North American Collection

Tulip tree, flowering dogwood, sweet gum, paper birch, bald cypress, tupelo, devil’s walking stick, bayberry, spiderwort, Virginia creeper, staghorn sumac, asters, goldenrod—these are all names evocative of the eastern North American woodlands and meadows. Yet this is Berkeley, California, where these and several hundred other species create nearly an acre of rapidly maturing woodland, shrubby thickets and flowery meadows of eastern natives.

There is much to delight a visitor exploring the shady trails meandering through the North American Area. From early March with drifts of foam flower (Tiarella cordifolia) and columbine (Aquilegia canadensis), to the lingering flushes of scarlet and gold in November and December, when the air is heavy with the sweetly herbal scent of decay, the area has a long season of showy and subtle enticements. For sheer floral exuberance, it is the months of August through October that attract most visitors, with dozens of species of goldenrods (Solidago), asters, joe-pye weeds (Eupatorium), ironweeds (Vernonia), along with many other genera and species combining to form colorful masses of flowers audibly humming with bees. At any season, the trails provide a surprising range of experiences; cool refuge from the sun, dramatic views of the San Francisco Bay, choice vistas back over the Garden, the opportunity for peaceful contemplation, the stimulation of learning new plants, or possibly sighting a particularly pleasing combination of foliage or flowers captured fleetingly by a fragment of sunlight.

And if you are looking for a place for quiet reflection or a convivial repast with friend or family, the Ornduff picnic table at the lower end of the area is a cherished spot sought out by those who regularly use the Garden.

History

When the Garden moved from campus up to our current Strawberry Canyon site in the 1920s, a North American area was designated for its present site. Yet the collection was not developed until the late 1970s, the site having been used as a Fuchsia garden until then. In the late seventies the area was cleared and planted with a few dozen eastern tree species that were thought to be of future interest to the Forestry Department on campus. In the early ’80s, the collection was expanded to reflect a much fuller range of eastern plants through collecting by the Garden staff and through seed lists from eastern gardens.

Collection Strengths

The eastern North American collection was developed without clearly stated curatorial goals. That having been said, the collecting, and consequently the collection, can be reduced to the following overlapping focuses or categories. The most important pursuit has been to acquire plants of biogeographic interest, that is, plants found in the eastern flora that reflect some of the fascinating distribution patterns in families, genera or species that provide evidence of the ever-changing geography and climates of the planet over time. For example, in Bed 303 we have the tulip tree (Liriodendron
Unique or very distinctive families or genera that occur in the Eastern North American flora are another focus. Although our sampling of these is relatively small, a few examples are lopseed (*Phryma leptostachya*), once in its own family; the Phrymataceae, now placed in the verbena family (in Bed 304); leatherwood (*Cyrilla racemiflora*) in its own family, Cyrillaceae (in Bed 304); pawpaw (*Asimina triloba*) in a genus unique to the eastern U.S. (in Bed 306); Franklin tree (*Franklinia alatamaha*), not seen in the wild since 1790 (Beds 309 and 311); Georgia bark (*Pinckneya pubens*) in Bed 303; and about two dozen other examples.

Another orientation of the collection is horticultural. Eastern plants that are common in horticulture, or the progenitors or wild forms of plants in gardens have been avidly searched out to exhibit in this area of the Garden. Most of these have been showy herbaceous perennials such as black-eyed susans (*Rudbeckia* species), asters, goldenrods, lobelias, hibiscus, etc., but many vines and shrubs such as hollies and winterberries (*Ilex* species), azaleas (*Rhododendron* species), and honeysuckles (*Lonicera* species) are well represented. A corollary of this focus has been the public display of

