 39 million acres per year worldwide. This catastrophic loss is exacerbated by recent intensification of meteorological events, causing further loss of forested areas and associated soils.

This situation is writ large in the Philippine archipelago. While the islands that comprise this nation harbor immense biodiversity, less than 10% of the original habitat remains. The biodiversity in these remnants is seldom well documented and often subject to ongoing encroachment. Scientific exploration and conservation are therefore vital, particularly in the southern Philippines.

To this end, an ambitious four-year botanical survey of this region was recently initiated. The project is funded by the National Science Foundation through an award made to researchers at the Botanical Research Institute of Texas (Dr. Peter Fritsch), University of North Carolina Wilmington (Dr. Darin Penneys), and Southern Illinois University (Dr. Daniel Nickrent). I was honored to be invited to participate in the project and embarked on the inaugural expedition this past June.

Our international team assembled at Central Mindanao University (CMU) in Bukidnon, Mindanao, the second largest island in the Philippines. Our hosts and in-country partners (led by Dr. Victor Amoroso and Dr. Fulgent Coritico) gave us the warmest welcome imaginable. They also organized a botanical symposium at which many of us presented (I delivered a talk on “Integrated Conservation at the UC Botanical Garden”). Researchers and students from throughout the region attended. It was wonderful to meet so many members of the scientific community in the Philippines and share our work at UCBG.

After planning meetings and final preparations (including a trip to the market to purchase the sturdy rubber boots so essential for tropical fieldwork), we headed to our first site, Marilog Forest Reserve. Once there, we broke into our designated groups, including two seed plant groups and one group each for ferns, lichens, and bryophytes. Each group was composed of senior scientists, students, and local researchers. The latter were community members with indigenous botanical knowledge and deep familiarity with the forests we would be exploring. Both kinds of expertise proved invaluable during our fieldwork.

Processing botanical specimens into the night at the Mt. Hamiguitan base camp.
The members of Seed Plant 2, as our group was called, quickly fell into easy camaraderie. The long days of intense work were lightened with laughter and conversation. Our collective objective was to systematically survey and document the plant diversity of the area. This required keen scouting and copious documentation via field notes and scientific photographs. Of course, we also collected specimens: materials for herbarium vouchers (pressed plant specimens) and leaflet tissue for future DNA extraction.

We’d set out early each day in anticipation of torrential downpours by late afternoon. Underneath the towering canopy, the tropical montane forest was replete with palms, tree ferns, and orchids. Interspersed were a host of showy shrubs including species of *Fagraea*, *Matthaea*, and *Freycinetia*. Almost immediately we began spotting members of the Melastomataceae, a family of research interest to several of us on the team, myself included. Most exciting was a grove of huge *Astrocalyx calycina*, an extremely rare, endemic tree species. I was also delighted to see another melastome, *Melastoma malabathricum*, lighting up the understory with flamboyant flowers.

Given the botanical richness encountered, we often could only advance a few hundred meters before having to settle down to process a mountain of specimens. In addition to the general collecting activities, I regularly paused to collect seeds and spores for the living collections at the Garden and elsewhere.

The Marilog area had already been subject to botanical surveys so everyone was surprised by the wealth of new occurrences uncovered during this first stage of the expedition, including putative new species. We would have gladly continued collecting there but had to move on to other relatively unexplored localities on the island.

After a brief pitstop at CMU, we set off for Mt. Limbawon, an 1880 m (6100 ft) peak in the Pantaron Range. The journey itself was an adventure, with a dawn departure by van to a rendezvous point by the side of the road. This spot marked the start of a rough dirt track that could not be traversed in vehicles so awaiting us was a fleet of motorcycles. It seemed almost everyone with a bike had been mobilized from the adjacent town. We each hopped behind a driver and set off in a long cavalcade. After a half hour of riding, we arrived at a beautiful village at the base of the mountain. Lunch and then – upwards! The climb was beautiful, but hot. I prefer to get such ascents over quickly, so forged ahead with a group of porters. Easy for me: I was only carrying my own gear. The men and women porting had giant packs of provisions, including heavy cooking pots, sacks of rice, and, most remarkably, cardboard tiers of fresh eggs. All were balanced with seeming ease up slippery mud slopes navigated in flip flops or bare feet.

