



UNIVERSITY of CALIFORNIA
**BOTANICAL
GARDEN**
NEWSLETTER

Volume 28, Number 2 & 3

Published by the UNIVERSITY OF CALIFORNIA BOTANICAL GARDEN at Berkeley Spring/Summer 2003

History of the Californian Area *Creating a California Aesthetic*

Editor's Note: This double issue of the Newsletter features the California Area of the Garden in recognition of horticulturist Roger Raiche's retirement in June 2003.

The University of California Botanical Garden is divided into nine major biogeographical areas. At about 14.5 acres, the California Area is the largest. Benefiting from relatively easy access to native flora and a history of active collecting, it also contains the largest number of unique accessions.

The California flora has long been an important focus of the Garden. According to several written histories, when the Garden was established on the main campus in 1890, the two collection areas were economic and native Californian plants. Collections of these plants were utilized in the earliest botany teaching programs of the university. In the 1920's when the Garden was moved to Strawberry Canyon onto the site of the Stutt Dairy Ranch, then Curator and later Director T. Harper Goodspeed proposed a novel method of organization. Until that time most botanical gardens had been arranged around taxonomic or economic themes. Goodspeed directed landscape design Professor T. Gregg to create a garden organized around geographic affinity, emphasizing South American, African and native Californian collections.



Photo by J. Williams

Western azalea (Rhododendron occidentale) is featured in the Serpentine Plant Communities Display.

While California natives were always a significant component of the Garden, it was not until the hire of Harry Roberts in the 1950's that the Californian Area really began to flourish. Most of the oldest plants in the section date to that era, with an unknown number having been donated by the noted horticulturist Louis Edmunds from his native plant nursery in Danville.

(continued on page 2)

CALIFORNIAN AREA *(continued from page 1)*

Wayne Roderick, who went on to become the director of the Regional Parks Botanic Garden in Tilden Park, was the driving force in the section from the early sixties to 1976. Wayne began to shape the area as we know it today, adding an alpine bed, vernal pool, freshwater marsh, chaparral, and bulb collection.

His collection of native bulbs was internationally recognized as one of the best in the world, and he increased the diversity of the collection enormously.

The Mather Redwood Grove on the north side of Centennial Drive was added to the Californian Area in the early seventies. Planted in the 30's along with much of the rest of the canyon, the Grove was developed with understory plantings to evoke the feeling of a natural redwood woodland.

Kurt Zadnik took over the Area in 1979 and stayed through 1996. During this period Director Robert Ornduff amplified the focus on developing plant communities that could be used to support university classes taught by himself and others.

Roger Raiche joined the staff in 1981. It is difficult to quantify Roger's impact on the Californian Area, because simply put, most of what we see there today is attributable to him. Of the current living accessions in California, Roger collected 71 percent, either alone or in association with others. Over his career Roger contributed 4,783 accessions to the Garden. In addition to creating a massive influx of plant material reflecting his insatiable passion for the California

flora, Roger oversaw the expansion of boundaries and overall growth of the area. Roderick's bulb beds were renovated and expanded in 1981, the alpine bed was rebuilt in 1989, and the serpentine bed, Roger's particular favorite, was reconstructed and expanded in 1992.

In over twenty years at the Garden, Roger assembled an outstanding collection and knit it together in a beautiful manner. Here Roger explains it best when he speaks about the California aesthetic that he worked so hard to create: "In an area devoted to Californian native plants I feel it is imperative to suggest nature. It is a heightened nature we present, as if this were a garden carved out of some idealized Santa Lucian potrero, with labels conveniently provided to enhance our knowledge. But it has the feel of nature: the relaxed, comforting experience of plants growing well together,

bound by inscrutable yet immutable laws; a balance of thousands of interacting factors. This aesthetic has been successful, not only in the vast number of plants we've been able to display for the public, but also by the unsolicited testimonials we've received from visitors, thanking us for an experience that gave them enormous pleasure."

Following Roger's retirement this year, Horticulturist Nathan Smith, who began working with Roger in 2000, took up the challenge of maintaining and developing this unique Garden resource. The area continues to be used heavily as a teaching resource, with over 900 Biology 1B students utilizing the habitat displays each year. Docent tours focus on a number of topics, with traditional uses of plants by California's Native Americans being the most highly in demand by local school groups.

— Chris Carmichael



Photo by H. Forbes

An early view of the Alpine Fell-field. Design by Ron Lutsko, Jr. with rock work by Philip Johnson and plant selection by Roger Raiche and Kurt Zadnik.

Educational Uses of the Californian Area

Diverse educational programming utilizes our Californian Area collection. Annually, the collection provides the foundation experience in California ecological diversity for 900 biology major students taking Biology 1B, the second semester of introductory biology at Cal. Many of these students have never traveled around California and have no first hand knowledge of California plant communities. The Garden's scientific collection and its plantings make their textbook information real. Other campus departments, including geology, landscape architecture, plant pathology, and creative writing, visit the Californian Area as an essential part of their curricula. Classes from many other colleges and universities in the area including San Francisco and Sonoma State Universities, Mills College, Merritt College and St. Mary's College, utilize our California collection to illustrate their courses.