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**Lip fern** (*Cheilanthes lindheimeri*), a small, handsome evergreen fern from southwestern deserts that thrives in our cool, damp climate.
plants that should be grown or known more in horticulture, especially in California, where some of these plants are poorly known or seldom seen. In a few cases, new plants exhibited at the Garden were quickly accepted into the local nursery trade, and are now quite commonly grown. Good examples are pink tickseed (Coreopsis rosea), sneezeweed (Helenium flexuosum), tickseed (Coreopsis major), slender blue flag (Iris prismatica), and heart-leaved and white wood asters (Aster cordifolius and A. divaricatus respectively). Still to be “discovered” might be the majestic and richly-colored ironweeds (Vernonia species), American ipecac (Gillenia stipulata), and the marvelously diverse genus of the compass plants (Silphium), some of which would be worth growing simply for their fascinating foliage. Gardeners with a keen eye are likely to find many more choice plants to expand their planting palettes.

Geographic Boundaries and Demographics

The collection is focused primarily on the eastern seaboard, but anything east of the Continental Divide has been accepted. Space limitations and the erratic nature of good, wild-collected sources of plants from some parts of the country—with provenance data—have been just as responsible for the concentration of eastern species as any other factors. For example, space limitation has precluded any sizable prairie representation, although such would be very desirable. New England and the Carolinas account for the majority of plants exhibited, but most eastern states have some representation, as do the Canadian provinces.

The diversity of the North American collection is impressive for such a small space. We have over 290 genera, in 102 families. The daisy family (Asteraceae) is the largest with about 110 species in 29 genera. Yet it is a collection in transition. Both from an ecological and aesthetic perspective, our collection suggests what an Easterner might know as an abandoned meadow in the process of reverting to forest. As the canopy of our trees fills in, increasing shade will become the determining factor in plant growth. Ultimately, the sun-loving plants will be restricted to the margins, while the interior becomes a shady woodland glade. Therefore, the aquisition of woodland understory plants is our priority.

Horticulture

One may suspect that many of the eastern plants would sulk at the cool summer and mild, “winter-less” Berkeley climate, but in fact, most of the plants we have tried have done extremely well. Oddly, although there seems to be no apparent need to do so, most plants go into a complete winter dormancy. While their Berkeley season may start a month earlier and end a month later, the need for dormancy and flowering times remains very close to what I have observed in the wild. In fact, only one plant, black-eyed susan (Rudbeckia hirta), keeps on flowering into winter.

A heavy, weekly watering—sometimes twice during heat spells—is all the plants seem to need during our dry summer months. The astoundingly rapid summer growth needs regular pruning to keep it from swallowing the smaller pathways, and dead herbaceous growth needs to be cleared up in December through February, but overall it is a remarkably self-sustaining collection. Our major challenge is loss due to the honey fungus (Armillaria mellea), which infests much of the Garden, and insidiously kills off some of our choice plants. Tragically, the important genera of maples (Acer), spikenard (Aralia), arrow-wood (Viburnum), brambles (Rubus), and honeysuckles (Lonicera), seem especially vulnerable. However, when something dies, there is always another plant waiting to try out that spot; the Garden, like nature, quickly fills in a gap.

Invitation

For those who visit in the next few months, the late flowering herbaceous perennials will compete with the long sequence of autumn foliage coloration for attention. There is a wonderful correlation between the increasingly low angle of the sun and the brilliance of foliage tints, as the birch, tupelo, sumac, Virginia creeper, chokeberry, and dozens of other plants reveal their hidden gold and scarlet radiance. We hope you will spend some time on an across-the-country stroll, here in Berkeley.

—Roger Raiche
The Board of the Friends of the Botanical Garden, the Garden staff, and everyone who has been associated with Garden activities over the last decade are eager to recognize and thank the three retiring Friends Board officers, Bob Riddell, Gladys Eaton and Ramona Davis for their many years of dedicated service to the Friends and the Garden. Also retiring from the Friends' Board are Elly Bade, Bob Ratcliff, Tom Shaw, and Jim Van Sicklen. They will be profiled in the next issue of the Newsletter.