Members of the local community had cleared the route to our base camp; we were grateful not to have to machete through the undergrowth. We pitched our tents and immediately started exploring. Over the next week we made transects from camp to the top of Limbawon. The unspoiled mossy forest at higher elevations was breathtaking, as were the otherworldly pitcher plants (various *Nepenthes* species), stilt palms, and epiphytic Ericaceae. The “bonsai forest” at the peak was speckled with pint-size *Dacrydium elatum*, boggy thickets of twigbrush (*Machaerina*), and woody plants such as *Rhododendron quadrasianum* and *Syzygium*. It is also home to an intriguing disjunct population of...
Drosera rotundifolia, the round-leaved sundew found here in California!

Dramatic rains quickly reduced our campsite to a sea of mud and one sustained downpour transformed the meandering stream beside us into a roaring, brown river. Quick thinking by some of the community researchers, and brave maneuvering of a massive log, saved the camp from total inundation. Despite the soggy conditions, everyone worked diligently and cheerfully, excited to have the chance to contribute to botanical knowledge of the region. Once again, the number of specimens gathered far exceeded expectations. We often worked into the night perched under tarps with flashlights and steaming mugs of Milo (a chocolate drink popular with children…and botanists).

From Mt. Limbawon, we continued onto Mt. Hamiguitan in an adjacent province. Reaching the base camp required another long climb, but the exquisite views from mountain to sea spurred us on. We were rewarded with yet another palette of amazing plants. I marveled at massive trunks of almaciga (Agathis philippinensis) coated in beads of fragrant pitch, elegant fans of Sararanga sinuosa, and – as at the previous sites – the remarkable diversity of pitcher plants and Medinilla species (another genus in the Melastomataceae). We spent several days working our way up and down the mountain. The peak was at a similar elevation to Mt. Limbawon, but had a very different profile. Bathed in mist, it nonetheless was drier and lacked the boggy plateau. The edges of the long ridgeline dropped off abruptly to steep slopes cloaked in dense vegetation. When the veils of fog momentarily parted, it was heartlifting to see how far the seemingly undisturbed forest extended.

After three weeks of fieldwork, I traveled to the city of Davao to secure a phytosanitary certificate for the many propagules collected during the expedition. I spent two days cleaning and processing everything and then went to the port for inspection and certification. After clearance, my collections were transported back to the United States for secondary inspection by the USDA. Those materials will now be propagated here at the Garden; many will ultimately find a home in our greenhouse and Asian Collection.

In parallel to this project, we have been hard at work integrating materials collected from last year’s expedition to Chiapas, Mexico (for more on this project, please see our 2018 Newsletter). Thanks to an anonymous donor, we were able to accomplish much needed tree work in the Mexican/Central American Section, including reduction of unhealthy or overgrown specimens; this has freed space for new accessions. Eric Schulz (Mexico/Central America Horticulturist) has simultaneously undertaken the monumental project of removing ivy, blackberry, and other invasives from previously undeveloped areas in the lower reaches of this section. This effort exposed a broad slope to which he has been introducing dozens of Chiapan plants expertly cultivated by Susan Malisch (Propagator) in the nursery and carefully tracked in our database by Clare Loughran (Assistant Curator). While the display is young, it will hopefully soon mature into an exciting tapestry of cloud forest flora. When you are next at the Garden, we hope you will explore this area, then enjoy watching it develop in subsequent visits.

Serendipitously, this infusion of tropical montane materials coincides with a major renovation of the Tropical House set to commence in 2020. Thanks to the generosity of the Haldan family, we will be able to transform this aging but beloved tropical plant conservatory. Once refurbishment is complete, the enhanced environment in the Tropical House will set the stage for renovation of the interior plantings. While important legacy plants will be carefully maintained, senescing plants and horticultural bedding materials will be replaced with wild-origin accessions from biodiversity hotspots like Mindanao and Chiapas. In the meantime, Corina Rieder (Greenhouse Horticulturist) is bringing her tropical plant expertise to bear on cultivating these materials in our back-of-house collections.

As these and our many other collection, conservation, and research projects unfold, all of us at the Garden take pride in contributing to the documentation and preservation of our global flora. Cultivating biodiversity – and sharing it with our visitors – is at the heart of our mission to further the conservation of plants and promote public understanding and appreciation of this diversity. Please stay tuned for more exciting biodiversity initiatives!