Each year several thousand elementary and middle school students discover the diversity of California habitats while participating in the California Habitats docent-led tour. On this tour students compare the color, texture, orientation and size of leaves, soil composition, plant sizes and shapes as they visit different plant communities in the Californian Area. At tour activity stations, students experience California habitats and plants including feeling serpentine rocks and tasting opuntia jelly. In another extremely popular tour focusing on California Indian uses of native plants, students discover many uses of the soap root, how elderberry is used in rituals and for dye, how manzanita is used in drinks, and how cattail is used for matting, boats, food and absorbent padding for a baby on its cradle board. Twenty-three plants are fea-



Photo by J. Williams

Coreopsis gigantea in Bed 6B, a signature plant in this Channel Island habitat planting, delights visitors (Yes! They really are Dr. Seuss-like plants!). Seedlings will be available at the Fall Plant Sale.

tured in the tour.

Our marvelous California collection of plants are featured in diverse programming for adults or the general public through the Garden's seasonal self-guided tour brochures, special classes such as the California Plant Communities and California Spring Wildflower Walk presented by area horticulturists Nathan Smith and Roger Raiche and the Ferns and Fern Allies workshop presented by the Jepson Herbarium. We hope you will explore this, our largest collection of the Garden, and our region's botanical and ethnobotanical heritage.

— Jenny White

ENDOWMENTS FOR THE CALIFORNIAN AREA

Endowments for the Garden help to maintain specific areas of the Garden and to maintain the Garden itself in perpetuity. Although the returns from endowments vary with the economic times, the fact is that the Garden's endowments are integral to our economic stability and strength through the years.

The goal of establishing an endowment for each area remains a

Garden priority. At present the Californian Area is supported by the California Endowment and the Henry Hilzinger Endowment.

Endowment income makes it possible for the Garden to undertake projects for which other funding is unavailable. The renovation of the Channel Island beds in the Californian Area of the Garden has been a very exciting process for horti-

culturist Nathan Smith. An essential part of the process was his trip to San Nicolas Island off the coast of southern California to collect seeds and cuttings. This trip served to bring the project into focus for him and he went to work rehabilitating the beds upon his return. He also added to his already considerable knowledge of the plant habitats of the islands.

— Janet Williams

Roger Raiche

Plantsman Extraordinaire

Roger Raiche was fortunate as a young boy to have a gardening role model in his father, Raymond. The senior Mr. Raiche taught Roger basic gardening skills in seed sowing, pruning, and weeding, and by the age of eight Roger had his own gardening space at the family home.

A two year stint at Cornell in Architecture and Art History convinced Roger to further explore career options. He left college and joined together with several friends to open a communal living situation near Ithaca. During his six years there, Roger continued to expand his gardening and agriculture skills with flower, vegetable, and herb gardens and an orchard in support of the store they ran for income. It was one of the first whole-grain bakeries/natural foods stores in the area. Roger also developed a personal garden, inspiring him to learn the local native plants with help from visits to Cornell Plantations, the library, and in natural areas nearby. While a student at Cornell he took an introductory botany course, but other than that has had no formal training in plant identification or botany.

In 1978 Roger moved to San Francisco, where he worked for friends with landscape businesses. He was amazed at the hugely different landscape and native plant palette of the West Coast, and set about learning new plants with zeal. He spent many hours at Strybing Arboretum, on field trips with the North American Rock Garden Society and with the California Horticultural Society. He especially recalls field trips to the Tahoe region, including the Desolation Wilderness, led by the late Gladys Smith (author of *A Flora of the Tahoe Basin and Region*).

Roger was hired at Berkeley Horticultural Nursery in sales, and then in propagation, where he continued to meet

other plant enthusiasts. At that time, commercial nursery staff were allowed to take cuttings of plants in the Garden for their propagation stock, and it was while doing this Roger met then garden manager Daniel Campbell. Both men were also active in the California Horticultural Society. Campbell hired Roger at his first opportunity (in 1980) for a

half-time watering job. Within six months Roger was hired on full-time with responsibility for what is now the Crops of the World Garden, the former orchard (now part of the South American Area), and for the Eastern North American Area.

Roger's fascination, some would say obsession, with native plants brought him to the attention of systematic botanists throughout the Bay Area. One early association was with Walter and Irja Knight, two of the several authors of *A Flora of Sonoma County*. Roger collected all sorts of manzanita (*Arctostaphylos*) samples and brought them to Walter for identification. Mr. Knight deposited many of these samples in the herbarium at the California Academy of Sciences. When I joined the Garden staff in 1988 I convinced Roger that his specimens should be housed in the Jepson Herbarium on campus. Labeling his many field collections will help occupy some of Roger's retirement years!

By 1981 Roger was assigned to work half-time in the Californian Area under the supervision of Kurt Zadnik. From then until near retirement Roger worked in the Californian Area and for many years in the Eastern North American Area.

He spent nearly every weekend traveling the roads and trails in California exploring the native flora and scenery. He developed an intense interest in serpentine-endemic species and plant communities. It was during these weekend forays that he came across the mariposa lily now named for



Photo by R. Anderson

Roger Raiche during the 1992 dedication of the Serpentine Plant Communities Display.

He spent nearly every weekend traveling the roads and trails in California exploring the native flora and scenery. He developed a deep interest in serpentine-endemic species and plant communities. It was during these weekend forays that he came across the mariposa lily now named for him...

him, The Cedar's fairy-lantern (*Calochortus raichei*), as well as Raiche's manzanita (*Arctostaphylos stanfordiana* ssp. *raichei*), and Raiche's red ribbons (*Clarkia concinna* ssp. *raichei*). He brought each of these specimens to the attention of botanical experts, who then named them in recognition of his finds. New species and subspecies continue to be discovered and recognized in California. Roger has played a signifi-



Photo by H. Forbes

Roger collecting cones of Brewer spruce (*Picea breweriana*) for the seed exchange program.



