The Evolution of the Plant Record System

With one of the largest and most diverse collections in North America, the UC Botanical Garden has endeavored to maintain the collections with accurate records, so that they will be accessible as a resource for research and education. We asked Holly Forbes, Assistant Curator, to shed some light on the history of this record-keeping system for anyone who has ever wondered how we keep track of the Garden's invaluable collections.

When a plant (or seed or cutting) is first brought into the Botanical Garden, it is assigned an accession number. For example, the first plant brought into the Garden in 1991 was assigned the number 91.0001. The last plant we accessioned that year was 91.1467, indicating that the total number of plant materials brought into the collection in that year was 1467. We use the accession number to track the progress of a particular plant through its history at the Garden. In the earlier days of the Garden (1890-1977) three separate written records of every accessioned plant were kept: on file card, in accession books and on bed maps. The file cards were the most complete, for each 4 x 6 file card contained everything we knew about a plant—its accession number; family, genus and species names; author name (person who originally described the species); who collected it; when and where it was collected; any habitat information available; and in which beds it was planted at the Garden.

Accession Books are a critical complement to the file cards. They are chronicled sequentially by accession number. The Accession Books originally contained only the accession number, plant name, and source of the plant (i.e., who gave it to us). But in 1977, then-Curator Bruce Bartholomew altered the Accession Book headings so that they recorded all of the information found on the file cards (except for bed numbers). This new recording system enabled users to access information gathered by multiple accessions that were all from one field site and one collecting trip, because you could see it all together in one place. To facilitate finding plants in the collection, bed maps were hand-drawn and accompanied by a list of all plants in the bed.

The plant records process involves many people. As assistant curator, I assign an accession number to plant material and pass the plant on to our propagator. Later,
when the plant material is of sufficient size to be placed in the Garden, this information passes into the capable hands of the horticultural staff, who then record the accession number, plant name and location of all plant material they handle. But because all of our information was originally on paper in three different locations, any "record change" had to be made in several places, multiplying the possibilities for error. (By "record change" I mean recording the transfer of a plant from one bed to another, removal from a bed, planting it out from the nursery, etc.) This arrangement led to confusion and error.

**Initial Steps Toward Computerization**

To more efficiently handle the vast amounts of information on plants and their locations, in 1982 we launched a project to computerize many of our records operations. UCB's Administrative Information Services wrote custom programs for the Garden's record keeping system, dubbed the Plant Record System (PRS), that has been generally very successful for us. Everything on the computer can be copied onto a mini-data cartridge that will hold up to 40 million bytes of information. The PRS comprises about 28 million bytes at this time and is backed-up daily.

In February 1989 we celebrated the final steps in the conversion to computerized plant records—a major milestone in Garden curatorial history. This achievement has made our task of keeping the records up-to-date a great deal more efficient.

**Access**

Access to the computerized PRS information for those persons unfamiliar with computers was simplified recently when Laura Kim of Campus Information Systems & Technology produced simple "read-only" menus for us. Staff, researchers and volunteers can now use a Garden computer to find a particular family or genus, where the plants came from in the wild, and where they are planted in the Garden. In addition, there are many useful hard-copy resources to access similar information.

The most common reports generated by the curatorial staff are the Accession Books, List of Living Accessions, and Bed Lists. As you might imagine, a lot of paper can be involved in this process. The most recent List of Living Accessions is 751 pages long; it contains nearly 20,000 accessions in alphabetical order by family, genus, and species, and includes the accession number and bed number(s). Printing all the Bed Lists takes even more paper, approximately 800-900 pages, for 22,152 entries.

The PRS now allows us a great deal of flexibility in finding records by creating lists that use particular criteria and grouping data in almost any way imaginable. I can use the system to generate label requests that are then used by our volunteers to engrave labels. We can look something up on the computer, or we can use the paper List of Living Accessions to see if we have the plant and where it is. From there we can go to the Accession Books to determine its individual history.

Before computerization we could not produce a list of everything in the Garden without a monumental effort that would be out-of-date before it was finished. Researchers wanting to know which plants we have in certain groups can now receive a list within a short period of time. In the past we had to compile a list from the cards by hand—a time-consuming and tedious process. For example, if a researcher needs a list of all the Garden's cycads for use in a collaborative study of chloroplast DNA, we can now provide one within minutes. To actually find those plants in the collection, we would turn to the bed number listed for each accession and the bed maps.

