My research, and that of my students, focuses on understanding plant evolution using morphological and molecular (DNA) characters to unravel evolutionary relationships. We investigate the mechanisms behind evolutionary trends in plant development. Students in my lab work on everything from tropical ginger to temperate carnivorous plants, from tropical bromeliads to desiccation-tolerant ferns. Our research is not only enhanced by living collections from the UC Botanical Garden, it would be impossible without them. It’s important to recognize two aspects of the Garden’s collection that are beneficial to our research in particular; its depth (capacity to grow more than one individual of each species) and its breadth (overall number of species, or diversity).

**Depth:** Floral developmental research requires sampling from early to late stages of flower development, and this is impossible to do from field collections. You’d have to spend months, if not a full year, in the field to collect everything from the earliest to the latest stages of floral maturation, with nothing to do in the meantime but wait and watch the flower develop. No one has the time (not to mention the patience, or the funds) to sit and watch flowers develop. Having a living collection enables us to sample floral material at all stages of development, regardless of the length of time it takes from early floral stages through to maturity.

Fortunately, Garden staff encourage all scientific endeavors, allowing my students to lop off a fantastic lobster claw (*Heliconia*) inflorescence in its prime, enabling us to get a sample of floral material at just the right stage. The fact that the Garden collection is first and foremost a research collection makes it unique and incredibly special for us. This increases the chances that we can get the material we need at the right stages and that there are multiple individuals to sample from, ensuring that we’ll be able to collect samples as they develop throughout the year.

Undergraduate researcher Sankar Sridaran worked on floral development in the spiral ginger family Costaceae (*Costus dubius*) and the banana family Musaceae (*Musa obtusa*) from the Garden for his honor’s thesis. Sankar traveled to the Garden numerous times to harvest floral material from the Tropical House (*Costus*) or the banana grove just behind the Tropical House; and sometimes I believe he went there as an excuse to escape the lab! Sankar was interested in comparing gene expression in *Musa* and *Costus* to determine which genes may be involved in the different developmental
forms found in these two species, both of which are in the ginger order (Zingiberales).

Graduate student Madelaine Bartlett mentored Sankar on his undergraduate thesis project, and continues to work on material that Sankar diligently gathered from the Tropical House. As her research expands to other ginger order plants (Zingiberales), Madelaine has collected floral developmental material from all the families in the order, including ginger (Zingiber) Alpinia, bird-of-paradise (Strelitzia), and parrot’s beak (Heliconia).

In fact, we have used the Heliconia collection for three different projects: phylogenetics (evolutionary relationships) of Heliconia species (carried out by undergraduate Laura Lagomarsino), floral development in golden lobsterclaw (Heliconia latisspatha) (L. Lagomarsino & M. Bartlett with visiting research Bruce Kirchoff), and comparative floral development across all Zingiberales. These three different projects, all focused on different aspects of the natural history of Heliconia, were made possible because not only were we able to collect numerous flowers from one particular species of Heliconia, but we were also given access to many species of Heliconia all under one roof, which leads me to the next aspect of the Garden’s resources that is so important.

**Breadth:** Many of our research projects involve snipping away small pieces of leaf material with the goal of extracting the plant’s DNA. With this, we hope to elucidate evolutionary relationships. Due to the breath (or diversity) of the living collection, undergraduate students can complete an honors thesis on a single genus or family with sampling almost entirely from the Garden. For her undergraduate thesis, Hillary Cooper collected species of Dracaena from around the world without leaving the comforts of Berkeley. She used the Garden collections to develop a phylogenetic hypothesis for Dracaena and their close relatives, most recently placed in the family Ruscaceae. Her work showed that the Hawaiian genus Pleomele is nested within Dracaena, and that the drought tolerant, tree-like form (exemplified by species like Dracaena, Dasylirion, and Beaucarnea) evolved at least two times independently from understory, temperate moist forest species such as solomon’s seal (Smilacina) and lily of the valley (Convallaria). In addition, she used a molecular clock approach to show that members restricted in distribution to the southwestern deserts of the United States (Nolina, Dasylirion, Beaucarnea, Calibanus) evolved right around the time of the aridification of Sonoran & Chihuahuan deserts, around 30 million years ago.

Graduate student Chodon Sass used the extensive and diverse cycad collections to test out a system for using DNA to ‘barcode’ species of cycads. Testing different regions of DNA allowed Chodon to come up with recommendations for developing a system in which DNA sequences could be used to generate a species-specific tag, a useful ‘forensic’ tool to identify specimens in the absence of reproductive or vegetative characteristics. Her research was made entirely possible due to the breadth of the cycad collection at the Garden. Her results were recently published in the on-line journal Public Library of Science (PLoS One, Sass et al. 2007).

Another graduate student, Nhu Nguyen, working on a short rotation project in my lab, relied heavily on the Garden’s extensive bulb collection. With support from the Heckard Fund of the Jepson Herbarium, Nhu completed a study of western wild onions (Allium) using material from the Garden and from wild collections he made during the spring of 2007. In addition to extracting DNA from the bulb collection, Nhu also spent a good deal of time at the Garden photographing various species of Allium, some of which can be seen in his recent publication.
Dr. Chelsea Specht, for her freshman seminar course, Extreme Green.

The Garden routinely provides material for research off site, usually fresh or dried leaves for phylogenetic studies (evolutionary history), and also for other purposes. Some times it takes many years between the provision of samples and the publication of the research. For example, the Garden provided a plant of *Salvia stenophylla* to Dirk Hoelscher in 1999 and the research paper was not published until 2003 (see list). We always ask for a copy of any research publication that is based, at least in part, on material received from the Garden. Here is a sampling of recent publications.