Bob Riddell was born in Peoria, Illinois and came to Berkeley in 1951 as a physicist at the Lawrence Berkeley Laboratory. Now an avid gardener, his interest in plants developed slowly, but by the time he and his wife bought their present house in 1973, they did not even notice its fabulous view of the Bay because they were so enthralled by the 1 1/3 acres and the gardening potential. They now have between 150 and 200 rhododendrons, among other things, and are working on a collection of southern hemisphere plants, which Bob pronounces “fascinating.”

Bob feels, and most Friends would agree, that his biggest contribution during his tenure as President, was to get the Friends going. When he assumed leadership, the membership numbered 400, and there was not much going on. Today there are more than 2,000 members, and many diverse activities.

Gladys Eaton was born in northeastern Kansas, where she helped her mother in the garden. She came to the Bay Area in the 1940s and went to work in a physician’s office, and became the office manager. She married a man who was a nature lover, and they travelled extensively. Gladys says her husband’s enthusiasm rubbed off; he was crazy about plants, and she got excited about birds. After her husband died, she became active with the Oakland Museum, in the Natural Sciences section, and was on the Museum Board off and on for 13 years. At the museum, Gladys served as Chair of Major Gifts and Chair of Membership. She credits that experience as teaching her everything she knows about fund raising, and she is the Friends’ Historian for more than a decade, using her significant artistic and organizing talent.

Now that she has retired from the Board, Gladys is spending her time painting. Her watercolors have been displayed locally with increasing frequency, and she has won awards!

Ramona Davis was born in Bridgeport, Connecticut, grew up in Schenectady, New York, and graduated from Syracuse University, in French. She taught French during her tenure as Vice President of the Friends, Gladys chaired the Major Gifts Committee and the Membership Committee. She was also Plant Sale Coordinator for several years, and while not recognized for it, has been the Friends’ Historian for more than a decade, using her significant artistic and organizing talent.

Now that she has retired from the Board, Gladys is spending her time painting. Her watercolors have been displayed locally with increasing frequency, and she has won awards!

Bob Riddell (Photos by Jerry Parsons)
Ramona Davis

for 20 years, meanwhile becoming a Master Teacher, teaching other teachers to teach foreign languages. She became Director of the Middle School at the Hamlin School in San Francisco. When Ramona decided to take a year off to explore other opportunities, she took docent training at the Botanical Garden and was “forever wedded” to UCBG, and still leads tours on a regular basis. Meanwhile she also took classes at Merritt College and became a Volunteer Propagator. She returned to work in 1984, but joined the Friends Board with Bob and Gladys, as Treasurer. She recalls that the chair of the Nominating Committee persuaded her that there “wouldn’t be much to do.” How times have changed!

Ramona enjoys gardening, although her present residence does not have a lot of space for it and her current gardening challenge is deer. Her other main interest is wolves, which she suspects is inspired by her 8-year-old dog, Louis XIV. She is active in several organizations which focus on wolf preservation and their reintroduction to the wild.

These three energetic and generous people were responsible for great growth and diversification of the Friends of the Botanical Garden during the last decade. They guided the group through good times and rocky ones, never faltering in commitment or leadership. Thank you Bob, Gladys and Ramona, for jobs very well done.

—Nancy Swearengen
What effect did the excessively wet and unusually late and cool spring have on our garden and landscape plants? As yet, there are not many indications of problems from too much water in the soil but as the year advances, perhaps symptoms will appear. However, the rains have caused a number of problems on the above ground parts of plants.

Sycamore anthracnose has been very prevalent this year. The causal fungus is *Apiognomonia veneta*, the species name indicating that the fungus kills the tissues along the veins. Spores are produced in a mucilaginous material and are released and splashed by rain. Only young leaves and twigs are susceptible. Infected leaves drop throughout the growing season and are of little or no consequence in carrying the fungus from one year to another. The fungus does carry over on the infected twigs and if there are late rains after new spring growth has started, it will be infected. Once infected, spores will be produced on the new tissues and there will be more spread. Chemical control is difficult; present fungicides are not effective and coverage in very large trees is hard to accomplish. Removing previous season’s twigs will help control but in large trees, this also is difficult. On small trees, this is effective and the fungus rarely is found on pollarded trees. Though defoliation may be severe, the fungus does not kill trees. The cultivar ‘Bloodgood’ is resistant.