Photo by H. Forbes

Roger collecting mountain dogwood (*Cornus nuttallii*) for the seed exchange program

cant role in these discoveries and has a well-earned reputation for being an excellent field botanist in northern California. In support of protecting the native flora, Roger filled out field survey forms for rare species for the California Department of Fish & Game. Staff there inform me they always look forward to Roger's surveys, as he waxes poetically about the species and their habitats in each one.

By the late 1980s Kurt Zadnik's responsibilities changed to focus more on the greenhouse succulent plants and supervisory responsibility for the Californian Area was turned over to Roger. Kurt continued to assist in the Californian Area, including field collections for the Garden's biennial seed exchange list. I feel fortunate to have been a participant in these biennial forays with Roger and Kurt, receiving an introduction to many areas and plants new to me. Roger's regular weekend forays paid off for the seed exchange list, as he was able to direct us to many sites of particular botanical interest.

In 1997 Roger co-founded a landscape design and install business with his partner David McCrory. The success of Planet Horticulture Inc. encouraged Roger to reduce his hours to half-time at the Garden in 1998, where he continued in the Californian Area and also designed the tree boxes in the entrance area until his retirement on June 30th.

— Holly Forbes

Californian Conservation Projects

The Garden is a participating institution in the national Center for Plant Conservation (CPC) <http://www.centerforplantconservation.org>. The Center facilitates programs in seed banking, germination and growth studies, restoration, and monitoring of rare plants. Such programs have benefited greatly from information brought together at scientific meetings held by the CPC. Publications resulting from these meetings include *Genetics and Conservation of Rare Plants*, ed. by Donald A. Falk and Kent E. Holsinger, *Restoring Diversity: Strategies for Reintroduction of Endangered Plants*, ed. by Donald A. Falk, Constance I. Millar, and Margaret Olwell.

The Garden focuses our conservation efforts on the nine Bay Area counties. Current projects include demographic monitoring (collecting information about size, number of flowers, and seed set) of the Baker's larkspur (*Delphinium bakeri*) in Marin County. We are working with Dr. Jason Koontz of the Center for Biodiversity of the Illinois Natural History Survey to determine the genetic variation within the single population of this federally and state-listed endangered species. This information will better inform our efforts to preserve the population. The US Fish & Wildlife Service is helping to support this project by funding some of the field work needed to survey for potential introduction sites in Spring 2004.

The federal Endangered Species Act requires that a recov-



Photo by H. Forbes

Baker's larkspur, (*Delphinium bakeri*),
known only from Marin County.

ery plan be created for each federally-listed plant or animal. Most of the recovery plans for plants include a component of seed banking. The seeds are stored and used for research and restoration projects, and serve as a potential back-up of genetic material in the event of catastrophic loss to one or more populations. The US Fish & Wildlife Service contracted with the Garden to seed bank several Bay Area serpentine endemic species in 2002 and 2003. Many of these species exist in only one or two populations and are threatened by competition with invasive exotics, and roadside maintenance. These include the Tiburon jewel-flower (*Streptanthus niger*) and Tiburon mariposa lily (*Calochortus tiburonensis*).

The Garden is also making seed collections of four federally-listed endangered and threatened species in El Dorado

County, in the vicinity of Pine Hill. These are Layne's butterweed (*Senecio layneae*), Stebbin's morning-glory (*Calystegia stebbinsii*), Pine Hill flannel bush (*Fremontodendron californicum* ssp. *decumbens*), and El Dorado bedstraw (*Galium californicum* ssp. *sierrae*). This project is supported by funding from the US Bureau of Reclamation.

The seeds collected in support of these rare or endangered species will be stored in state-of-the-art facilities in the National Center for Genetic Resources Preservation (a facility of the US Department of Agriculture, Agricultural Research Service) in Fort Collins, CO and at Rancho Santa Ana Botanic Garden in Claremont, CA.

Seed Exchange Program

The Garden receives approximately 30% of its annual accessions from the seed exchange lists (indices seminum) of other botanical gardens. The Garden's biennial seed exchange list is the reciprocal offering to these other institutions. Each list consists of California native plants collected from native habitats by Garden staff (most recently by Curator Holly Forbes and Californian Area horticulturists Roger Raiche & Nathan Smith). The list includes the locality and habitat data for each species and is distributed to over 600 botanical gardens and other research

institutions. The Garden's seed exchange list is one of the very few available offerings of wild-collected California native plants and is used heavily by other gardens and individual researchers for their projects.

Past support for the seed collecting and production of the biennial seed exchange list has been provided by the East Bay Chapter of the California Native Plant Society, the Happy Valley Garden Club, and by Mrs. Myrtle Wolf. Additional support is welcome.

— Holly Forbes

THE DOCTOR SAYS

■ The essential oils of two plants, catnip (*Nepeta cataria*) and osage orange fruits (*Maclura pomifera*), were found to be effective mosquito repellants. In experiments on the yellow fever mosquito (*Aedes aegypti*), the oil from catnip was effectively repellent at 1% and 0.1%. The oil from osage orange was effectively repellent at 10, 5, and 1%. Abstracts 222nd National Meeting American Chemical Society.

■ In the United States, the processing of sweet corn ranks second only to that of processing tomatoes. Generally sweet corn is processed as canned corn, tortillas, baking and food snacks. Because of the heat involved and the long standing idea that preserved fruits and vegetables have lower nutrient

value, due partly to Vitamin C loss, research in New York was started to determine the nutrient quality of corn after processing. It was shown that heating corn at 115° C for 25 minutes caused a 25% reduction in Vitamin C. However, the total antioxidant activity was elevated by 44% and the amount of phenolics such as ferulic acid (found only in grains) were raised 550% and total phenolics was raised 54%. The antioxidant activity was equivalent to 210 mg. of Vitamin C per 100 grams of corn. Even so, it was suggested that consumers obtain their phytochemicals from a variety of sources of fruits, vegetables, and grains. *Journal of Agricultural and Food Chemistry* 50: 4959-4964.