Vanessa Handley, Director of Collections & Research
It is the nature of plant conservation projects that they are, almost without exception, long-term efforts. Each project requires seasonal observations in the field and experimentation in the nursery. New information then informs our activity calendar each succeeding year.

The large-flowered fiddleneck (*Amsinckia grandiflora*) Recovery Implementation Team (RIT) met in February to discuss next steps after the winter 2018/2019 outplanting work. Garden staff Holly Forbes and Vanessa Handley serve on the RIT, a federally-appointed group that helps coordinate efforts to recover species from the brink of extinction. Holly and Vanessa collected seed from the sole remaining natural population to help sustain future outplanting projects.

Staff and many volunteers worked behind the scenes on this project, sowing nursery-produced seeds in thousands of cone-shaped containers. Several Garden horticulturists joined the conservation team (Holly, Vanessa, and Assistant Curator Clare Loughran) during the outplanting in winter 2018-2019. The challenge of planting over 4,000 plants at four steep, wet sites made for a good team-building exercise for all involved.

We’re happy to report that the spring results in 2019 were the best yet, with over 30,000 plants in bloom. This project was featured in our annual Big Give in March. Thank you to all who supported our conservation efforts during this fundraising drive. Please see the Garden website (botanicalgarden.berkeley.edu/biggive) for the wonderful large-flowered fiddleneck project video produced by Marketing Specialist Delanie Lowe. Funding from the Bureau of Reclamation (with coordination by Vollmar Natural Lands Consulting, LLC) makes this ongoing conservation project possible.

The farewell-to-spring seed banking project had our staff in the field again, making another conservation seed collection of the Merced clarkia (*Clarkia lingulata*). One of the two sites where it occurs was significantly damaged/burned in the Ferguson Fire of 2018 near the entrance to Yosemite National Park, seriously changing the physical character of the site. The second site did not burn and Merced clarkia was in abundance there. Our funding partner, the US Fish & Wildlife Service, was able to make a modest seed collection of Whitney’s farewell-to-spring (*Clarkia amoena* ssp. *whitney*) from Mendocino County in August 2019. We will be growing it out for seed production and conservation banking in spring 2020. These efforts are being made to help forestall the need to add these species to the Endangered Species Act. In addition to the six species of this project, we seed banked Mariposa clarkia (*Clarkia biloba* ssp. *australis*), one of the ancestors of Merced clarkia.

Coast yellow leptosiphon (*Leptosiphon croceus*) is a small annual wildflower native to one tiny patch of coastal bluff near Half Moon Bay. This was a good year for the population, as
we observed an estimated 3,165 plants. The coastal bluff site is vulnerable to erosion and invasion by non-native plants, and additional impacts to the site may occur with the development of housing nearby. We were happy to achieve our goal this year of having at least 3,000 seeds protected in our seed bank.

Funds donated to the Garden through the annual Big Give, supplemented by contracts with the US Fish & Wildlife Service, continue to support conserving several other species. The work includes growing, reintroducing, and monitoring Baker’s larkspur (*Delphinium bakeri*) and yellow larkspur (*Delphinium luteum*) populations and seed banking several federally-listed San Francisco Bay Area species. In 2018-2019, we identified potential sites for introducing yellow larkspur to Marin County and conducted seed collections of Tiburon mariposa lily (*Calochortus tiburonensis*), Baker’s larkspur (*Delphinium bakeri*), yellow larkspur (*Delphinium luteum*), Calistoga popcorn flower (*Plagiobothrys strictus*), and San Mateo woolly sunflower (*Eriophyllum latilobum*).

We continued our contract work with California State Parks to monitor Mt. Diablo buckwheat (*Eriogonum truncatum*) populations. Holly and Clare, accompanied by park natural resource program managers Cyndy Shafer and Gina Benigno, hiked cross-country over difficult terrain in June to document the numbers of introduced plants on Mt. Diablo. The numbers were better than in 2018, but not as good as we had hoped.

California Plant Rescue (CaPR, caplantrescue.org) is a consortium of Center for Plant Conservation member gardens like UCBG and other conservation practitioners working to conserve California plant species. CaPR’s near term goals include seed banking all native California species with five or fewer remaining populations. The seed collections described above were from some of the rarest plants in California, each having fewer than five populations.