Am pleased to report that the Garden continues to shine as we move into the new year and a number of important projects have come to fruition since last summer. We ended the fall with another highly successful and exciting Fall Plant Sale; attendance and sales remained high. Too many were involved to thank everyone individually, but we must again recognize the enormous effort that both the volunteers and staff put into making these events the successes that they have become. I look forward to seeing all of you at our upcoming Spring Sale on April 26th, and especially at our traditional members’ only preview sale with reception on Friday evening, April 25th. While on this subject, I cannot resist a plug for our daily plant offerings, now on our newly expanded plant sales deck next to the freshly renovated Garden Shop; in fact, a nice segue into news regarding the shop.

Anyone who has visited the Garden Shop over the past few years could not have helped but notice the rather sorry state into which the facility had fallen: old worn carpets, mismatched display shelves, in need of fresh paint, and an old glass sliding door that often proved difficult to open and close. I am, therefore, very pleased to report that the Garden Shop has finally received a long awaited face-lift in which all of the above were addressed. Many thanks to those donors who generously supported this remodeling effort! This project now completes the renovation of the Garden Entrance begun in 2005.

In addition to the structural improvements to the Entrance, we have also finally begun to address an issue that has long concerned me regarding our public mission; namely, a lack of meaningful interpretive signage for visitors. We began to address this problem with the interpretive signage in the Arid House and this past fall saw a major extension of this interpretive project with a series of new signs from the Entrance to as far as the Southern African Area, as well as in the Orchid, Fern and Carnivorous Plant House. These signs follow a uniform theme of presentation and are intended to inform the curious without burdening visitors. Our goal is
to extend this signage throughout the Garden; work on the second set has already begun. This valuable project has been supported by a series of grants from several agencies, including the Stanley Smith Horticultural Trust, the Elvenia Slosson Research Endowment, the Institute of Museum and Library Services, and Laverne and Douglas Leach.

The construction of a new outdoor cycad exhibit in the Southern African Area was discussed in the last Newsletter. I am now excited to announce the completion of this exhibit; I believe the results are spectacular. Whether you already love cycads or if you want to develop an appreciation for these ancient plants (I like to think of them as dinosaur salad), you must visit the new exhibit. Megan Ray, the horticulturist leading this project, tells the story elsewhere in this issue.

Some of the recent new construction was more behind the scenes but will be equally important for the public in the future. A notable example is the construction of a propagation house for the volunteer plant propagation program. Located on the site of the old Annex that was removed in 2006, this 14 by 30 ft. greenhouse will provide indoor working and propagation facilities to support the expanding propagation program that supports our large plant sales. As with all such facilities, including the Garden Shop renovation, this greenhouse was made possible by generous gifts from the Garden community, in this case, especially from Garden volunteers past and present, and involved no campus funds.

Other construction involved extensive repair to the gutters and roads, especially in the lower portion of the main road near the Tropical House. We continue to address the issue of difficult paths and stairways, but it is truly a daunting problem. One high profile need is in the Mexican/Central American Area, where we must replace about 200 rotting wooden stairs. Another plan for this area calls for the construction of a low rock wall lining the uphill side of the main path.

On the strictly plant side of things, I confess to being obsessed with the outcome of our last blooming of the titan arum “Titania” (Amorphophallus titanum). If you remember, one of our own corpse flowers bloomed last August and our attempts at pollination have proven successful. An impressive head of fruit has been developing and the 4 foot stalk containing hundreds of the fruits is one of the most impressive sights I have seen among plants; I think it is even more fascinating than the bloom. We have opened some fruit and have found a large seed developing. They should be ripe by the time you receive this Newsletter. Many of you may have been following this story with the image timeline on our website which I have been updating on a weekly basis.

I’m also pleased to report that Management Services Officer Nancy Nelson joined the Garden staff in December. She is bringing many years of UC experience to her role as business manager. See her profile in Garden Notes.

—Paul Licht
We are celebrating the recent publication of *Botany on Your Plate* by the National Gardening Association in February 2008. This life science unit for grades K-4 inspires children to explore the fascinating realm of plants we eat. The book was developed by Garden staff with funding from the Howard Hughes Medical Institute, the National Science Foundation, and the Shasta Wildlife Conservation Foundation. Students develop and hone their evidence-gathering skills and investigative vocabulary while documenting their observations of roots, stems, leaves, flowers, fruits, and seeds in their plant journals.

The idea for *Botany on Your Plate* grew out of the Garden’s successful 25-year-old, docent-led presentation titled “Grocery Store Botany.” Based on Myrtle Wolf’s master’s thesis, overseen by UC Botany Professor Dr. Herbert Mason in the early 1980’s, this engaging program has been presented to thousands of East Bay elementary students by Garden Docents.

Through grant funding *Botany on Your Plate* became a multi-lesson series. The project has worked with more than twenty schools and 100 teachers in local school districts, testing the activities with children in grades K-6. Youth educators in after school programs and botanical gardens across the country also provided informal testing. Beginning in 2004, the Hayward Unified School District’s Nutritional Learning Communities program provided leadership and classroom support to trial test the curriculum in schools where more than 50% of children qualify for free and reduced-fee lunch programs.

Working closely with these classroom teachers, activities were refined to better support age appropriate concepts supporting standards for science, mathematics, language arts, social studies, and nutrition. The unit was also taught to several adult classes for English Language Learners, so that parents could support their children’s investigations at home.

Early in 2005, UC Berkeley Master’s degree program graduate students Darissa Phipps and Jeff Orbick conducted an evaluation study of *Botany on Your Plate* in three schools in Hayward, California. The study was exploratory in nature and focused on changes in science content knowledge and attitudes towards fruits and vegetables for children in grades K-3. The pre- and post-data collected showed significant success in target outcomes. Following the unit, 95 percent of the student population assessed reported that they seek out and eat more fruits and vegetables when making choices for their diet. Students also demonstrated gains in knowledge regarding plant parts and their respective functions.

*Botany on Your Plate* is available in The Garden Shop, along with *Math in the Garden: Hands-On Activities That Bring Math to Life*, also by Garden education staff.