— Robert Raabe

GARDEN NOTES

NEW STAFF... The Garden welcomes **Bill Barany** as Horticulturist for the Arid House and Southern African collections. Prior to joining the staff, Bill volunteered at the Garden where he worked with Horticulturists Lawrence Lee and Anthony Garza, propagating cacti and succulents in support of Garden plant sales. He has long pursued his passion for gardening. Bill most recently worked for the San Francisco-based gardening company Rock and Rose. In this position he provided custom design and expert gardening services for private gardens in the Bay Area. As a self proclaimed "succulent freak" Bill developed his passionate personal interest in cacti & succulents and has a respectable personal collection of what he claims to be "the alien beings of the arid plant world". Bill Barany comes to the Garden from a family of native Californian farmers and gardeners from the central coast of California. He holds a BFA in Painting from the San Francisco Art Institute.

MORE CHANGES IN STAFFING...The incoming director, **Dr. Paul Licht**, no longer maintains an active research lab and so plans to devote considerably more time and effort to day-to-day management of the Garden than had been possible for **Dr. Simms** with her nearly full-time research and teaching responsibilities. A consequence of this change in management is that the Garden has less need for an associate director. The budget crisis also made this position a luxury that the Garden could not afford. In addition, a clear gap in the Garden's management structure is that of an

administrator in the Management Services Officer (MSO) series. Eliminating the associate director position allows the hiring of an MSO without further stressing the Garden budget. We wish **Richard Henderson** the best of success in future endeavors.



Photo by J. Williams

Horticulturist Bill Barany with the first flowering of spiral aloe (*Aloe polyphylla*) at the Garden.

DIRECTOR'S COLUMN

In this, my last director's column, I take the opportunity to reflect on the meaning and purpose of the UC Botanical Garden. The Garden's successes and accomplishments during my tenure as director reflect the hard work, enthusiasm and vision of a team of people working together towards common goals. My proudest accomplishment at the Garden is the forging of that team spirit and common commitment.

The passionate commitment of the staff, volunteers, visitors, and supporters who comprise the Garden community is our mainstay. I saw that my task was to strengthen and build upon the features that evoked this commitment, and then direct the passion and energy associated with this commitment to accomplishing those goals. Chief among these features is the unusually diverse and beautifully presented plant collection.

The collections staff, working largely independent of any campus leadership, created this unique collection that manages to be both a glorious garden and a world-class scholarly resource. Clearly, these people have been cognizant of and inspired by their dual roles as both artists and scientists working at a great research university. It was important to support their efforts, develop leadership from among them, and further empower their vision for collections development. To that end, I was lucky to have the opportunity to promote Dr. Chris Carmichael to lead this group.

It was also important to provide the collections staff with the tools and resources necessary to accomplish their goals. During my tenure, the Garden benefitted from renewed University commitment. Among many improvements was the replacement of the dilapidated Desert-Rainforest Greenhouse with the modern Arid House and its automatic climate controls. The University added public restrooms to the entry area and reroofed three Garden buildings. A less



Photo by J. Williams

visible but more important change is that campus services now repair and maintain the Garden's infrastructure. This means that the Garden will soon be getting major upgrades to its water and irrigation systems.

Maintaining a garden requires purchasing lots of supplies —soil amendments, tools, rock, containers, labels, etc. Candice Schott and Michael Rimar of the Garden's business office have developed important new procedures to facilitate the Garden's increased financial dependence on donations, sales revenues, membership, and endowment. Visitor Services staff have greatly enhanced the visitor experience by putting a friendly, informative face at the Garden entrance. Janet

Williams has led the Garden's efforts to enhance these new revenue

streams and to effectively market the Garden.

The community that developed around the Garden's unique collection is another important strength of the Garden, which also must be nurtured. Certainly, the staff alone could not have sustained the garden that we know

and love. Without the leadership, support, and sheer volume of labor provided by the volunteers, there would be no UC Botanical Garden. In recognition of this fact, during my tenure the Garden devoted increased staff attention to the volunteer program, lead by Kim Kaso. I believe that the exciting successes of the recent plant sales are one reflection of this growing commitment to Garden volunteers.

Education is a core mission of the University and an important goal during my tenure has been to increase the role of the Garden in education at all levels. By establishing a nationally recognized garden outreach program with both federal and private grant funding, Dr. Jennifer White has helped the Garden reach new audiences. She and her staff are also working with campus scientists to develop school

FAREWELL FROM ELLEN SIMMS

The Garden's successes and accomplishments during my tenure as director reflect the hard work, enthusiasm and vision of a team of people working together towards common goals.

programs to teach the importance of genetic diversity in food crops and biodiversity in natural communities.