**Mapping**

But a quick look at the hand-drawn bed maps still being used in the late 1980s would reveal an obvious need for professional surveys and efficient ways to keep pace with changes in the Garden. In September 1989 the Institute of Museum Services awarded the Garden a Conservation Project Support grant of $22,028 to improve our plant mapping. These funds allowed us
to purchase a more advanced computer system and
digitizing tablet, to survey approximately one-third of
the grounds professionally, and to hire a consultant,
Alex Downey, to establish a customized AutoCAD
mapping system. In 1990 the Garden received another
Conservation Project Support grant ($24,744) to conduct
further surveys (bringing survey completion to three-
fourths of the grounds), to install that information
on AutoCAD, and to map long-lived (“landmark”)
specimens in each bed. Using AutoCAD, we are now
able to produce scale bed maps or section maps through-
out much of the Garden. During the summer of 1991 our
student employees were so efficient they were able to
go beyond their assigned task in the California Native
section and map nearly every section of the Garden for
landmark specimens!

Endangered Species

As a member of Botanic Gardens Conservation
International (BGCI), formerly an arm of the Interna-
tional Union for the Conservation of Nature and
Natural Resources (IUCN), the Garden can share its
computerized records on endangered species in the
Garden collection with researchers worldwide. One goal
of the BGCI is to compile information on endangered
species being cultivated in botanical gardens worldwide.
The Garden receives lists of endangered plants by
country from around the world. We use this information
to determine our own holdings and reciprocate by
informing BGCI which plants we have, the quality of
their collection data, and the possibility of sharing
material with other institutions. Ultimately, we may
be called upon to provide material for reintroduction
efforts, either at home or abroad. Botanic Gardens
Conservation International also sets professional
standards for conservation activities, and promotes the
educational and research aspects of botanical gardens
around the world. To further these goals, we continue
to explore the information-sharing technologies now
developing worldwide.

Collaborations

The Museum Informatics Project, a relatively recent
development of the UC Berkeley campus community,
“is a collaborative effort to coordinate the application
of information technology in museums and other
organized, nonbook collections.” The Garden is pleased
to be working with Project personnel ultimately to
implement advanced data base management systems
and network connections that will link Garden
collections information electronically across vast
geographical distances.

Among other exciting prospects for the future, we
hope to incorporate information from The Jepson Manual:
Higher Plants of California, due out in Spring 1993 from
University of California Press; work out new data base
management systems in conjunction with developing
Garden curatorial policies and the Museum Informatics
Project; and carry out our plans for future inventories of
the collection.

—Holly Forbes

Patron Plant

The Friends Membership Committee has just selected
Cochliostema odoratissimum, of the family Commelinaceae,
as its Patron Plant for 1993. It is rare and endangered
and grows on one riverine island in Costa Rica. The
cochliostemas are handsome epiphytes closely related to
the commelinas. Our Garden has propagated the plant
both for our collection and for those donors giving at the
patron ($500) and above level.
MEET THE BOARD

Eleanor Bade

Anyone who has worked with Elly Bade knows how committed she is to the Garden and its activities. But few know we almost lost her as a volunteer even before she started! In the mid 1970s when she first applied to be a docent, she was turned down because she “had too many kids.” Luckily, she didn’t take the message too seriously. She later became a member of the 1977 docent class and has been a fixture and force at the Garden ever since.

Elly’s fondness for gardens and natural landscapes traces back to her childhood in southern California in the town of La Cañada near Pasadena. Her mother gave her the freedom to roam widely in the vineyards and sagebrush that dotted the valley’s alluvial plain. She recalls with a chuckle how she explored the entire valley, including its underground flood ditches and canals. She and her friends knew the system of tunnels like a subway map—with every overhead grate accessing a different location in town.

Because her parents wanted her to stay near home for school, Elly attended Pomona College and studied History rather than heading northward as she would have preferred. After her first job in the Los Angeles School District as a school librarian, she continued her education in the Library School at USC, and finally ventured northward to accept a position as school librarian at Everett Junior High in San Francisco. She and her husband Bill, a math professor at UCB, have lived in the Bay Area since 1955, raising their six children in Berkeley and taking advantage of sabbatical leaves to live temporarily overseas in exotic locations like Denmark and England.

Elly may be one of the few volunteers at the Garden who has tried nearly everything here. After mastering her work as a docent, Elly branched out to help on plant sales and soon found herself working more and more on propagation. In the late 1970s she was the propagator in charge of Vines, changing in the early 1980s to Trees and Shrubs. Around the same time, Elly joined with fellow docent June Falkner to organize and run the first Friends’ sponsored symposium, on Roses. Their teamwork was responsible for the series of annual symposia that ran for nine years and drew huge audiences of Garden enthusiasts.

Elly’s love of education and children has been reflected in her work at the Garden. She was active in the committee that designed the first in-school programs in the early 1980s. Even today, when she presents “Grocery Store Botany” to elementary school classes, she instills a sense of wonder and appreciation about the plants around us. As a member of the Centennial Planning Committee in 1989 and 1990, Elly made sure that children were included in the year’s festivities by adding an Art Contest to the calendar. The highly successful contest was repeated again this year, and of course, Elly was part of the contest committee. And anyone who has browsed the Visitor Center can recognize Elly’s librarian skills. Her volunteer work as the Garden’s book buyer since 1987 has made the Visitor Center a well known community resource. Elly proudly points out that the Garden’s selection of children’s plant and nature books is one of the best in the Bay Area.