Another common disease this spring is black spot on roses. The causal fungus lives under the cuticle and the black spot is fungus tissue, not rose tissue. With very good eyes, or a hand lens, the advancing strands can be seen around the edges of the spots. Although the fungus is present in small amounts, because it needs splashing water to spread its spores, it is not a problem in our dry summers unless overhead sprinkling is used. Because of the rains, it is bad this year, particularly where the roses were not pruned into dormancy last winter. Not only does the fungus carry over on infected leaves on the plants but a resting stage is produced on fallen leaves and starts the cycle again in the spring. Good cultural practices will give control.

Late blight, the dreaded potato disease that caused so many problems in Ireland 150 years ago, has been found a number of times this spring on tomatoes, which also are susceptible. Although the fungus is air borne, some gardeners have lost as many as three plantings due to the cool wet weather which favors it. Because of the warm, dry weather now, it should not be a problem, perhaps until late fall.

Peach leaf curl was bad this year. Even where dormant sprays were applied, control was not attained because the rains washed off the fungicides. Interestingly, a far less common fungus in the same genus but which attacks ferns and produces large galls and swellings on the fronds has been found.

Entomosporium leaf spot on Indian hawthorn, evergreen pear, pyracantha, loquat, toyon, quince and hawthorn has been bad this year. The causal fungus is splashed by rain and most of the hosts are evergreen so carry the fungus all year. Control is difficult.

Apple scab rarely is seen here but this year it is common on leaves and on fruits. The dark color is due to the fungus as it develops under the cuticle. If a problem, all leaves and fruits should be raked and destroyed at the end of the growing season.

Fireblight, a disease resulting from infection by a bacterium which attacks only members of the pome tribe of the rose family also is bad due to the excessive rains.

If additional problems arise as a result of the wet winter, the information will be included in the next Newsletter.

—Bob Raabe
FROM THE DIRECTOR

On a delightful evening in June we dedicated the new Aquatic Plants Display, created in honor of our former director Dr. Robert Ornduff. The display turned my thoughts to the beauty of the Garden, which in turn brought to mind three major ingredients that make the Garden the beautiful place that it is.

Foremost are the plants. The natural beauty of the Botanical Garden's marvelous collection of plants is the primary source of beauty, awe, and inspiration that brings us to the Garden. The plants are the basis for our love of the Garden. The plants will always be foremost.

Second only to the plants are the people in the Garden. Anyone who is in the Garden for any time at all quickly realizes that the people who come to the Garden are a special group. It is as if the people who love plants and are drawn to the Garden somehow assimilate the quiet beauty of the plants. It is a special joy to see bubbling groups of beautiful school children exploring the Garden in the company of our even more beautiful docents.

A third ingredient that gives the Garden added charm and beauty is the special structures that are found throughout the Garden. Things such as the Weeden Walk through the Californian Area; the Tour Orientation Center; the renovated Conference Center; and the memorial benches. These are like proper lighting on a fine painting: they enhance, refine, and make more enjoyable the natural beauty of the Garden.

The Aquatic Plants Display is the newest in our list of special features. With its addition the Garden has become a bit more interesting, a bit more charming, a bit more beautiful. Like virtually all of its predecessors, the new display owes its existence to the Garden's many dedicated Friends who give so much to the Garden with both their time and their money. On behalf of the Garden I thank all who have contributed to the many special features that grace our Garden.

Such generosity to the Garden is terribly important. Having said that, I want to look forward to another possible dedication in the not too distant future. The Botanical Garden was recently written up in an article that began:

Upon arriving at the University of California's Botanical Garden, one is greeted by a rusting wire fence, a deteriorating parking lot, and a sign warning of rattlesnakes, beyond which one enters a world renowned garden.