Research is another core mission of UC Berkeley. The Garden has a proud reputation in botanical research. In recognition of this past and also of the Garden's current position in the Office of the Vice Chancellor for Research, I realized the importance of re-establishing a world-class research program at the Garden. California is one of a small number of globally important biodiversity hotspots and conservation of California's plant diversity is an important component of the Garden's mission. I focused on developing plant conservation research. Curator Holly Forbes participated in this effort by obtaining funding for and performing several conservation projects, one of which she describes in this newsletter. One of my major efforts was to design and oversee the construction of the Plant Conservation Research Center. I currently direct research activities in that center. A sampling



Photo by J. Williams

unique combination of plant knowledge and design vision have left a strong and positive stamp on the Garden and its larger community. I treasure the remarkable insights on the native flora that I have gleaned from those times that we happened to cross paths in the Garden. Yet, as one of Roger's many enthusiastic admirers, I also see this change as an exciting beginning. I eagerly await the new gardens that he and David McCrory will create on their fresh canvas in Sonoma County.

Roger's departure has also prompted some retrospection as well as enthusiastic glances toward the future, which Chris Carmichael ties together in his history of the development of the Californian Area.

Everyone is acutely aware of the current economic picture, and many are also aware of its general effects on state institutions. It is important for supporters to remember that the Garden is being seriously impacted by state cuts to the



Photo by J. Williams

LEFT: *The Plant Conservation Research Center laboratory.* RIGHT: *The new Arid House featuring cacti and succulents.*

of these projects by both students and staff include: (1) understanding how certain plant species become invasive, (2) examining the host range of the invasive plant pathogen that causes Sudden Oak Death, (3) determining how rare *Cypripedium* orchids are affected by their fungal associates, and (4) understanding how nitrogen fixing bacteria influence the performance of their lupine hosts. Finally, I led the team that designed the Jane Gray Research Greenhouses, which will be built this summer. These modern research greenhouses will greatly facilitate research at the Garden by UC Berkeley students and faculty members.

In this newsletter, we also bid farewell to Roger Raiche on his retirement from the UC Botanical Garden. The Garden has benefited in so many ways from Roger's presence. His

University of California budget. Fundraising is an important way the Garden can mitigate these impacts. In this newsletter, Janet Williams describes the Californian Area endowment program, which is a crucial element of the Garden's fundraising efforts. She also describes some of the exciting new benefits of Garden membership.

The Garden itself remains a tranquil respite from the many concerns that threaten to overwhelm us. Twilight is an especially peaceful time. The busy sounds of the day subside; the calm quiet of the gloaming spreads through the canyon, punctuated occasionally by the last calls of birds roosting for the night. Be sure to take advantage of the new summer evening hours to experience this special time in the Garden.

— Ellen Simms

Garden Party *2003*

Long time Garden horticulturist Peter Klement summed up the 2003 Garden Party held in glorious weather on June 1 for us: "...there I was sitting in the shade surrounded by gorgeous blossoms everywhere in the Asia area, sipping magnificent wine, enjoying delicious food and the music of the string quartet playing on the Tour Deck just washed over me. It was peaceful, it was just perfect; I was in Heaven."

The Garden Party is quite simply one of the best parties in town and most everyone who attended went out of their way to tell us so. Bounteous bouquets of thanks to our Garden Party Committee, staff and volunteer helpers, CW Event Producers, prize donors, the suppliers of delicious foods and the magnificent wines; also, special thanks to the



Photo by B. & H. Lys



Photo by B. & H. Lys

LEFT: *Scharffen Berger Chocolate Maker* offered tasty samples. RIGHT: *A lovely string quartet* performed for guests.

musicians and singers whose talents transported us with delight. This fundraiser brings in needed funds to help keep the Garden growing well and going strong. We hope to see many more of you there at the next UCBG Garden Party on Saturday, June 19, 2004—mark your calendars now! If you would like to volunteer to help with the next Garden Party please call Kim Kaso on (510) 643-1924 or Janet Williams on (510) 643-2937—we would really appreciate your help!

EVENT DONORS

A New Leaf Gallery	Forestrree Company	Phoebe Hearst Museum of
Anto Offset Printing	Franus Wine Co.	Anthropology
AW Pottery	Garibaldi's on College	Poulet
Berkeley Art Museum & Pacific Film Archive	The Glenn Custom Framing	Margaret Richardson
Berkeley Repertory Theatre	Grand Lake Ace Garden Center	Rick & Ann's Pantry
Body Time	Hida Tool & Hardware	Gayle Roberts
Bread Garden Bakery	Juan's Place	Rosenblum Winery
Bubi's Catering	Columbia Gorge Winery/ Julie Dobson	Scharffen Berger Chocolate Maker
Café Fanny	Karen LeGault	Skates on the Bay
César	Kim & John Kaso	Tahoe Gloves
Chabot Space & Science Center	la Mediterranée	Ten Speed Press
Chronicle Books	Lawrence Hall of Science	UCB Cal Alumni Association
Claremont Resort & Spa	Navarro Vineyards	UCB Student Musical Activities
John Doyen Hand Turned Bowls	Oakland Museum	UCBG Gift Shop
East Bay Nursery	Orchard Florist & Nursery	UCBG Plant Propagators
Elephant Pharmacy	Jerry Parsons	West Teak
Judith Finn	Peet's Coffee & Tea	Westbrae Nursery
Flowerland Nursery	Pharmaca Integrative Pharmacy	Whitford Cellars
	Picanté	Janet Williams & Mark Wilson

NEW MEMBERSHIP BENEFITS

New member benefits came into effect April 1st—the result of much discussion among members, volunteers and staff over the course of a series of workshops examining how best to encourage growth in our membership community. We are pleased to announce in conjunction with this that we have significantly increased our group of supporting nurseries—current Garden members who show their membership cards at the time of making a purchase at these nurseries receive a 10% discount on their purchases, for the full list please check our website or call Garden information, (510) 643-2755.