As if all this hasn’t been enough, Elly has been active behind the scenes on a number of Friends’ committees. She’s enlisted many new recruits for the Garden through her work on the Membership Committee and the Nominating Committee. She’s even managed to get her husband involved by drafting him for traffic control and logistics at plant sales! Elly is especially proud of her work in helping start the Staff Development Committee, which helps Garden staff members with financial assistance to attend conferences, expeditions and off-site trips. And for the past several years, Elly has even been a chef at the Garden, actively planning and cooking for the Bird Walk and Breakfast held in the spring.

With the arrival of her first grandchild, Hanna, in August 1991, Elly has chosen to be more selective about her Garden work. (After all, Hanna deserves only the best babysitter!) Elly now devotes the majority of her volunteer time to book buying for the Visitor Center, but is frequently available as a facilitator for those needing her skillful advice about other Garden activities. Elly sees the Garden as a community resource and hopes that someday we’ll have a reference library and drop-in center where people can come with their questions. Chances are, if Elly’s involved, it will probably happen!

—Margaret Race
**PROGRAM HIGHLIGHTS**

**Fall back, Spring ahead!**

**A Glorious Autumn**

Fall 1992 found the Garden in a veritable frenzy of excitement about its new and unparalleled programs.

The Friends' lavish program on *Teas* was extremely well-received. And, with the **BIG TIME California Indian Cultural Days**, co-sponsored by the Phoebe Hearst Museum of Anthropology (formerly the Lowie Museum) and the Lawrence Hall of Science, we recorded the largest attendance ever at a Garden event. Congratulations are in order for volunteer and docent, Jacky Vittori, who coordinated the event for the Garden's Education department.

The slide lecture/booksigning for *The Oaks of California* marks a new direction for Garden programs.

**A Dappled and Delicious Spring**

Right on the coattails of the Rose Pruning Workshop in January is a program that is not-to-be-missed! Ghillean Prance, the Director of the Royal Botanic Gardens at Kew (England) (mother of us all) will present a slide-illustrated lecture entitled "Biodiversity and the Work of the Royal Botanic Gardens at Kew" on Monday night, January 18. The engaging and erudite Dr. Prance is being co-sponsored with the Strybing Arboretum, and the talk, which is FREE, is being held at 7:30 pm at the San Francisco County Fair Building (formerly known as the Hall of Flowers) in Golden Gate Park.

Dr. Robert Ornduff will lead a course on March 20-21 entitled *The Ecology of Bay Area Plant Communities*. It entails a slide-illustrated lecture and activities at the Garden, and a full-day field trip to Marin county. This course will introduce you to the biotic communities that occur in the San Francisco Bay region, their location, composition, ecological dynamics and histories, as well as human influences. The course is being sponsored by UC Extension, cost $140: please contact them for details (510) 642-4111.

Other Spring programs include: a newly designed *Wildflower Photography* workshop with the nationally recognized (and irrepressible!) photographer John Smithers, that gives you four full days of shooting and one-on-one professional guidance and evaluation out in Point Reyes National Seashore; and two European garden tours, one—*Normandy and the ile de France*—the other, *Wildflowers and Gardens of Switzerland*.

The Friends are sponsoring a new three-part series on *Fruit Tree* gardening that promises to meet an oft-expressed need among East Bay gardeners for practical information on raising fruit trees locally. Our highly acclaimed series on *Environmental Gardening* is back, as are Glenn Keator’s *Wildflower Identification Workshop* series, the *Propagation Workshops* and *Art in the Garden*. We are happy to announce that we will also produce our third **BUG DAYS!** event for all bug-lovers.

— Carol Baird

*Anthropologist Pegg MulleVIOUS demonstrates California Indian fire-making skills for the BIG TIME Indian event, which drew an unprecedented number of visitors.*

*Carson Bates, a young member of the Mewuk nation, carves a split-stick rattle as part of the BIG TIME festivities. (photos by Richard Anderson)*

*Botanic Gardens at Kew*
What is exciting about the flora of Mexico and Central America (or Mesoamerica) is that there are so many plants unknown to most Californians. The richness of the Mesoamerican flora follows from the region's extremely diverse geology, topography, climate and an interesting convergence of many floristic zones. Takhtajan says in his *Floristic Regions of the World*:

"The topographic, ecological and floristic diversity of central Mexico is so great that no scheme of classification can do it justice."