—Kathy Barrett

---

**The Idea Behind *Botany on Your Plate***

*Botany on Your Plate* grew out of the Garden’s successful 25-year-old, docent-led presentation titled “Grocery Store Botany.” Based on Myrtle Wolf’s master’s thesis, overseen by UC Botany Professor Dr. Herbert Mason in the early 1980’s, this engaging program has been presented to thousands of East Bay elementary students by Garden Docents.

Through grant funding *Botany on Your Plate* became a multi-lesson series. The project has worked with more than twenty schools and 100 teachers in local school districts, testing the activities with children in grades K-6. Youth educators in after school programs and botanical gardens across the country also provided informal testing. Beginning in 2004, the Hayward Unified School District’s Nutritional Learning Communities program provided leadership and classroom support to trial test the curriculum in schools where more than 50% of children qualify for free and reduced-fee lunch programs.

Working closely with these classroom teachers, activities were refined to better support age appropriate concepts supporting standards for science, mathematics, language arts, social studies, and nutrition. The unit was also taught to several adult classes for English Language Learners, so that parents could support their children’s investigations at home.

Early in 2005, UC Berkeley Master’s degree program graduate students Darissa Phipps and Jeff Orbick conducted an evaluation study of *Botany on Your Plate* in three schools in Hayward, California. The study was exploratory in nature and focused on changes in science content knowledge and attitudes towards fruits and vegetables for children in grades K-3. The pre- and post-data collected showed significant success in target outcomes. Following the unit, 95 percent of the student population assessed reported that they seek out and eat more fruits and vegetables when making choices for their diet. Students also demonstrated gains in knowledge regarding plant parts and their respective functions.

*Botany on Your Plate* is available in The Garden Shop, along with *Math in the Garden: Hands-On Activities That Bring Math to Life*, also by Garden education staff.

—Kathy Barrett

---

**95 percent of the student population assessed reported that they seek out and eat fruits and vegetables when making choices for their diet.**
We have been busy selecting and propagating water thrifty plants for many years. The front entry garden features many staff favorites that have proven reliable and garden worthy. We will offer many plants from the front entry garden (including the lovely Silene on the plant sale card!) as well as a suite of more obscure plants from the nooks and crannies of our 34 acre collection. These selections are excellent choices to help gardeners face the reality that 2008 brings the very real possibility of water shortages and water rationing due to the low levels of rainfall in 2007.

New this year is a focus on the flora of South Africa. We will be offering limited quantities of unusual shrubs from the Cape Floral Kingdom including the well-known Melianthus major and Kniphofia spp. The South African flora has a mind-boggling diversity of geophytes that we’ll feature in the sale such as the uncommon and dramatic Brunsvigia josephinae, or the well-loved Angel’s fishing rod (Dierama pulcherrima). Look for these plants and more in our bulb display inside the conference center. South African succulents large and small such as Aloe saponaria, spiral aloe (Aloe polyphylla) and Haworthia spp., will be available.

We will offer limited quantities of the increasingly popular grass-like plants in the Restionaceae. Look for restios with our display grasses and grass-like plants. We will also offer a limited quantity of five and fifteen gallon cycads. Wonder what the big deal is about cycads? Go check out the new rock work and cycad plantings in the Garden.

Also new this year is an expanded selection of subtropicals from our Mexican/ Central American collection. Many lush- looking subtropicals have proven surprisingly tough and drought resistant in our garden. Utilizing select broad-leaved flowery subtropicals is a great way of creating a lush and tropical-looking garden without unnecessarily taxing our water supply.

We will continue to offer a great selection of the ever-so-regionally appropriate and well-adapted California natives, including many species of the summer flowering buckwheats (Eriogonum spp.). This year we’re also featuring a great variety of monkeyflower (Mimulus spp.) selections and cultivars which are justifiably popular for their long flowering season and garden tolerance.

Collectors will continue to find the plants that are unique to our operation here at the Garden. Come shop the finest collection of Lapageria cultivars ANYWHERE. Lovely specimens of oddly adapted and easy-to-grow insectivorous plants will be available near the newly rejuvenated Tropical House. For those who garden indoors, we will continue to offer choice houseplants for foliage and flowers.

Come enjoy the Garden atmosphere, the extraordinary plant selection, and advice from expert staff and volunteers. Please come and support the Garden! You can find a more complete list of plants to be offered at the sale on the Garden’s website [http://botanicalgarden.berkeley.edu](http://botanicalgarden.berkeley.edu).
here have been a series of exciting developments in the Garden’s cycad collection since the last report in the Summer/Fall 2006 Newsletter. Rare taxa from a number of geographic regions have been incorporated into the plantings in Mexico/Central America, Australasia, the Cycad and Palm Garden, and Southern Africa. Overall, there are many more specimens of the Garden’s cycad collection on public display than ever before.

The Australasian Area has historically had a strong representation of cycads. Over the course of 2006 and 2007, more species of *Macrozamia* and *Cycas* have been added to the landscape. Specimens of the beautiful *Cycas ophiolitica* are planted with the grass *Anamanthele lessoniana* in bed 503 to exceptional effect. The *Macrozamia* displays have been augmented with several species such as *Macrozamia miquelii* and *M. glaucophylla*, especially in beds 511 & 513.

In 2006, several of the handsome Mexican/Central American species of *Dioon*, including *D. edule*, *D. mejiae*, and *D. purpusii* were planted next to the Orchid, Fern, and Carnivorous Plant House and continue to thrive. The *Dioon* spp. have been interplanted with companion plants such as *Salvia*, *Echeveria*, and *Beschorneria*. Watch for further cycad developments in the Mexican/Central American Area as more *Dioon* and *Ceratozamia* species are added.