Membership really gives you good return on your investment both at the Garden and out in the world! A slight increase in the membership fee amounts has been necessitated by the increased cost of doing business; this is offset for our members by the increased value of our new membership benefits. An exciting aspect of the restructured benefits is the fact that we now offer affiliate membership status to current members of the UC Berkeley Retirement Center, as well as to current UC Berkeley faculty, staff and current UC Berkeley Alumni Association members.

INDIVIDUAL LEVEL MEMBERSHIPS

- Individual (\$40)
 - Individual Student (\$15)
 - Current Cal Student (\$10 with ID)
 - Individual UCB Affiliate* (\$30 with ID)
- (*UCB affiliates include: faculty, staff, UCB Alumni Association and UCB Retirement Center members)

MEMBERSHIP BENEFITS AT THE INDIVIDUAL LEVEL

- Unlimited admission to the Garden for one year;
- Members'-only Plant Sale before our wildly popular Spring and Fall Plant Sales;
- FREE or discounted fee on stimulating Garden classes, workshops, lectures and events;
- 10% Discount on most purchases of plants, gifts, and books at the Garden Shop;
- Subscription to the Garden Newsletter, containing informative articles, the latest Garden news, research notes and botanical updates;
- "Best of the Garden" seasonal tours led by Garden experts;
- FREE admission and discounts at over 160 Gardens and Arboreta—both national and international;
- Two one-time guest passes for free admission to the Garden;

- Discount on a subscription to *Pacific Horticulture* magazine;
- Discounts at many select local nurseries.

FAMILY LEVEL (AND ABOVE) MEMBERSHIP BENEFITS

- Family (\$55)
- Family UCB Affiliate* (\$45 with ID)
Receive all the above PLUS free admission for two adults and their children or four adults and two additional free guest passes.
- Supporting Members (\$100)
Receive all of the above PLUS a special "Behind-the-Scenes Tour" of the orchid and propagation greenhouses and recognition in the annual report.
- Sponsor Members (\$250)
Receive all of the above PLUS an exclusive invitation to a Garden reception.
- Patron Members (\$500)
Receive all of the above PLUS an exclusive tour of the Garden with the Director or a Garden expert.
- Benefactor Members (\$1,000)
Receive all of the above PLUS an exclusive dinner with the Garden Director.



Photo by J. Williams

Horticulturist Jerry Parsons offering a behind the scenes tour of the orchid collection to Garden members.

The reward you'll have from joining the Garden is the tremendous satisfaction that comes from knowing you're supporting this fantastic living museum!

Dr. Paul Licht

New Garden Director

The opportunity to direct the UC Botanical Garden is certainly the capstone of my 40 year career in teaching, research and administration at Berkeley. To be in a position of responsibility for what I've long recognized and enjoyed as one of the premiere botanical collections in the country is an awesome but exciting prospect. In addition to being fanatical about my home garden, as a biologist, I truly appreciate what 'scientific' garden collections have to offer for our understanding of our environment, our health and indeed our basic sustenance, both physical and mental, as well as the preservation of an invaluable resource.

Although my appointment officially began in July, I've had the privilege of beginning my involvement in the administration of the Garden in mid-spring, so I can already address many of the issues that I know will occupy my attention in the coming months and years. I've also had the great pleasure of becoming acquainted with the talented and dedicated Garden staff and large cadre of volunteers who give so generously of their time. I experienced this community in full action during the very successful spring plant sale (in fact, the most successful ever) and the delightful annual June Garden Party. While on this topic, I would be remiss if I didn't extend an invitation for more of you to join us as volunteers: the need is great and I can promise you that your life will be immeasurably enriched by the experience.

Perhaps the most common question that I have been asked in my encounters is "So what are your plans for the Garden?" Rather than changing, I wish enhance the Garden's long standing mission of research, education and public outreach with an emphasis in conservation. Research and education remain central to the role of a university program, but the Garden is somewhat unique in its public persona. We are a component of the Berkeley Natural History Museum



Photo by J. Williams

To be in a position of responsibility for what I've long recognized and enjoyed as one of the premiere botanical collections in the country is an awesome but exciting prospect.

(<http://bnhm.berkeley.museum/>), a consortium of the six major museums at Cal. However, along with the Hearst Museum of Anthropology, the Garden stands out in being a public facility. Moreover, we are unique in being a 'living' museum; both the strength and beauty of our collection are properties of the live and vibrant nature of our specimens. These attributes carry a special responsibility. Care of the collection of over 12,000 different kinds of living plants and 18,000 cataloged (scientific) specimens spread over 34 acres requires intensive efforts and detailed expertise. Fortunately, our collections and horticulture staff do an exceptional job. However, the effort required for our vast specialized collection translates into the need for a much larger staff than required by most public gardens. I see serious staffing obstacles for the mere maintenance of existing specimens, let alone the expansion that is required to serve the scientific community and aid in conserva-

tion and preservation of the diverse world flora. Our problems are further compounded by a relatively old infrastructure with inadequate greenhouse facilities, collapsing retaining walls and paths, and an antiquated irrigation system. I am happy to report that a long-overdue creek restoration project has just been completed in the Asian Area to address the El Nino slide damage above the Japanese Pool and a major overhaul of at least the backbone of the irrigation system will start this fall, but much remains to be done.

On a more positive note, I want to tempt you with at least two potentially exciting new developments to whet your appetites. First, I have arranged to receive the very fine and extensive collection of South African material from the UC Irvine Arboretum (they are redirecting their energies to native plants). Our Southern African Area should soon

sprout even more lushly. Secondly, I have initiated plans to 'do something' about the Garden entrance. Look for updates in the near future.