The Mesoamerican flora includes Neotropical elements from the south (predominating throughout Central American and Mexican lowlands) along with elements from Takhtajan's Californian and Appalachian floristic provinces from the northwest and northeast (which predominate in the highlands). This makes for some interesting juxtapositions. On my Spring '92 visit to the pine-oak woodlands of northeast Mexico's Sierra Oriental with modern day plant explorers John Fairey and Carl Schoenfeld, I was shown the surreal mix of flowering *Cercis canadensis* and *Cornus florida ssp. urbiniana* (Appalachian) competing with the self-assured displays of large *Tillandsia* specimens (Neotropical) perched in their limbs. On nearby drier slopes *Garrya* and *Arbutus* (Californian) entered the mix. In parts of a similar pine-oak formation the understory consisted of palms, genus *Sabal*, and not far away palms were replaced with the cycad, *Dioon edule*.

**A Short History**

The Mesoamerican collection is one of the youngest and fastest-growing collections at the Garden, having its start in the 1960s as a result of gifts from Dr. Dennis Breedlove, Curator of Botany at the California Academy of Sciences, whose work in southern Mexico as director of the ongoing Flora of Chiapas project has enhanced our understanding of the Mesoamerican flora immeasurably. The collection began to diversify geographically through the late 1970s as materials from Guatemala, Honduras and additional states of Mexico were donated by Fred Boutin (Huntington Botanic Garden) and Dr. Robert Ornduff (then UCBG Director). But by this time the old Mesoamerican section (near the Fern House) was filling to capacity.

In the late 80s a grant was received from the Elvenia J. Slosson Endowment Fund for Ornamental Horticulture to help develop a new Mesoamerican site on the Gardens' southwest slope. This area was partly an oak-bay woodland, but over half of it was *Baccharis* scrub. In 1988, two wooded acres were cleared with the aid of the California Conservation Corps and a beautiful grove of live oaks was left at the top of the hill. Landscape Architect Ron Lutsko, Jr. developed the path and bed layout for the new section. The California Conservation Corps also worked with the then horticulturist for the Mesoamerican section, the talented David Coronado, to put in all the path work.

**Breaking in a New Recruit**

Soon after the clearing and establishment of the paths and planting beds I began working at the Garden. David and I divided the section into mesic communities, montane and cloud forest, pine-oak woodland, dry thorn scrub and an ethnobotanical center. We worked first on the mesic (wet plant) communities that were to occupy the cleared woodland area. Planting went rapidly with the help not only of David Coronado but of our industrious Peter Klement, horticulturist for the South American section. The three of us worked well together and the plants grew spectacularly. A year and a half later a full complement of trees had been planted for the wet plant communities along with most of the backlog pines for the pine-oak woodland. The herbaceous materials (*Salvia*, *Cuphea*, *Dahlia*, *Bidens*, *Lupine*, and others) performed prodigiously. As the winter of 1990 approached, the planted areas were filled with flower buds and the rare and endangered *Magnolia sharpii* flowered for the second time ever.

**Land of Disaster**

**Disaster #1: The Big Freeze.** A quick reading through our annual reports starting in the 1960s suggests that
“disasters” are nothing new at the Garden. Nevertheless, the devastating freeze of December 1990 (see UCBG Newsletter Winter 1991), was a serious blow to the entire west coast. I tried my best not to take it personally, but after a period of numb shock, my morale plummeted. While there was miraculous survival and rapid regeneration in many cases, over 80% of the new Mesoamerican section had been killed to the soil line, Intellectually I can say that I learned a great deal from the BIG freeze.

One tactic I learned from the freeze was to acquire hardier plant material that could be distributed throughout the plantings and act as a “green backbone,” supporting the displays of tender plants and maintaining esthetic effects after a freeze. With this in mind I began corresponding with John Fairey and Carl Schoenfeld, who collect extensively (but quite responsibly) in Northeastern Mexico and have a thorough knowledge of plant communities in the region. Together with John and Carl in March 1991 I visited Mexico and had a chance to see this and related plant communities as they exist in nature. John and Carl sent me home laden with unusual and desirable plants for the Garden.

Disaster # 2: Landslide. It was a supreme irony that, in my absence during my 1991 Mexican trip, exceptionally heavy rains had activated a huge landslide (or rotational slump, in soil engineer’s jargon) that not only threatened the pine-oak woodland, but put off indefinitely the design of the ethnobotanical center already funded by another grant from the Elvenia J. Slosson Endowment Fund. Unfortunately, it has been more difficult to rebound from this one! Despite correctional “French drains,” considerable movement occurred again in March of 1992 and the campus has informed us that it will not have the resources to stabilize the site.

Although visitors often speculate about the origin of this slide, it’s interesting to note that the slide site was not wooded and no clearing of trees occurred there previously. The slide area occurred on landfill that was used to create the flat area above the new Mesoamerican section. This landfilling and modification of the landscape occurred even before the Botanical Garden was sited in Strawberry Canyon. The actual slope of the underlying sandstone hill is quite steep, and ground water runs at a depth of 20 to 25 feet at the interface of sandstone and the overlying fill. Soil scientists have located the instability at this depth, much deeper than tree roots can reach. To completely correct the problem would require some quite expensive geological engineering which we are unable to afford at present. In the meantime, we have implemented a partial botanical solution by planting Guatemalan alders and willows whose roots may draw off some of the ground water and slow the movement, but what is really needed is some quite expensive geological engineering.