Except for the part about "a world renowned garden," we hope to make that introduction obsolete. We are currently meeting with the landscape architecture firm of Freeman and Jewell, who have been hired to create a plan to redesign the entrance to the Garden.

Major objectives of the project are: Increasing safety for people entering the Garden, especially groups of children. Aesthetics. Keeping open options for some day pursuing our even larger dream of constructing a proper building to house a visitors center, an educational center, and the Garden's staff.

When a design is completed, our task will be to make the plan become a reality. That translates into a capital campaign. Like the new Aquatic Plants Display, the Entrance Project will be possible only with continued generosity from the Garden's Friends. As we take pride in the Garden's beauty I urge everyone to keep dreaming about the future for this beautiful Botanical Garden that we all cherish.

—Philip T. Spieth

Garden Tours of Special Interest

March 26 - April 5, 1996
Landscapes Along the Mississippi
Visit private gardens of Jackson, Vicksburg and Natchez, and St. Louis, including the world famous Missouri Botanical Garden.

August 17 - September 2, 1996
Namaland and the Cape Floral Kingdom
Experience the natural wonders of the Cape of South Africa first hand with Dr. Robert Ornduff, former director of the Garden.

Call Geostar Travel, 800-624-6633 for more information.
Chinese Traditional Medicine

Western and traditional Chinese medicine differ greatly in their principles, practices, and traditions. Western medicine relies heavily on synthetic or natural chemical compounds, while Chinese medicine relies on complex natural compounds and on plants or their parts in the treatment of human ailments. Legend has it that the use of herbal remedies by the Chinese originated about 5,000 years ago. Chinese medical practices are deeply rooted in ancient traditional philosophies, some of which may seem abstract or complex to western minds.

Chinese medicine explains natural phenomena as constantly changing and influenced by cosmic forces. Ideas of fluctuation and mutability permeate its underlying philosophy. The human body is viewed as a microcosm, but one whose functions are influenced by the same forces that govern the universe. Thus, a human body may be viewed as a miniature of the universe. The central premise of Chinese medical theory is based on the recognition of four vital bodily humors: *qui* (air), *xue* (blood), *jung* (vital essence), and *jin ye* (fluid). These bodily humors govern the human body as an animated microcosm.

Bodily humors can be converted from one form to another and their amount and the balance among them are considered to be major factors governing an individual's health. An excess or a deficiency of a humor upsets the natural, healthy state of equilibrium in a human body. This equilibrium is monitored and regulated by bodily organs; when this natural regulation fails, illness results, and Chinese herbal medicine is administered to restore the imbalance that the body cannot restore.

The familiar Chinese principles of *yin* and *yang* are important in the practice of Chinese herbal medicine. *Yin* and *yang* are opposite, primordial, cosmic forces that are believed to pervade the human body. In Chinese medicine, *yin* represents a passive, negative force. It is female-like in nature, characterized by darkness, contraction, and descent; its symbol is water. In contrast, *yang* has a male-like nature, and is characterized as an active, positive force; it is characterized by brightness, expansion, and ascent, and its symbol is fire. Chinese philosophers believe that *yin* is the superior and stronger of the two vital forces. This idea is derived from an analogy between fire and water: fire releases energy quickly and its display of power is brief. Water endures, and over time can erode the thickest wood and hardest stone. The two forces are normally in a state of balance with each other. Each of these vital forces governs the well being of different parts of the human body, and their state of harmony insures a person's health. *Yin* and *yang* cannot exist without one another, but it is their balance that is essential for human well being.