Our education program serves a large population of the K-12 students in the Bay Area and a new grant from the National Science Foundation will allow Jenny White, our Associate

Director for Education, to continue her outstanding programs. In addition to the many thousands of school children, a large number of Cal students—and other campuses—from classes such as biology, landscape design and art use the Garden. The volunteer

Docent program is vital here and we will have difficulty expanding these activities without

additional volunteers; again, I invite you to join us. Adult or continuing education is an area to be developed and I think this goal can be best achieved by expanding and improving the public display capacity of the Garden as well as through offering more programs. The low 'visibility' of the Garden, even in the local community, is somewhat distressing. We must 'get the secret out' and attract more visitors and members: Please help spread the word! At the same time, I do not want to lose sight of the value of the Garden as a tranquil haven to escape the ever-escalating stress of daily life, a place where one can relax in a beautiful setting. I know from personal experience that a stroll through our fabulous Garden at any time of year is a wonderful prescription for lifting spirits. We are adding some unobtrusive directional

signs and we've increased summer hours—now 9 am to 8 pm on most days. A membership drive started in spring combined with some proactive recruiting at various gardening venues around the Bay Area has already yielded encouraging results. In this connection, I'd like to suggest that you consider giving the gift of a Garden membership to family or

friends to celebrate special occasions. Once they use it, they'll surely thank you.

This newsletter remains our way of staying in touch with you and it will continue to bring you a combination of news, progress reports, announcements of upcoming events as well as informative articles related to basic botany and our mission of conservation. This publication, like the Garden itself, is for you, and we welcome your suggestions and com-



Photo by H. Lyss

Docent Barbara Lyss describes the Herb Garden to visitors.

ments for future issues. I also urge you to become a frequent visitor to our website (please note the new address—<http://botanicalgarden.berkeley.edu>) for breaking news, special announcements and some lovely images (perhaps the next best thing to visiting the Garden itself). Finally, I urge you to think of the Garden as 'YOUR' garden. As a member supporting the Garden, you earn bragging rights; you are unlikely to meet many with bigger or more spectacular gardens. Encourage others to enjoy it and, of course, please do so yourself as often as possible. I look forward to seeing you all many times in the months to come; there is always something new and exciting to see in our living museum, so you can't come too often!

—Dr. Paul Licht

Volunteer Opportunities

at the Garden



Learn about plants from around the world.

Work with people who are passionate about plants, ecology and conservation.

Support the mission of one of the University's most fabulous museums.

Docent Training

Thursdays, September 18 through February 12, (with breaks for holidays) 9:30 am-12:30 pm.

Lectures and tours by UC Berkeley faculty, Garden Staff, and additional expert speakers on a variety of topics to familiarize participants with botany in general, California native plants in particular, and with the Botanical Garden specifically.

Learn and practice your tour techniques, too!

Fee and registration required. Call 510-643-1924 to sign up!

Docents... lead tours for school children and adults, create and staff educational events, design and present programs in school classrooms.

Propagators... propagate and grow plants sold at the Garden Shop and three annual plant sales.

Garden Shop... buy, stock and sell gift items and books in the shop. Chat with visitors and share information about the Garden and plants.

Horticulture... assist Horticultural staff with Garden maintenance, such as weeding, raking and digging.

Special Events... travel with us to local community festivals to 'talk up the Garden'. Assist at Garden programs and events.

Curation... make plant labels, clean seeds, help collect and prepare specimens for research and herbarium, collect data on Garden plants..

If you have a talent to share with us, make a suggestion! We may be able to make it work for both of us.

Hours are flexible, but we ask that you work a minimum of three hours a week. For more information, contact Kim Kaso, Volunteer and Program Coordinator at 510-643-1924 or email at kimkaso@uclink.berkeley.edu

FALL PLANT SALE!

Bell Flowers, Babianas and Bog Gardens

Sunday September 28th

9:00-10:00 am

**Special Members Only sale
(Memberships will be
available at the gate)**

10:00 am to 2:00 pm

Open to the general public.

9:00 am to 11:00 am

**Silent auction of choice and
rare plants.**



Photo by J. Williams

Lapageria rosea

In the San Francisco Bay Area, early autumn with its warm sunny days is the time when the growing season really begins and is the perfect time to plant and enjoy your garden.

This year we are pleased to offer an amazing selection of the choice and rare Chilean bellflowers (*Lapageria rosea*). These result from the Garden's own breeding program of Sarah Wikander's hand pollinations. In addition to over 50 plants with lovely shades of rose pink flowers, there will be more than 30 select one-of-a-kind seedlings, including many with white, salmon, or pale pink flowers and some with blushed tones giving an elegant striped or suffused appearance. Due to the great demand, sale of these plants will be strictly limited. Come early!

The Garden is pleased to offer an expanded number of South African bulbs, many never or seldom offered in the nursery trade. New and choice selections include *Babiana* 'Dark Mood' and *Tritonia crocata* 'Princess Beatrix'. A selection of native Californian bulbs including *Calochortus* and *Brodiaea* will also be available.

Fall is the best time to plant natives and there will be a wide selection of shrubs, and perennials for sale including *Salvia clevelandii* 'Aromas' and the Botanical Garden's own introduction, *Ceanothus* 'Joan Mirov'. There will also be seedlings of the giant coreopsis (*Coreopsis maritima*).

Other special offerings this fall will include: a new selection of choice carnivorous plants; a sampling of seed from the Garden's own collections of rare and unusual plants; and herbs for beauty, culinary use and teas. Children will especially enjoy a bog garden activity project and a selection of plants priced to accommodate even the smallest of allowances.