In the face of climatological and geological disaster I must admit to having made a bit of a retreat, but caution is often the better part of valor. In Part Two (Spring issue 1993) I will address current and future plans for the Mesoamerican section. In the meantime, the “green backbone” has been steadily advancing. By the time this article is published we may know to what effect!

—Martin Grantham
WHO'S WHO IN THE GARDEN

The Mailing Volunteers

Volunteers bring a rich variety of backgrounds to the Garden. Lurking behind the persona of a volunteer is a nurse, librarian, architect, artist, physician, physicist, social worker, banker and a teacher, among other professions. Each adds to the rich mix that makes up the whole.

Nonprofit and educational organizations such as ours rely heavily on volunteers to accomplish their goals. The Botanical Garden and the Friends are no exception to this rule. From the President of the Board down to the person who will pick up a stray tissue in the parking lot, volunteers fill those spaces where University monies are not available.

A little known but important group of volunteers help Deborah Darnell, the Friends Assistant, with the mailing of Newsletters, announcements of programs, letters announcing the annual giving appeal, and our never-ending search for new members. The Fall 1992 Newsletter carried five announcements, which meant that a total of 10,000 pieces plus mailing labels were handled by a relatively small group of individuals. Our “regular” volunteer mailers over the last two years have folded, stuffed, taped and labeled eight Newsletters, eight special program mailings and innumerable Friends mailings. Over that period the group has included Evelyn Givant, Myrtle Wolf, Marjorie Gardner, Addie Collins, Neil Beach, Carmia Feldman, Kate Heckman, Jean Nunnally, Nancy Markell, June Falkner, Lizzie Lee, Thelma Russell, Peggy Klenz, Kay Riddell, Peg Newell, Florence Yaffe, Esther Oswald, Elly Bade, Leonard Skinner, Marge Brostrom, Linda Pollack, Anne Ingham, Gayle Roberts, Carol Baird, Karolyn Laib, Doris Beatty, Dorothy King, Liz Hunt, Kathleen Orloff, Tomia Sumner, Nancy Swearerengen, Bobbie Ohs, Joan Minton, Kathy Welch, Phyllis Ashworth.

Do not fold, staple, tape or stuff our mailing volunteers: they are too valuable to us! (photos by Gladys Eaton)

The “Baywood Mailers.”

Tanya Musobietti, Gloria Conway, Kim Ellis, Isabelle McKay, Deborah and myself. “It’s an opportunity for volunteers from the Visitor Center, docents, volunteer propagators and Friends committees to work together. Energy and noise level is always high on mailing days,” says Deborah. In fact, the ’90s equivalent of the old-fashioned quilting bee saves untold dollars in labor.

Our membership mailing that went out to 12,000 Oakland and Berkeley Cal Alumni, as well as the Annual giving appeal, was handled by an outside group of volunteers, the Baywood Mailers, from Baywood Court Retirement Home in Castro Valley. The Alumni mailing contained six pieces to each letter, making a whopping total of 72,000 pieces handled by these good-hearted volunteers.

Volunteerism enriches the Garden and the lives of those who serve.

—Gladys Eaton

GARDEN NOTES

Tropical Garden Donation

The Friends of the Botanical Garden have donated $800 to the forest acquisition fund of the Wilson Garden, our sister garden in Costa Rica, to purchase adjacent land and keep it in its natural state. The donation was made possible because of an appeal that followed last year’s Friends trip to Costa Rica—and horticulturist Jerry Parson’s eloquent presentation before the Board in February.

—Gladys Eaton
FROM THE DIRECTOR

"Endangered means there is still time; Extinction is forever."

Almost everyone involved with the Friends has a keen interest in conservation and native flora, but I’d venture that few are aware of how actively the Botanical Garden is engaged in efforts to rescue rare and endangered species from the brink of extinction. Behind our beautiful garden and our diverse collections of plants is an important role that links us directly with the Center for Plant Conservation (CPC), a national program headquartered at the Missouri Botanical Garden that aims to safeguard our irreplaceable natural plant heritage by establishing a National Collection of Endangered Plants. Together with Dr. Robert Ornduff and Holly Forbes, I recently returned from the CPC Annual Meeting where directors, curators and specialists from across the country convened to discuss strategic policy issues and practical concerns related to the National Collection, the largest conservation collection of plants in the United States.