Not surprisingly, the Cycad and Palm Garden has long been home to a wide range of specimens from our collection. In 2006, Horticulturist Judith Finn planted several species of *Macrozamia*, including *M. moorei*, *M. polymorpha*, and *M. communis*, as well as *Zamia integrifolia* and *Encephalartos trispinosus*, greatly increasing the diversity of the cycad component of this garden.
Southern Africa has also been a site for cycad activity. This past summer, thanks to several generous donations, we had the opportunity to develop the empty hillside at the east end of the Southern African Area, the former site of the Canary Island collection (now located in the upper Mediterranean Area). The conditions of this site, with its steep slope and southern exposure, made it a perfect spot to create a display of our amazing collection of southern African *Encephalartos*.

The first principle of this planting was to incorporate a range of *Encephalartos* to show species diversity. Since *Encephalartos* come from widely divergent habitats, the plants are organized into horticultural zones to accommodate their cultural requirements. These zones include an arid zone at the front of the new planting area for *Encephalartos* that come from dry areas such as the karoo scrub and coastal dunes. This section is planted with companion plants from the Eastern Cape, including *Euphorbia, Haworthia, Aloe* and bulbs. The upper west side is a mesic zone, currently composed of the grassland species *Encephalartos ghellenckii* and the grass *Miscanthus capensis*, with some companion bulbs, shrubs and perennials. The shady east corner and the upper bed (141) are planted with the shade loving *Encephalartos villosus*, the forest grower *Encephalartos paucidentatus* and the stately *Encephalartos transvenosus*, a cycad that can reach 40’ tall in the wild. *Encephalartos natalensis* have been planted in the sunnier spots of the upper bed. Trees, shrubs and perennials from the Eastern Cape are incorporated throughout this area, including the wild pear (*Dombeya rotundifolia*) and snuff box tree (*Oncoba spinosa*). The new eastern section will continue to grow as more plants become available from our nursery and from outside sources, so keep checking back and watch the planting take shape.

—Meghan Ray

**Exhibit Details**

- Hardscape completion: Four weeks
- Water lines re-routed: Two
- New paths constructed: Two
- Rock wall sections built: 190 feet
- Boulders added: 35 tons

**Exhibit Donors**

- Mr. and Mrs. William F. “Rick” Cronk, III
- Mr. Robert Ferber
- Ms. Florence Gong
- Mr. and Mrs. Timothy Gregory
- Mr and Mrs Douglas Leach
- Richard and James Rundel
Management Services Officer Nancy Nelson joined our staff in December. She comes to us with many years of UC administrative experience, most recently at the Earthquake Engineering Research Center (EERC) located at the Richmond Field Station. There she managed the administration in support of the Shake Table Laboratory, the Network for Earthquake Engineering Simulation equipment site laboratory and the EERC affiliated library. Prior to that, Nancy worked in the Department of Plant and Microbial Biology and administered research being done in the cornfields at Oxford and Gill Tracts. She graduated from Cal with a degree in Soils and Plant Nutrition and has been a member of the Garden since 2000.

Lead Building Maintenance Employee Rick Boyer joined the staff in September, 2007. His job at the Garden involves general support for all of our facilities, and assistance in grounds maintenance as well. An East Bay native, Rick worked most recently for Al Heffley, Inc., a general contracting firm. While with Heffley he worked on several campus projects, including the renovation of the Tanglewood Estate. He has done construction work, from foundation to finish, all over the state of California, and in Montana as well. When not at work he plays the guitar, keeps turtles and tortoises as pets, and has an interest in old cars.

Curator Holly Forbes attended Cycad 2008, a conference devoted to the subject of cycads. Held every three years, this time it was hosted by the University of Panama. Over 125 registrants enjoyed daily suites of speakers for a week and a local field trip to see Zamia elegantissima in habitat in a nearby national park. Also in attendance were staff emeritus Judith Finn and Garden Research Associate Tim Gregory. We were able to meet with South African colleagues, in particular Dr. John Donaldson of the South African National Biodiversity Institute, to discuss conservation uses of the cycads held at our Garden.

Assistant Curator Barbara Keller attended a conference of the Northern California Botanist’s, “Northern California Plant Life: Celebrating What We Have With an Eye to the Future,” held in Chico in mid-January. Topics included rare plants and rare plant monitoring, habitat restoration, and ecology.

The Garden received a grant in December from the Genetic Resources Conservation Program, based at UC Davis, for the purchase of a fine-scale analytical balance. This tool will permit Garden staff to count seeds by weight (we must first manually count out lots of one or two hundred). We have hundreds or thousands of seeds of each of various species, many of conservation concern. We will now be able to get accurate counts for planning conservation projects.

Mt. Diablo Buckwheat (Eriogonum truncatum) was the subject of an experimental introduction on Mt. Diablo in December. Seeds of this annual species were sown in several adjacent sites in the hope that they will germinate, flower, and set seed in place. We will keep you posted of progress in the next Newsletter.

Baker’s larkspur (Delphinium bakeri) is growing well in the Garden’s nursery. We are learning that they take at least two years to flowering size, preferably three. The long time between germination and flowering size means our time table for attempting a reintroduction has been extended. We have identified a promising site for introduction, and are in negotiation with public land managers in Marin county.

The Garden is working with the Creekside Center for Earth Observation in a federally-funded project to help rescue San Mateo thornmint (Acanthomintha duttonii) from the verge of extinction. The Garden will experiment in growing this annual serpentine soil endemic to reproductive maturity. Our goal is to produce thousands of seeds for use in bolstering the only known population.
Volunteering at the Garden

The Garden welcomed 89 new volunteers in 2007, bringing our list of active volunteers up to 268! Of the new volunteers 43 of them became propagators, 11 Garden Shop volunteers, 13 horticultural volunteers, six curatorial volunteers, and a handful of others help provide non-routine support for events, special projects and so on.