As always, there will be great selections of houseplants, orchids, cactus & succulents, perennials, ornamental grasses and trees & shrubs for sale. A silent auction of very choice and rare plants will be held from 9:00-11:00. For a listing of the plants for sale check the Garden's web site at <http://botanicalgarden.berkeley.edu>

Parking: A special free shuttle will be available from the Lawrence Hall of Science to the Garden for overflow parking.

GARDEN STAFF

Dr. Paul Licht, *Director*

ADMINISTRATION

Crissy Bilyk, *Visitor Services Specialist*
Kim Kaso, *Volunteer Services & Program Coordinator*
Rose Katsus, *Management Services Officer*
Afrooz Navid, *Administrative Assistant*
Margaret Richardson, *Tour & Rentals Coordinator*
Michael Rimar, *Administrative Assistant*
Candice Schott, *Business Operations Supervisor*
Janet Williams, *Marketing & Development Officer*

COLLECTIONS & HORTICULTURE

Dr. Christopher Carmichael,
Manager of Collections and Horticulture
Holly Forbes, *Curator*
Barbara Keller, *Curatorial Assistant*
Anthony Garza,
Supervisor of Horticulture and Grounds
John Domzalski, *Propagator*
Bill Barany, *Horticulturist*
Judith Finn, *Horticulturist*
Peter Klement, *Horticulturist*
Bridget Lamp, *Horticulturist*
Lawrence Lee, *Horticulturist*
Jerry Parsons, *Horticulturist*
Dr. Robert Raabe, *Garden Pathologist*
Roger Raiche, *Horticulturist*
Eric Schulz, *Horticulturist*
Elaine Sedlack, *Horticulturist*
Nathan Smith, *Horticulturist*
Gerald Ford, *Building and Grounds Maintenance*

EDUCATION

Dr. Jennifer White, *Associate Director for Education*
Christine Manoux, *Program Assistant*

FACULTY ADVISORY COMMITTEE

Dr. Todd Dawson, *Integrative Biology*
Dr. Lewis Feldman, *Plant Biology*
Dr. Joe McBride, *Environmental Science,
Policy, & Management*
Dr. Brent Mishler, *Integrative Biology*
Dr. Vincent Resh, *Environmental Science,
Policy, & Management*
Dr. Alan Smith, *Herbarium*

NEWSLETTER

Holly Forbes, *Editor*

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Development	643-2937
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The Garden Shop	642-3343
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Tours/Rentals	642-3352
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CALENDAR OF EVENTS

SICK PLANT CLINIC

First Saturday of every month, 9 am to noon.

UC plant pathologist Dr. Robert Raabe, UC entomologist Dr. Nick Mills, and their team of experts will diagnose what ails your plants. Free. No reservations required.

DOCENT TRAINING

*September 18, 2003 through February 12, 2004
(with breaks for holidays), 9:30 am – 12:30 pm*

Become a docent! It's a great way to support and learn about your favorite Garden! Lectures and tours by UC Berkeley faculty, Garden staff, and additional expert speakers on a variety of topics to familiarize participants with botany in general, California native plants in particular, and with the Garden specifically. Learn and practice your tour techniques, too!

Fee and registration required. Contact Kim Kaso at 510-643-1924 for information and/or to sign up.

QUARTERLY BIRDWALK

October 4, 9 am – 10:30 am

Join birding experts Chris Carmichael and Dennis Wolff for an early morning walk through the Garden to see fall migrants.

Free to Members, \$5 plus admission Non-members.
Space is limited; registration is required.

Except where noted, to register for
any Garden program or event
call 510-643-2755

ETHNOBOTANICAL WALK

October 5, 11 am – 12:30 pm

Join Horticulturist Eric Schulz in the renowned Mexican and Central American Area as he discusses how the Mayans and Aztecs used plants for cooking and medicine, and then explore the exotic produce of the region in the fascinating Foods of the Americas marketplace on your own.

Free to Members, \$5 plus admission Non-members.
Space is limited; registration is required.

AUTUMN IN ASIA

October 18 (Saturday) 9am–11 am

A walk through the fabulous Asian Area to see the blaze of fall colors with Horticulturist Elaine Sedlack.

Free to Members, \$5 plus admission Non-members.
Space is limited; registration is required.

CARNIVOROUS PLANTS WORKSHOP

November 1, 10 am – noon

Join Horticulturist Judith Finn as she discusses the fascinating world of carnivorous plants.

\$25 Members, \$35 for Non-members.
Space is limited; registration is required.

A WALKING TOUR OF GYMNOSPERMS

November 8, 10 am – 11:30 am

Join Chris Carmichael on an exploration of cone-bearing plants (especially conifers) grown in the Garden.

Free to Members, \$5 plus admission Non-members.
Space is limited; registration is required..

FALL IS THE BEST TIME TO PLANT!

Fall Plant Sale

Sunday September 28th

(See inside for details)



GARDEN HOURS: The Garden is open from 9 am – 5 pm year round. Extended summer hours are from 9 am to 8 pm Wednesday through Sunday from Memorial Day to Labor Day. The Garden Shop is open 10:30 am to 4:30 pm.

Summer Garden Shop hours are extended to 7:30 pm Wednesday through Sunday. Closed first Tuesday of each month.

University of California Botanical Garden
200 Centennial Drive, #5045
Berkeley, California 94720-5045

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Public Tours are offered at 1:30 pm each Thursday, Saturday and Sunday. Call (510) 643-2755