As one of 25 participating institutions nationwide, the Botanical Garden has accepted responsibility for maintaining living plant material—seeds, cuttings or whole plants collected directly from the wild—of rare, threatened and endangered species in our western region. Other western gardens that participate in the effort include Tilden Botanic Garden, Rancho Santa Ana Botanic Garden and the Berry Botanic Garden in Oregon. By spreading the task among participating Gardens and Arboreta, the CPC eventually hopes to build a National Collection that maintains more than 4,400 endangered plant species. Considering that one in five plant species in the U.S. is rare, threatened or endangered, there’s a lot of work ahead. And since California and Hawaii top the lists of regions facing the greatest threats to their native flora, it is fitting that we take an active part in efforts to save endangered plants of the California floristic zone.

It’s clear that gardens like ours will be increasingly important, not only as a means of preserving the living genetic reserve of our country’s most threatened plant species, but also as a source of scientific and practical information to help species recover by reintroducing them into the wild. So next time you wander through the Garden and enjoy our collections, remember there’s a lot more to them than just their beauty.

—Margaret Race
New Members

Kathy Abascal
Franci Abraham & Mike Pierce
Mary Jean Aerni
M. Alafi
Charles E. Ashman
Nancy Baker & Patrick Manion
Viviane Barton
Jeanne Beck
Andrew Belcher
Katrine Benninger
Marian H. Berge
Louis Biagi
Elizabeth Ann Borum
Sandy Boyd
Jamie Brodie
Walter Busse
Kathleen Butler
Janis Callon
Darya Chehrezad
Chi Chen & Karrin Maehani
David Chew
Arlin Christopherson
Stanley & Dorothy Cocks
Ella Collier, M.D.
M. Esther Colwell
Vincent Cook
Judy Cortese
Ethel L. Cross
Mary Frances Crowell
Linda P. Cushman
Carla D'Antonio
Herbert H. Daubner
Bonnie Davidson
John Denning & Brigitte Miermacker
Barbara Deutsch
Barbara Dore
Carol J. Dore
Craig Dore and Sheila Valorose
James D. Downing
Dr. Lester E. Ehler
Julie Fairst
Marcia Fisher
Pauline Fisher
Elizabeth S. Fitzsimmons
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Sylvie Gastonguay &
Claude Giasson
Julie Goerlitz
Robert A. Goldstein &
Anna Mantell
Linda Ann Govan
Natasha Granoff
Carl Grimm
Bruce Hayes
Anne Hellman
Dr. David and Jennifer Hemphill
Kathryn Hill
Susan Hill
Beth Hird & Ken Pisciotto
Natalie M. Hirshberg
Hazel Houston
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Margaret Klein
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Darlene A. Nelson
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Heidi Jane Rahmann
William Croft Ratcliff
Lilli Ricardi
Audrey Richards
Mark V. Riley
Drew Roberts
Iris J. Rodgers
David Rose
Paul Sagues & Family
Elizabeth Schacter
Gillian Eversole Servais
Wendy & Robert Shaken
Carol Singleton
Susanna Smart Smeltzer &
David Smeltzer
Frances Stack
Mr. R. Stohler
Robert & Cleo Stoker
Beverly Stone
June and William Storm
Mary Jo Sutton
Brenda Taper & Gwen Head
John C. Tillotson
Sara Timby
Alfred H. Truesdell
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Mrs. Cameron Wolfe Jr.
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Penelope Wong
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Katy Wright
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Berkeley - California 94720
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Alan N. Weeden
Jim & Olive Wilhelm
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* Matching Corporate Gift

And to the following Friends for their gifts for Special Projects:

Drs. David and Evelyne Lennette again underwrote an Educational Intern for Fall Semester.
Marion E. Greene continued her support for California Alive!, especially for educating disadvantaged children from the area.
The Sidney Fund of Seattle, Washington, made a very generous contribution to California Alive!

Gifts in Kind

BAYWOOD MAILERS
Gladys Eaton
June Falkner
Carol Foster
Lizzie Lee

MORAGA GARDEN CENTER
SASO HERB GARDENS
Dr. Robert Ornduff
Elizabeth Waterman

In Memory

Rodney Kent Albin, from Peter Albin
Chuck Brittain, from Patrick E. McSweeney
Mr. and Mrs. J. W. Cobby, from Patrick E. McSweeney
Adelia Smyth Garard, from Olga M. Fekula Smyth
Vera A. Heimbucher, from Mr. and Mrs. Heath Angelo, Jr.
John Wayne Higson, Sr., from Mr. and Mrs. Eric Sutcliffe
Howard & Susanne Jeessen
Dr. Raki Kasapligil, from June McCaskill
Rudolf Schmid
and from the sale of a few of his books
Mr. and Mrs. E. J. McSweeney, from Patrick E. McSweeney
Catherine Pigford, from Kate and Harry Heckman
Lance Price, from Patrick E. McSweeney
James Rawl, from Doris & George Maslach
Tillman Sylvester Sylvia, from Patrick E. McSweeney

Two memorial benches have been donated by Mrs. Ethel Cross. One bench is in memory of her father Frank Lee Hussey and the second is in memory of her son Frank Stephen Cross.