Thank you to all of the Garden’s volunteers for their outstanding contributions. We are indebted to them for their dedicated service that keeps the Garden growing! At the December Volunteer Appreciation Luncheon 60 volunteers who have served over ten years were honored.

If you are interested in becoming a Garden Volunteer, please contact the Volunteer Coordinator Perry Hall at 510-643-1924 or perry@berkeley.edu. Hours are flexible, but we ask that you work a minimum of three hours a week.

The following volunteers have reached milestones of service in five-year increments:

**Milestones 2008**

25 years
Marge Brostrom

20 years
Nathan Shoehalter
Brenda Wong

15 years
Nick Mills
Cecile Weaver
Barbara Lyss

10 years
Dennis Wolff
Steve Asztalos
Albert Chiu
Bonnie MacKenzie
Dorothy Sanchirico

5 years
Rosalie Holtz
Christina Lederer
Cynthia Plambeck
Holly Hartley
Sherry Albrink
Michael Chinn
Elaine Halnan

Docent Training Fall 2008

Join the community of dedicated volunteer docents at the Garden. Learn about our world-class collections from around the world. Our docents create memorable and exciting learning experiences for small groups of school children, university students, and the general public. Training is provided by the Garden’s expert staff and by plant specialists from UC Berkeley and the community. The 20-week course will start in September 2008.

*For more information, and to apply, call 510-643-1924*
### CALENDAR OF EVENTS

**Sick Plant Clinic**  
First Saturday of every month from 9 am – 12 pm  
Free, no reservations required

**Discover the Plant Deck**  
First Saturday of the month, 10 am – 12 pm  
Meet our volunteer propagators to get in-depth horticultural advice. Check out mature specimens of plant deck offerings in the Garden.  
• May: Natives Plant Sale Extravaganza  

**Bugs in the Garden: An Exhibit by Patrick E**  
Tuesday, April 1, 2008 – Thursday, May 15, 2008  
9 am – 5 pm  
Walk through the Garden to see a variety of original bug sculptures by local artist Patrick E, including a special new insectivorous insect member of the Garden.  
Free with Garden Admission

**Cal Day**  
Saturday, April 12, 2008  
Free Tour: Plants of the World  
11:30 am, 12:30 pm, 1:30 pm, 2:30 pm  
Free

**Artist Walk with Patrick E**  
Thursday, April 17, 2008 6 pm – 7 pm  
Enjoy a glass of wine and walk through our exhibit with Patrick E as he describes his process of making the sculptures in our collection. $10, $8 members*

**Birding Basics**  
Thursdays, April 3, 10, 17, 24, 2008 9:30 am – 12 pm  
Join longtime Audubon Society member and bird watching instructor Dennis Wolff for a four part class on the fundamentals of birding. A combination of lecture, slide show, audio-identification and fieldwork will be explored. $100, $90 members, for all 4 classes; space is limited; registration required

**Oakland Museum’s 50th Annual California Wildflower Show**  
Saturday, April 19, 2008 10 am – 5 pm  
Sunday, April 20, 2008 12 pm – 5 pm  
The Garden helps sponsor the show by providing staff to collect, identify, and arrange flowers.  
Free with Oakland Museum Admission

**Spring Plant Sale**  
Members’ Sale, Silent Auction, and Reception Friday, April 25, 2008 5:30 pm – 7 pm  
Sale to the Public Saturday, April 26, 2008 10 am – 2 pm

**Bug Day**  
Saturday, May 3, 2008 10 am – 2 pm  
• 10 am – 2 pm: Educational displays: Light brown apple moth, mosquito abatement and live specimens of insects by UC entomology students.  
• 11 am and 1 pm: Family Tour: Pollinators in the Garden  
• 2 pm: Lecture: Common Garden Insects in your Bay Area Garden with entomologist Jan Washburn.  
All events are free with Garden admission

**Bringing Back the Natives**  
Sunday, May 4, 2008 12:30 pm & 3 pm  
12:30 pm Family tour: California Natives: Plants and People  
3 pm Join Horticulturist for the California Area, Ken Bates, for Getting started with California Natives: Plant Selection and Site Preparation. Free with Garden admission; space is limited*

**Glorious Spring Bloom in the Garden**  
Sunday, May 18, 2008, 1 pm – 3 pm  
Join us for a staff-led members’ tour of the best of the Garden spring bloom. See some of the Garden’s rare and unusual flowers in all of their glory. Take photos as you travel the garden blossom trail. Free for members; Registration required; space is limited

**Unsettled Birding Breakfast**  
Saturday, May 10, 2008 8 am – 11 am  
Join Chris Carmichael, Associate Director of Collections and Horticulture, and expert birder Dennis Wolff to walk and talk amongst birds and birders at this annual event. Includes a light breakfast. Heavy rain cancels this walk.  
Free; space is limited; registration required

**Escape into the Garden of Old Roses**  
Saturday, May 10, 2008 1 pm – 3 pm  
Celebrate Mother’s Day with a tour of the Garden of Old Roses at the peak of its bloom led by Garden Rosarian Peter Klement.  
$20, $17 members*

**Unsettled Lecture: Interesting Insectivores**  
Sunday, May 11, 2008 1 pm – 3 pm  
Come hear acclaimed expert on every known carnivorous plant, curator of the Galleria Carnivora, and professor at UC Davis, Barry Rice, as he speaks at the annual Unsettled Lecture. Free

**Trees in the Garden: A Family Tour**  
Saturday, June 7, 2008 1 pm – 2:30 pm  
Discover how a tree is different from other plants, how they adapt to their environments, make food from sunlight, grow and reproduce. $12, $10 members; price includes one adult and one child, $6 each additional child or adult per family

**California Deserts: Ecological Rediscovery**  
Sunday, June 8, 2008 1 pm – 3 pm  
Join Mills College Professor of Biology and conservationist Bruce Pavlik as he speaks to current issues of desert conservation. $10, $8 members