Our Berkeley location makes conservation of California
CONSERVATION & RESEARCH

native plants a natural focus. The Garden collections, however, are nearly worldwide in content. Some of the species in our holdings are extinct in the wild, or nearly so. The southern Mexican species golden fuchsia (*Deppea splendens*) was described for science in 1987 by former Garden staff member and then botanist at the California Academy of Sciences Dr. Dennis Breedlove. It’s available in the local horticultural trade, but until 2018 was thought to be extinct in nature for many years. We are working with colleagues at the Huntington Botanical Gardens and in Chiapas, Mexico, to repatriate this species. Because it is self-sterile, Assistant Curator Clare Loughran made pollination crosses among the variety of clones in the Garden in late 2018. The resulting seeds were harvested about seven months later and are stored in our seed bank; plans for these seeds are being developed with our partners.

Director of Research and Collections Dr. Vanessa Handley and Curator Holly Forbes joined Garden Advisory Board member Dr. Tim Gregory in attending the 11th International Conference on Cycad Biology held in August 2018 in White River, South Africa. Dr. Handley made an award-winning presentation on her work with colleagues in assessing the genetic diversity of the Venda cycad (*Encephalartos hirsutus*). The Garden has the largest collection of this species in the United States. It is functionally extinct in habitat due to losses from poaching. Drs. Handley and Gregory serve on the Species Survival Commission Cycad Specialist Group of the International Union for Conservation of Nature.

The Garden provides researchers at UC Berkeley and around the globe with fresh or dried plant material and/or data for a variety of purposes. Some of the current plant DNA studies are being applied toward conservation goals. Here are just two examples:

Dr. Ana Almeida, a member of the faculty of Cal State East Bay (CSUEB), and her students started analyzing the Garden’s extensive collection of rare California species for a conservation genomics project. Dr. Almeida is very familiar with the Garden collection, having sampled it for her Ph.D. and post-doc work at UC Berkeley, and having worked as a graduate student researcher for the Garden during her Ph.D. program.

Dr. Craig Brodersen of Yale University and his post-docs continue to sample the Garden collections extensively for their work on internal leaf anatomy. Several publications have resulted from their sampling (e.g., Earles et al. 2018 listed below).

Holly Forbes, Curator

Recent publications citing the Garden’s collections include:


Li, Hong-Tao, Ting-Shuang Yi, Lian-Ming Gao, Peng-Fei Ma, Ting Zhang, Jun-Bo Yang, Matthew A. Gitzendanner, Peter W. Fritsch, Jie Cai, Yang Luo, Hong Wang, Michelle van der Bank, Shu-Dong Zhang, Qing-Feng Wang, Jian Wang, Zhi-Rong Zhang, Chao-Nan Fu, Jing Yang, Peter M. Hollingsworth, Mark W. Chase, Douglas E. Soltis, Pamela S. Soltis and De-Zhu Li, May 2019. Origin of angiosperms and the puzzle of the Jurassic gap. Nature Plants 5:461–470.
92,457 visitors came through our gate. Of significance: 4,905 visitors were Garden Members, 6,781 were UC Berkeley students, and 3,987 came on Free Wednesdays.

3,651 people are Garden Members. Of that, 2,295 are families and 226 are UC Berkeley students.

6,902 individuals attended public programs.

1,148 children and chaperones participated in family programs and summer camp.
### YOUTH TOURS & SCHOOL PROGRAMS

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<th>158</th>
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**Total K-12 Students Served:** 5,074

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### GRATIS COLLEGE CLASS VISITS

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**Total College Students Served:** 3,126

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### ADULT TOURS & GROUP VISITS

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<td>ADULTS</td>
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</table>

**Total Adult Learners Served:** 4,118

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**126 events** were held in the Garden for 9,544 guests. 87 of these events were weddings and 25 were for UC Berkeley departments and groups.

**330 active volunteers** dedicated 18,186 hours to the Garden. Their estimated value is $449,000 or 8.74 full-time employees.

**413 new plants** have been accessioned to the Garden.

**15 rare taxa** have been seed banked.
A New Docent Training Program

The Garden has many avenues for educating the public, from lectures, walks, and workshops, to outreach at schools and community events, but the heart of our education program is our docents. As they guide visitors through our diverse landscapes, they reveal the underlying plant science and natural history to provide a deeper understanding of the collection.