The following friends and family of Louis Albert Doré donated a bench in his memory:

Dr. Pamela Butler
Dr. & Mrs. Charles Coleman
Barbara Doré
Carol J. Doré
Craig Doré and Family
Levi Strauss Foundation Matching Funds
Donna J. Lloyd
Mr. & Mrs. P. J. McDonald
Mr. & Mrs. James E. McCarty
NYNEX Matching Funds
Jeannette & Raymond Ogburn
San Francisco Consulting Group
June & William Storm
Edward & Constance Vincent
Jim & Olive Wilhelm

In Honor

Joan Mirov on "Joan Mirov Day": four books to the Docent Library from Elly Bade.

MEMBERSHIP

The Friends of the Botanical Garden offers public education programs and provides independent funding to support the many needs of the Garden. You can enjoy and support the Botanical Garden year-round by becoming a member of the Friends of the Botanical Garden.

Membership benefits include:

- Newsletter
- Workshops, lectures, and tours
- Discount on Visitor Center purchases
- Discount on educational classes
- Early admission to Spring Plant Sale
- Volunteer opportunities

Friends of the Botanical Garden Membership Application

Yes, I would like to support the U.C. Berkeley Botanical Garden as a member:

☐ Student* $10  ☐ Sponsor $250
☐ Individual $25  ☐ Patron $500
☐ Family $35  ☐ Benefactor $1000
☐ Contributing $50  ☐ Supporting $100
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☐ My employer has a matching gifts program. I have enclosed the appropriate forms.

Contributions are tax deductible. Please make checks payable to Friends of the U.C. Botanical Garden and mail to:

Friends of the Botanical Garden, U.C. Botanical Garden, Berkeley, CA 94720

* Full-time only.
Calendar of Events

JANUARY

JANUARY PLANT CLINIC  Sat, JAN 2
Bring your ill plants to see Dr. Robert Raabe, UC Plant Pathologist—even on January 29. 9am-noon. Meeting Room.

TOUR OF THE MONTH: THE GLASS HOUSES  Sats, JAN 9,16,23,30
Tour Orientation Center. Meet at 1:30pm at the glass house. Free Docent-led tour of the Desert/Rainforest House, Carnivorous Plant/ Fern House, Tropical House. Meet at 1:30pm at the Tour Orientation Center.

ROSE PRUNING WORKSHOP  Sat, JAN 9
January is the month to get the most out of your roses! Get a good start in our workshop; you’ll learn effective rose pruning techniques, as well as proper pegging for shrub roses, from UCBG’s Peter Klement. 10am-Noon. Meeting Room. $15 Members, $15 Non-Members. Reservations recommended.

HARDWOOD CUTTINGS  Sun, JAN 17
First program in a four-part series on propagation. UCBG’s Martin Grantham reviews a variety of successful techniques in taking deciduous and hardwood cuttings. Meeting Room 12:30-3pm. Members $10; non-members $20. Reservations recommended.

BIODIVERSITY AND KEW GARDENS  Mon, JAN 18
The Botanical Garden and Strybing Arboretum are co-sponsoring a wonderful slide talk to be given by the highly respected Director of Kew Gardens, Guillem Francé. Hall of Flowers, Golden Gate Park. 7:30 pm. Free.

RAINFOREST RAP  Tues-Fri, JAN 19-MAR 19
Program on tropical rainforest ecology and conservation, for school and other groups. By reservation only. Meeting Room. Mornings. $20 per group.

SELECTING FRUIT TREES FOR BAY AREA GARDENS  Sat, JAN 23

PRUNING DECIDUOUS FRUIT TREES  Sat, JAN 30
Second in the fruit tree series. Master Gardener Harry Sanders reviews a variety of successful techniques for pruning deciduous trees. Sanders will provide step-by-step guidance, as well as an instructional video for participants to view. Meeting Room. 10-11:30am. See price list above, Jan. 23.

FEBRUARY

DINO DAYS! GARDEN TOUR  Every day, FEB 1-MAY 24
Dinosaurs may be extinct, but some of their favorite foods are still growing, even in Berkeley! Pick up a free, self-guided tour brochure at the Visitor Center, and digest the amazing world of prehistoric plants at your own pace.

PLANT CLINIC  Sat, FEB 6
Bring your ill plants to see Dr. Robert Raabe, UC Plant Pathologist. First Saturday of the month, 9am-12. Meeting Room.

DISEASES & PESTS AFFECTING FRUIT TREES  Sat, FEB 6
Third program in the fruit tree series. Dr. Robert Raabe, Professor of Plant Pathology, UCB, will present one of his popular reviews of common and uncommon maladies affecting Bay Area fruit trees. Meeting Room. 12:30-3pm. Members $10, non-members $15. (NOTE Time change from earlier programs). See price list above, Jan. 23.