Chinese medical practitioners also believe in the so-called five elements: metal, wood, water, fire, and earth. These govern and symbolize the world in which we live. The interactions between the five elements and *yin* and *yang* are thought to be responsible for all functions of the human body. The collective characters of the five elements resemble the natural existing relationships of the universe. Each element has its reciprocal regenerative and subjugative properties for the other elements. In the regenerative cycle metal is imbedded and formed within the earth. The fire which generates the earth arises from wood. Water that nourishes wood is contained and enclosed by metal vessels. In the subjugative cycle relations are of defeat and vanquishment. Fire is extinguished by water, which could be stopped by earth. Wood grows upon the earth, but can be cut down by metal tools. Fire has the power to melt metal and the cycle continues. *Yin-yang* and the five elements describe the basis of the function of the human body and its external environment in the context of universal patterns of nature. This symbolism and use of analogs reflect the essence and uniqueness of traditional Chinese medicine.

Western medicine characterizes drugs according to pharmacological activity: they may be antipyretics, antibiotics, anti-inflammatory, etc. Traditional Chinese
medicine characterizes drugs according to their properties and actions and arranges them in a tiered system. These are:

**Upper class:** imperial drugs which have no toxic properties and possess rejuvenating and renewing powers.

**Middle class:** ministerial drugs that are administered for mental stability and may have toxic effects on the users.

**Lower class:** assistant and subservient drugs which are used for treating various diseases.

These drugs are further classified based on their properties. For example, a flavor grouping recognizes pungent, sweet, sour, bitter, and salty flavor categories, each of which has its characteristic value in herbal medicine. Drugs with a pungent taste are used for either dispelling or promoting effects: salty-tasting drugs are used as purgatives, while bitter-tasting drugs are used to strengthen the body. Drugs that are tasteless or bland have dispelling effects via their diuretic properties. About two-thirds of the herbal medicines fall into the bitter and pungent categories. Thus, those who rely on these medicines commonly encounter unpleasant flavors. Since the pharmacological effects of the various flavors differ, Chinese physicians commonly combine more than one flavor in treating an illness.

Another set of properties of Chinese medicines is referred to as the four essences, based on the effects these medicines have on a patient's body. Cold or cool drugs reduce temperature; hot or warm drugs increase temperature. The former are considered as *yin* drugs; the latter are considered to be *yang* drugs. Another group of drugs is neither hot nor cold: these are the so-called balanced or neutral drugs. These regulate blood circulation, strengthen the body's balance, and restore or increase muscle tone.

Chinese drugs are also classified as ascending, descending, floating, or sinking. Ascending or floating drugs strengthen *yang*, and induce perspiration and dispel coldness and dampness. Warm, hot, pungent, and sweet drugs fall into this category. Descending and sinking drugs promote tranquillity, and are diuretics or purgatives. Cold, cool, sour, bitter, and salty drugs fall into this category.

Traditional Chinese medicine emphasizes the study and understanding of the properties of natural herbal products and their effects on the human body. As in western medicine, the training of a Chinese physician requires an immense body of knowledge, based on the experience of his or her predecessors. As in western medicine, the transformation of plants and plant parts into a form in which they are medically useful is carefully regulated in order to insure the maximum effect of the processed drugs on patients. Plant parts may merely be crushed, water extraction may be used, or plant materials may be subjected to high temperatures (cooked, in effect). These procedures reduce toxic effects while enhancing the medicinal values.

In Chinese medicine, the form in which the drug is administered is important. Plant parts may be ingested as slices of the plant, as powders, in pills, in teas, as concentrated extracts, or applied externally.

—Min Liu

Editor's note: The above article was condensed from a report written by recent Cal graduate Min Liu, a major in Integrative Biology, as a part of her honor's project at the Garden in fall 1994. Ms. Liu's full text is filed in the docents' library.

Our Garden has a planting of Chinese medicinal plants established in 1987; the interesting origins of this project were described in the Summer 1989 Garden Newsletter.