With great excitement, we launched a new docent training course at the Garden this fall. In 2018 we took a brief hiatus from offering the traditional eight-month course so we could reflect on how best to give new docents the skills and tools to feel grounded in this place, confident in their knowledge, and equipped with the art of guiding visitors of all ages on a journey of discovery. We redesigned the course by splitting it into two modules and by developing a post-graduation continuing education component.

The first four months of the new docent training course began this September. Module One provides trainees with a sense of place in our living museum of plants. It also gives them expertise on the core plant concepts we weave into Garden interpretation. We focus on understanding the collection as a curated living museum and on our role in plant conservation. In this updated curriculum, we take a more systematic approach to teaching botany, with a new emphasis on plant evolution, adaptation, and diversity. By the end of Module One trainees will be able to confidently lead a general Plants of the World tour in the Garden.

After winter break, trainees return for Module Two. In this section of the course, we dive into the details of themed tours. Each theme provides a new lens through which to explore the inner workings of the natural world and our relationship with plants. There are currently 15 tour topics for docents to draw from, including the popular Plant Wonders: A Sensory Walk and California Ecosystems and Habitats. In addition to mastering tour content as part of the Module Two curriculum, trainees will learn some of the most engaging ways to bring the topics to life. Experienced docents will model guided observation and inquiry techniques using hands-on materials and other interpretation strategies. As they practice the art of telling plant stories, trainees will delve into best practices for audience engagement that lead to those wonderful “aha!” or “wow!” moments of discovery. Trainees will shadow experienced docents on real tours so that by completion of the course they will be ready to lead their own guided walks.

After trainees have been steeped in botany basics and interpretation skills during the eight month formal course, they will learn more about plant treasures in each area of the Garden from horticulture staff. A variety of continuing education opportunities provided throughout the year will help them expand their expertise.

This year’s docent training class consists of an outstanding group of individuals from myriad interesting backgrounds, all who share a special enthusiasm for plants and gardens. We are so pleased to have them embark on this new training program and join our community.

Christine Manoux, Director of Education & Programs
2019: Connecting Plants and People

Centered around the theme of ethnobotany, our programs during 2019 have been particularly meaningful. The Year of Ethnobotany began with our 10th annual Plants Illustrated exhibit of botanical art, with members of the Northern California Society of Botanical Artists presenting lovely artworks highlighting relationships between plants and people.

By February, the Garden programs were in full swing, with events centered around one of the most important plants we use on a daily basis – coffee! With the aim of deepening public understanding of the complex issues that surround our use of plants, we also hosted programs on chocolate, kava, biblical botany, and more.

The newly revamped Fiber & Dye exhibit, along with associated programming, opened in March and was wonderfully received. Monthly Plants + People talks featured UC Berkeley graduate students and post-docs presenting on interdisciplinary aspects of ethnobotany.

During the summer, we switched gears to our beloved Redwood Grove concert series and hosting the Apples & Hops Garden Festival. The year culminated in our international Ethnobotany Symposium, which brought together scholars, practitioners, and community members to discuss and engage with the multitude of subtopics that constitute ethnobotany.

2020: Conservation in Focus

Conservation underpins all of our work at the Garden, so this is the theme we will spotlight throughout 2020. Next year, look for monthly talks, workshops, panel discussions, and tours of the Garden centered around the important and pressing topic of conservation. We will be taking this opportunity to share with the public some of the important local and international work the Garden is doing to help save the world’s rare and endangered plants.