**In the Company of Wild Butterflies**  
Tuesday, June 10, 2008 5:30 pm – 8 pm  
5:30 pm: Walk and display viewing  
6:30 pm – 8 pm: Film screening  
Come to the film screening of In the Company of Wild Butterflies. See live butterfly specimens and walk through the California Area with caterpillar lady and Garden docent Sally Levinson. We’ll begin the screening with a 15 minute film on the life-cycle of butterflies. $12, $10 members

**Gardening Under Oaks**  
Saturday, June 14, 2008 9 am – 12 pm  
Join Horticulturist Nathan Smith as he shares his experience working around the Garden’s numerous mature specimen trees, including detailed discussions of best cultural practices and suitable plants. A lecture will be followed by a tour of the Garden’s oaks and associated plantings. $30, $25 members*

*For all programs: Reservations are required for all programs and events, except the Sick Plant Clinic and Plant Sales. Pay parking is available in the UC lot across from the Garden on Centennial. Program fees include Garden admission. Register early, class space is limited. Cancellations received at least two weeks prior to program date are subject to a $10 service fee. Program fees of $10 or less and cancellations received less than two weeks to the program are non-refundable. Full refund if the program is cancelled by the Garden. For more info visit http://botanicalgarden.berkeley.edu
NEW MEMBERS


Ms. Alfreda Abbott
Becky Abbott & Cathy Winks
Mr. Matt Adams
Patricia & Ronald Adler
Richard Aguirre &
Carroll McDonald Aguirre
Ms. Julie Ahern
Dr. Ann Alderman
Mr. Konstantinos Alkakis
Chris Amatruda & Ed Luckel
Scott Anderson & Rebecca Morey
Philip Andreini & Anita Estner
Ms. Gina Bascigalupo Zappia
Tiffany Baer & Shari Robbi
Dr. Richard Bahrme
Lauren & George Baker
Mr. Allen Baki
Anthony Balayot & Phyllis Balayot
Sharon & Dean Banks
Mr. Evan Barbour
Mr. Enrique Barboza
Eugene & Nancy Bardach
Mr. Kai-Lukas Barlow
Ms. Kathryn Barnhart
Mimi Bartell & Robert Mangel
Ms. Madeleine Bartlett
Ian Bartos & Belinda Young
Mr. Nick Baughman
Mrs. Shoshana Beary
Mr. Marius Beecan
Mr. Randy Bennett
Jocelyn Bentley-Prestwich &
Krista Paul
Ms. Eileen Berkan
Carole Bidick & Bob Breuning
Gann & Constance Bierner
Michael Biggs & Becky Campbell
Mrs. Stefani Ritten
Ms. Kathryn Blake
Nicole Blanchet & E. J. Holowicki
Ms. Diane Bloom
Mrs. Johanna Bohoer
Chandan Bono & Elizabeth Barton
Mr. Richard Bookwalter
Ms. Barbara Boster
Mr. John Bowden
Mr. David Bowden
Dr. Loretta Breening
Mr. Robert Brew
Joseph & Doris Brown
Jack Brown & Debra Scott
Ms. Allison Bryne
Lewis & Renee Bundy
Mr. Paul Burns
Matt & Burt Calder
Linda & Peter Campbell
Mr. Eric Carlson
Jason Caron & Leah Guthridge
Ms. Lillian Carrothers
Ms. Tamara Carson
Miguel Carvajal & Richard Dugan
Ms. Susan Casey
Carmen & Eric Casain
Mrs. Manuela Cavarrobin
Mr. William Cavendish
Mr. Andy Chamberlin
Sheila & Andrew Chan
Michael Chan & Cheryl Andrews
Ms. Yuan Tsien Chao
Ms. Karen Chapman
Lily Chien-Davis & Darrell Davis
Conan Chin & Jenny Kengsouonta
Ms. Wendy Chou
Melania Ciapponi &
Stephen McDonald
Mr. Chris Clark
Ms. Marianne Cleary
Ms. Clareene Cleary
Mr. Geoff Cleverton
Ms. Barbara Clinton
Sarah & Kenneth Cluff
Dr. Bruce Cohen
Ms. Sas Colby
Mr. Michael Concanon
Cassius & Heather Conway
Brett Cook & Marla Chao
Julie & Alexis Cooney
Ms. Geri Cooper
Mary Corkey & Jeff Bond
Elizabeth & Erin Covington
Ms. Norma Criglar
Sara & William Cumberlech
Jeffrey & Elena Carreri
Kathleen Curry & Fernando Maelin
Mr. Oswald Da Rox
Ms. Cynthia Dakopolos
Dr. Linda Dalton
Mr. Will Daniel
Gary Dasenbrock & Michael Steel
Evin Delaney & Dionizio Ceballos
Lin Deng-sung & Jia-Jane Shuan
Mr. Darrell Defries
Andrew Dinney & Bridget Clarke
Mrs. Sarah Diamond
Kris & Mick Diele
Ms. Leagrey Dimond
Lindsay Dixon & Carolyn McMillan
Teresa Donovan & Keni Madden
Micha Dooka &
Carl (Totte) Gardeman
Joseph Dougherty & Tina Fujikawa
Sky Duke & Kerry Krouse
Ms. Sheila Duncan
David & Wanda Duncan
Mr. Susan Dunks
Ms. Nicole Dwork
Mr. John Eckstrom
Jeffrey & Carolyn Edmunds
James Eitel & Phede Fletcher
Mike Ekberg & Carla Meninsky
Mr. Mahmoud Elgasseir
David & Kristin Endres
Richard Hill & Kimi Kodandi Hill
Erie Hill & Vance Seelover
Susan Hill McIntee &
Brendan McEntee
Ms. Jena Hirschbein
Candace & George Hissert
Gloria & Henry Hitz
Mr. Kevin Hockett
Robert Hoffinan & Jane Wilson
Leigh & Rachel Hollowgrass
Mr. John Holmes
Mrs. Claire Holt
Ms. Leonie Holman
Ms. Christina Hopkins
Roy & Hansan Hosseini
Mr. Nancy Howdeling
Ms. Sally Howlett
Ms. Nina Huebisch
Dr. Pam Hunt
Brad & June Hunter
Ann & Ethan Hutcheson-Wilcox
Mrs. Kathleen Hutchinson
Mike & Sandy Imazumi
Ellen & Donald Irie
Keiko Ishihara & David Gill
Dr. Muriel Ishikawa
Phyllis Isom & John Krush
Rebecca Jabbar & Gary Richards
Mr. Sebastian Jarek
Chad Jennings &
HeeToo Moon-Jennings
Sven & Karin Jensen
Ms. Marilyn Jensen
Ms. Natalia Jessen
Elisabeth Jewell & John Smith
Mrs. Krystin Johnson
Ms. Ellen Johnson
Hans & Bettina Johnson
Frederick & Marilyn Johnson
Ms. Darlene Johnson-Cardo
William & Nancy Johnson
Ms. Ann Jones
Ms. Lindsey Jones
Ms. Alice Jordan
David & Christine Julius
Jay Jurisich & Susan Finegan
Stanley & Adeline Kahn
Clay Kallam & Maggie Brown
Clara Kamande & Christopher Dopp
Mr. Curtis Karplus
Ms. Hatsue Katsura
Eric Katz & Ragani Harris
Tom Kearney & Elaine Holliman
Julie & Richard Keene
Brian Kelvington & Craig Rognholt
Clarence & Carale Kent
Coralie & David Kenton
Kelcie Kerr & Mathew Heckert
Ms. Lauren Kerr
Allison Keye & John Stolouhos
Charles King & Barbara Heinrich
Bobbie & Don Kinkead
Mr. Randall Kiser
Tom & Indra Klatt
David & Judy Knoll
Michael & Hannah Kohnen
Mark Kohr & Marian Bradley-Kohr
Ms. Margaret Kotowicz
Aracely Kriete & Frank Preuss
Ms. Harriet Kuroiwa
Ms. Rachel Langland
Ruth & Robert Langerige
Alex Laskey & Rachel Farbiarz
Mr. Koa Lavery
Barbara Lavicka & Derek Dusley
Mr. Joseph Lawrence
Ms. Jeanne Le Deux
Ms. Genevieve Le Goiff
M. E. J. Le Moual
Ms. Suzanne Lea
Claire LeDonne & Terrence Cadigan
Ms. Sandra Lee
NEW MEMBERS