CHIP BUDDING: MAGNOLIAS & DOGWOODS  Sun, FEB 7
Second in the four-part series on propagation. UCBG horticulturist Martin Grantham discusses and demonstrates successful techniques, including bud grafting. Optional materials fee of $25 includes cutting tools participants can take home. Meeting Room.

TOUR OF THE MONTH: ASIAN PLANTS  Sats, FEB 13,20,27
Free Docent-led tour of the Rhododendron Dell and other sections of the Asian area that burst into bloom in the early Spring. Meet at 1:30pm at the Tour Orientation Center.

CHOCOLATE TASTING  Sun, FEB 14
Discover the wonders of chocolate on this Valentine’s Day with plant biologist Dr. John West and Russ Bianchi, a chocolate industry authority. Sample numerous kinds of chocolate. Meeting Room. 10am-1:30pm. Members $15, or 2 persons for $25. Non-members: $20 or $35 includes handouts and all the chocolate you can taste. Reservations recommended.

BUG DAYS!  Fri,Sat,Sun, FEB 26-28
Our most popular event! If you missed it last year, here is another chance for you to experience the wonderful world of insects and their relatives. The third annual BUG DAYS! EVENT, featuring live insects from the SF Insect Zoo Bring the family. Meeting Room 10am-3pm. $5.00 Child, $5.00 Adult.

MARCH

PLANT CLINIC  Sat, MAR 6
Bring your ill plants to see Dr. Robert Raabe, UC Plant Pathologist. First Saturday of the month, 9am-12. Meeting Room.

TOUR OF THE MONTH: POLLINATION  Sats, MAR 13,20,27
Free Docent-led tour of Spring’s exciting flowering plants, with special emphasis on how they are likely to be pollinated in their native habitat. Meet at 1:30pm at the Tour Orientation Center.

WILDFLOWER PHOTOGRAPHY  Fri,Sat,Sun,Mon, APR 2-5
If you have ever wanted to capture California’s floral bounty on film, come learn these skills with John Smithers, nationally known photographer and teacher. This year John will be taking his students to Point Reyes National Seashore and to the Sonoma Valley. Fee includes three nights bed and breakfast at a Marin inn, three rolls film development and individualized instruction and evaluation. This one is hard to beat. Members $525, non-members $575.

APRIL

WILDFLOWER PHOTOGRAPHY  Fri,Sat,Sun,Mon, APR 2-5
If you have ever wanted to capture California’s floral bounty on film, come learn these skills with John Smithers, nationally known photographer and teacher. This year John will be taking his students to Point Reyes National Seashore and to the Sonoma Valley. Fee includes three nights bed and breakfast at a Marin inn, three rolls film development and individualized instruction and evaluation. This one is hard to beat. Members $525, non-members $575.

APRIL

THERMAL ALPINE GARDEN  Fri,Sat,Sun,Mon, APR 1-5
IF YOU HAVE EVER WANTED TO CAPTURE CALIFORNIA’S FLORAL BOUNTY ON FILM, COME LEARN THESE SKILLS WITH JOHN SMITHERS, NATIONALLY KNOWN PHOTOGRAPHER AND TEACHER. THIS YEAR JOHN WILL BE TAKING HIS STUDENTS TO POINT REYES NATIONAL SEA SHORE AND TO THE SONOMA VALLEY. FEE INCLUDES THREE NIGHTS BED AND BREAKFAST AT A MARIN INN, THREE ROLLS FILM DEVELOPMENT AND INDIVIDUALIZED INSTRUCTION AND EVALUATION. THIS ONE IS HARD TO BEAT. MEMBERS $525, NON-MEMBERS $575.

WILDFLOWER IDENTIFICATION COURSE  Thurs eves, APR 15-JUNE 10
Dr. Glenn Keator, well-known botanist, celebrated educator and author of The Complete Gardener’s Guide to Native Perennials of California, will present an eight-week evening course on identification of California wildflowers. Reservations recommended. Meeting Room. 7-9pm. Members: $60, non-members: $70 for the series.

COMING ATTRACTIONS:

ENVIRONMENTAL GARDENING SERIES  Tues eves, APR 20-MAY 18
Estate Gardens of Napa Valley Guided Tour  Thurs, APRIL 29
Plant Sale  Fri, SAT MAY 7,8
Tour: Normandy & Ile De France  May 28-June 11
Tour: Wildflowers & Gardens of Switzerland  June 28-July 14

For further information on classes and events, call the Visitor Center, (510) 442-3343. To register for classes, send check to UC Botanical Garden.

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Berkeley, California 94720
Address Correction Requested

Plants are for sale at the Visitor Center all year  642-3343