Deepa Natarajan, Program Coordinator

From top: 2019 Plants Illustrated: Celebrating Ethnobotany exhibit; The newly revamped Fiber & Dye exhibit; Children enjoying apple samples from Filoli at Apples & Hops.
We were inspired by the *Year of Ethnobotany* to revive the well-received *Green Gala* eco-fashion show that had been held in the Redwood Grove in 2009 and 2011. This richly aesthetic and meaningful tradition showcases local designers with their beautiful plant-based garments. In 2019, the Garden worked with nine designers-in-residence who utilized dyes from the botanical world and fabrics made from plant-based fibers in their designs. Their work demonstrates the innovative potential of eco-fashion. Amongst other endeavors, the designers addressed the need to recycle and reduce waste in the textile industry, collaborated with traditional artisans from around the world, and developed new techniques for surface design and sculptural art. During *Runway in the Redwoods*, audience members were deeply moved by the peaceful poise of the models and the delightful music of Steven Emerson and friends. As one attendee commented, “It was like a commitment ceremony to climate change.” Following the fashion show, guests were invited to peruse and perhaps purchase a selection of plant-based garments and accessories.
The Garden hosted its first-ever ethnobotany symposium, *Connecting Plants and People: An Ethnobotanical Conversation*, on October 11 - 12, 2019. Over the course of two days, the vast discipline of ethnobotany was explored through a variety of lectures, hands-on workshops, tours, and demonstrations. The Garden hosted both local and world-renowned speakers and presented examples of the multi-faceted relationship between people and plants. We thank our sponsors, speakers, over 200 attendees, and volunteer Garden community for making this a memorable experience for all!
This has been a great year for the Garden and next year promises to be even more exciting. With our new director, Lewis Feldman, having come on board, we are preparing to move the Garden forward in its mission goals: developing and maintaining a diverse living collection of plants, supporting teaching and worldwide research in plant biology, furthering the conservation of plant diversity, and promoting public understanding and appreciation of plants and the natural environment.

We have already made notable strides toward each of these goals and are positioning ourselves to take advantage of new opportunities in the coming year. We have at last obtained control of and responsibility for the Jane Gray Greenhouse and its associated Headhouse. Once the Jane Gray Greenhouse has been refurbished and returned to optimal functioning, it will house the endangered tropical collection in three of the bays (currently housed in a collapsing greenhouse in the corporate yard) and provide one bay for research and conservation studies. The Headhouse will be converted into a working wet lab for conservation and research, as has long been needed at the Garden. This will greatly strengthen the Garden’s capacity for hosting research and conservation studies.

The Garden is closing the year of a lively series of events comprising the Year of Ethnobotany. On October 10th and 12th the Garden hosted over 200 attendees for the symposium Connecting Plants and People: An Ethnobotanical Conversation with a stellar international cast of speakers and workshop leaders.

The Advisory Board participated with
Doreen Sinha grew up in San Jose and received B.A. degrees in Molecular & Cell Biology and Psychology from UC Berkeley. Following graduation, she worked in equity research in Manhattan before returning to the San Francisco Bay Area. She currently works in Commercial Operations at Genentech. She and her husband Ravi, a fellow Cal alum, are active on several boards in their community and Sinha has held leadership roles in multiple groups on the peninsula. She and her husband live in Burlingame with their two children.

June Smith has been an avid gardener since the age of five. During her professional career, she worked in University Relations at UCLA, UC San Diego, and the University of California’s Office of the President. She was lucky to marry another avid gardener, Ad Brugger, who was a UC Dean and Vice Chancellor. They gardened together in Piedmont, where June still resides. June is a former president of the Piedmont Garden Club, a member organization of the Garden Club of America, where June was also National Treasurer. She and her husband (now deceased) have served on the Garden’s volunteer board several times in the past.

Catherine Watters is a botanical artist and instructor who shows her work in annual exhibitions, including recently at UCBG; Filoli; Wave Hill, NY; Kew Gardens, UK; and Villa Bardini, Italy. Her paintings are included in permanent collections at the Hunt Institute; Sydney Royal Botanic Gardens Florilegium; Royal Botanic Gardens, Kew; Museum of Natural History, Paris; Brooklyn Botanic Garden Florilegium; Alcatraz Florilegium; and Filoli Florilegium. Catherine co-founded the Alcatraz Florilegium and the Château de Brécy Florilegium in France. She received a B.A. in French and Art from UC Davis and now teaches and lectures at UCBG, Filoli, Wellesley College and various institutions in France.

Michael Sasso grew up on the East Coast and developed a love of plants at an early age through being exposed to orchids and tropical plants in Florida. Following his graduation from the University of Pennsylvania, he managed agricultural and residential properties where his responsibilities included overseeing renovations, landscaping, and development. In 1997, Michael started a landscaping business and rare plant nursery in San Francisco. Thanks to his unique expertise in horticulture and design, “Potrero Gardens” quickly became a destination and community focal point.