Ms. Barbara Lee
Mrs. Jennifer Lee Payans
Ms. Suzanne Legallet
Debrah Levine & Richard Black
Ms. Keri Levy
Eleanor & Kathleen Lewis
Hannelore & Robert Lewis
Mr. Don Light
Cheng-Ju Lin & Yih-Chih Lin
Robert Lindford & Dagama Abbott
Suzanne Lippert & Eric Hallstein
Steven & Judy Lipson
Ms. Christina Lisac
Alison & Jim Litts
Ms. Susan Lo
Ms. Jennifer Long
R. Kent Look
Mr. Gregory Lowe
Mr. Al Lujan
Ms. Anastasia Lydon
James Lyons & Elsie Kasler
Mr. James MacComb
Paul Major & Ken Watson
James & Tostmyn Kvalelek
Ms. Barbara Malina
Tulin & Enme Mangir
Mr. Bob Mankin
Mr. Norman Manzione
Michael & Victoria Marsden
Mrs. Muriel Marsh
Ms. Kelly Marshall
Mr. Bernard Marszalek
Jack & Evelyn Martin
Ms. Martina Martinez
Craig & Susan Matthews
Ann May & Rodney Freeland
Ms. Marie Mayer
Tim McBride & Alisa Harbin
Sally McCraven & Michael Oliver
Rhys & Mary McDonald
Mrs. Maggie McDowell
Andrea McGrath & Kevin Wildenberg
Don & Wanchun McGeerey
Ms. Maureen McKeown
Mr. Thomas McLaughlin
Ms. Molly McHaffy
Sharon Meyer & Gregory Alexander
Ms. Alice Meyers
Paul Mickle & Gaylee Greenwood
Ms. Laurie Miller
Ms. Karen Mireau
Ms. Margaretta Mitchell
Mr. Neal Miura
Wing Shung & Lingfang Mok
Dawn & Joe Morris
Eleanor & Norman Moscow
Jean & Roger Moss
Ms. Yulia Motofuji
Dave Murat & Stephanie Lowe
Tanya & Laurent Maschetti
Ms. Rita Novel
Mr. Nhu Nguyen
Mr. Erle Nickel
James & Jennifer Nourse
Ms. Flory Nye-Clement
Mr. John O’Donnell
Ms. Lauren Olwell
Kent & Lilli Orgain
Ms. Trish Ottens
Mr. John Otto
Ms. Myra Paci
Amy Palke & Matt Gainsborough
Sassan & Jessica Pazirandeh
Claire & Paul Pedkte
Keley Petersen & Sophia MacMillan
Barry & Ruth Phillips
Carla Phillips & Dylan Johnson
Edward & Mary Phillips
Piera Piagentini & Michael Burr
Michael & Tanya Pinkerton
Mr. Arthur Poskanzer
Barbara & Bob Post
Ms. Toney Pratt
Cesar & Diane Ramirez
Wally & Gayle Ransom
Ms. Joanna Reed
Nicole Reeder & Michael Korolyk
Mr. John Reilly
Mr. Martin Reisberg
Ms. Tanya Romer
Martin & Judith Ressinger
Shai & Shlomit Revzen
Ms. Deborah Rheurak
Sue & Dave Richter
Jason & Shayne Rivers
Anne Robert & Mickye Adams
Shirley & Leila Robles
Kevin Rockmu & Daniele Swingoes
Ms. Carrie Rodrigues
Heidi Ronfeldt & Orion Weiner
Juanita & Gloria Rosette
Ms. Nancy Rothermich
Ms. Robin Rudy
Howard Ruiz-Harrison &
Ellen Ruiz-Harrison
Mr. Richard Rundel
Ms. Robin Salsburg
Ms. Karen Salvini
Kristyn Saunders & Lee Taylor
Jennifer & Joseph Schomaker
Maxine & Nicola Schulte
Stephen Schurkey & Andrea Roth
Ms. Cathleen Schwartz
Bonny Scott & Archie Tindell
Alison & Mick Seaman
Ms. Deborah Sears
John & Ruth Sechler
Mary Lynn & Warren Sepkowski
Tanya Shaffer & David Green
Marcy & Brian Sharafian
Mrs. Marisa Shelby
Ms. Joy Shioshita
Janice Shordike & Bruce Schultz
Ladd & Laurie Sievenpiper
Mr. Richard Silberman
Mark Silva & Ai Kubo
Deki Simmons & Deanne Ogawa
Michelle Simone & Matthew Brown
Maggie Simpson & Diane Simoneau
Dr. Carol Simpson
Charles & Claudia Slayman
Mr. Donald Smart
Sally Smith & Christian Rowley
Mr. Frank Snapp
Ms. Susan Sola
Francoise Sorgen &
Olivier Goldschmidt
Amadis & David Sotelo
Mrs. Margaret Spence
Mr. John Spitzer
Ms. Judy Steinkraus
Arlie Stern & Matthew Tsang
Mr. Stanley Stevens
Ms. Suzanne Stevenson
Ms. Sharon Stockard Martin
Ms. Joan Stockbridge
Ms. Carol Stone
Mr. Solomon Stonebloom
John & Sandra Stoops
Mr. Mark Stratton
Andrew Streitwieser & Joyce Hassel
Janet Stromberg & Alan Silverman
Karen & Tom Sturges
I Fang Sun & Ren Yig Fang
Ms. Cynthia Sutter-Dominguez
Christine & Timothy Szylaski
Kaz Takahashi &
Anny Hsu-Takahashi
Mr. Frederick Tan
Ann & Dickran Tashjian
Judith & Catherine Tate
Stephen Teixeira & Kiko Malin
David Thill & Carla Shapreau
Roger & Sharyn Thollaug
Sophia & Dan Thorsen
Alan & Rachel Tolko
Steve & Sharon Torgersen
Janelle Towle-Kelly & Robert Kelly
Ms. Martha Tracy
Lisa Tru & Roland Hwang
Alice Trumbly & Harvey Salem
Stacy & Anne Turner
Ms. Michele Tunniccum
Ms. Van Tuyll
Ms. Linda Twain
Nobuo & Yoko Urata
Ms. Carolyn Vallerga
Mark Van Bronkhorst & Kanna Aoki
Dr. Paul Vanderwalt
Ms. Mary Varalli
Gabriel Vaupell & Thoureth Inn
Sandra Venning & William Warburton
Valerie Ventre-Hutton &
David Hutton
Ms. Joanneke Verschuur
Mr. Gilberto Villa
Scott & Elizabeth Wachenheim
Dr. Russell Wagner
Pete Walker & Sara Weinberg-Walker
Marlene & Jerry Walters
Jan & Michael Walton
David & Li Wan
Camille Wanat & George McGregor
Ming-Li Wang & Norman Lafort
Karyn Wang & Justin Chiang
Mrs. Kate Warner
Ms. Katherine Westine
Ms. Anastacia White
Tracy Wyte & Jasef Guzman
Mr. Ted Wiesner
Mr. Jordan Wilkerson
Ms. Stacy Wilkinson
Ms. Jane Williams
Ms. Vivien Williamson
Joan Wilson & Don Wilson
Elizabeth Windchy & Andrew Beards
Cynthia & Mary Witicki
Andrew & Kathleen Wojnoonski
Ms. Jane Woodard
Claire Woods & Zachary Slater
Bruce Woods & Nancy Woods
Chris & Susan Woodward
Mary Woolsey & Mark Peterson
Ms. Linda Worthman
Mr. Chris Wright
Junko Yano & Sudip Mukhopadhyay
Ms. Brianna Young
Bill & Sarah Zanze
Mr. Michael Zinke
The ‘before’ picture of the path leading up the hill above the Japanese Pool involved a saturated, swampy beginning at the lower end where drainage from the hill collected from the steep, sloughed-off bank, and a retaining wall (in the loosest sense) with old logs held in place by galvanized pipe. People coming down the path had a wet surprise when they reached the mucky patch. Edgar and Gilberto, under Philip Johnson’s supervision, spent two days preparing the site for a new wall. Altogether, six to eight cubic yards of heavy clay soil were excavated by hand. They then spent seven days building the eighty-five foot wall by shaping and placing a huge quantity of rock (approximately 17 tons worth). Philip personally scouted all of his sources for rocks, which are scarce in the summer, as there is much competition for material at that time. He carefully selects rocks with the specific job in mind. The work here was completed in only nine days!

Within that same time frame, they also rebuilt the upper and lower stairways. They installed a drain line behind the bottom of the slope, another at the outer base, and one behind each step tread to redirect the natural runoff to a drain box, thereby solving the pervasive seepage problem. A previously unappealing path has been vastly improved and is now an inviting area with great potential for plant display.

—Elaine Sedlack
Visit the Garden and stop by our newly renovated *Garden Shop* and *Plant Deck*. Open 10:30 am - 4:30 pm Daily.

Members support the Garden and receive a 10% *discount* on *Garden Shop* and *Plant Deck* purchases year round!

**GARDEN HOURS:** The Garden is open from 9 am - 5 pm year round. Closed first *Tuesday* of each month.