Chris Carmichael is a native of Massachusetts, but has lived in California for 22 years. He received his Bachelor’s degree in Biology from the University of Connecticut and his Ph.D. from Michigan State University. He then worked as Curator of Mammals and Birds at the MSU Museum. He started volunteering at the Garden in 1997, then joined the staff the next year. After retiring from his position as Associate Director of Collections and Horticulture in 2016, he continued gardening at his home in Oakland. Chris is pleased to be volunteering at the Garden again.
VOLUNTEERS

Volunteers serve with passion and dedication in every aspect of the Garden’s mission and work. The Garden continues to grow and thrive thanks to the thousands of hours that volunteers give each year. The Garden is extraordinarily fortunate to have such a vibrant and diverse community so devoted to this special place! The picture above was taken at the Docent, Ambassador & Garden Shop Social in May; their hats were designed and made by docent emeritus and artist Carol Foster, standing far left.

At the end of each year, we recognize those who have reached five-year increment milestones in volunteering at the Garden. In 2018, those who have been volunteering for ten years and above included:

- **10 Years of Service**: Linda Benjes, Rissa Coplan, Tim Gregory, Betsy Littell, Joan Primeau, Akiko Yamamura
- **15 Years of Service**: Cynthia Plambeck, Michael Chinn, Elaine Halnan
- **20 Years of Service**: Steve Asztalos, Emma Connery, Dorothy Sanchirico
- **25 Years of Service**: Nicholas Mills
- **30 Years of Service**: Nathan Shoehalter

*Perry Hall, Volunteer & Tour Coordinator*

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GARDEN STAFF

Third time’s the charm! After two attempts to retire—the first in 2002 as Chair of Deans in the College of Letters and Science and the second from the Garden in 2016—Paul Licht finally retired for good in June 2019. Paul had stepped back in as interim director during a crucial period in October 2018 and continued to serve the Garden the remainder of the academic year. Paul’s 14 years of unparalleled service to the Garden include overseeing the design and construction of the new Garden Entrance Plaza, expanding staff and collections, managing the relocation of Julia Morgan Hall to the Garden, negotiating different phases of ADA compliance work, and cementing re-acquisition of the Jane Gray Greenhouse and Head House. Although no longer an official member of the staff, visitors will continue to hear Paul’s voice floating around the grounds. You are most likely to encounter him driving around in the Licht Mobile golf cart, giving a tour, and telling one of his many treasured Garden stories.

Ben Anderson, horticulturist for the California Area, accepted a position at the nearby Regional Parks Botanic Garden in December 2018. We look forward to collaborating with him in his new role.

Sarah Winninger left the Garden in January 2019 to become the Development Associate at the College of Natural Resources at UC Berkeley. She joined the Garden staff five years ago as the Membership Specialist, and then filled the Development Associate position.

Sophia Warsh joined the staff to care for the California Collection in spring of 2019. She has over 15 years of horticultural experience working at the Queens Botanical Garden, Central Park Conservancy, and Missouri Botanical Garden. Sophia has a certificate in landscape design from the New York Botanical Garden and attended the Native Plant School at the Shaw Nature Reserve in Missouri. She recently completed an M.S. in Museum and Field Studies from the University of Colorado Boulder with an emphasis on field botany of Western North America and natural history collection management.

Ethan Fenner joined the staff in June as Horticulturist for the Southern African Collection. He has a B.A. in Biology from New College of Florida and recently graduated from the School of Professional Horticulture at the New York Botanical Garden. Before coming to the UC Botanical Garden, he studied and interned at various collections, including the Floridian scrub mints at Bok Tower Gardens, South African collections at the San Francisco Botanical Garden, and collections in the Tropical Nursery at Royal Botanic Gardens, Kew.

Emily Gude joined the staff in August 2019 as our new Membership Manager. She comes to us most recently from Inglenook Winery in the Napa Valley, where she held a leadership role on its Membership and Special Events team. She is a UC Berkeley alumna, having graduated with a B.A. in Art History. She previously worked for UC Berkeley as part of the Development and Alumni Relations department.

Megan Peterson joined the staff in August 2019 as Visitor Experience Coordinator. She graduated from UC Santa Cruz with a B.A. in American Studies and comes with eight years of tourism and customer service experience from her work at Visit Stockton, the destination marketing organization for her hometown of Stockton, California.
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For more information, contact Jenny Moore at 510-664-7969 or visit botanicalgarden.berkeley.edu/donate.