It is worth noting that contemporary Chinese medicine has benefited from several thousand years of use and modification. Evidence of its ever-changing nature is the fact that some plant species indigenous to North America, such as Jimson Weed (Datura stramonium) have been incorporated into traditional Chinese medicine. These plants were unknown in the Old World until early in the 16th century. It is important to remember that most humans in the world employ a medical system that is not western medicine, but a traditional one rooted deeply in their culture. These folk medicines may have a much longer history than the western medicine familiar to many of us.
BOOK REVIEWS


A few years ago visitors to the San Francisco Landscape Garden Show were able to see a special exhibit of garden drawings by Gertrude Jekyll, an English garden designer who worked in the early part of this century. The drawings are a portion of a remarkable collection of photographs, papers, drawings and herbarium specimens of garden plants (in the university herbarium) given to the College of Environmental Design at UC Berkeley. They were donated by Beatrix Jones Farrand, a pioneer American landscape architect who collected them during her working lifetime with the intention of using them in a school of landscape design she hoped to start on her property, Reef Point, in Bar Harbor, Maine. At the end of her life, realizing she would be unable to achieve this goal, she dismantled her gardens at Reef Point and sent her collection of papers and reference materials to Berkeley.

Jane Brown, one of the speakers at our 1988 Garden Symposium and author of this book, became aware of this treasure during the course of her research on a biography of Gertrude Jekyll and her collaboration with the English architect, Edward Lutyens (Gardens of a Golden Afternoon). It was inevitable that Jane, herself a garden historian and trained landscape architect, would come to be interested in the life of Beatrix Farrand. So the question is, who was this woman who brought the Jekyll photographs, papers and drawings to the U.S. and who eventually gave them to UC, an institution as far away from the gardens Jekyll designed in England as it could possibly be?

The Beatrix Farrand Jane Brown writes about could not have come from a more privileged world. She was brought up in classic old New York. Her parents were quite well off, and the family spent their summers first in Newport, R.I. with her paternal grandparents, and later at a large summer house of their own, Reef Point, in Bar Harbor. Her father's young sister, Edith Wharton, was ten years older than she was, and her mother's lifelong closest friends were Theodore Roosevelt and Henry Adams. Her mother and father were divorced, an unusual occurrence in that period and one which affected her deeply, when she was a child of ten. Apparently her Aunt Edith and her mother looked after Beatrix's early education. There is no mention, however, that she attended private school or that she was tutored at home. In this account of her life, her real education began with her horticultural studies in the early 1890s with Charles Sprague Sargent, director of the Arnold Arboretum at Harvard. (Sargent was mentor also to another unusual woman, Susan Delano McKelvey, who studied botany with him and wrote Botanical Explorations of the Trans-Mississippi West. He also sponsored E.H. Wilson's plant exploration trips to China.) Her subsequent professional education consisted of a visit to the Columbian Exposition in Chicago, a single course in architecture at Columbia University School of Mines, and in 1895 a tour of European gardens where she met William Robinson and Gertrude Jekyll. Beatrix seems to have always made the most of her social connections, both in her travels and in her career commissions. In the early 1900s she was designing her Aunt Edith's garden at the 'Mount,' and gardens for wealthy landholders on Mount Desert Island. She helped select a site for the Cathedral School for Girls in Washington, D.C., and was one of the founding members of the American Society of Landscape Architects. Subsequently, she worked for the White House during the Wilson administration and designed the plantings for Princeton and Yale universities. She established nurseries at these universities and supervised them, enabling the staff to renew the landscapes at lower cost, not usually done by a landscape architect then or now. It was in the 1920s and 30s that Beatrix began her long and rewarding client-designer relationships with Abbey Aldrich Rockefeller at the Eyrie, Seal Harbor, Maine and with Mildred Bliss at Dumbarton Oaks, Washington, D.C. In 1913 at age 41, she was married to Max Farrand, chairman of the history department at Yale. He later became the first director of the Huntington Library and Gardens. The Farrands moved to Southern California for the academic year, and spent their summers at Reef
Point. Beatrix then maintained two offices, one on each coast, and traveled between the two by train. She seems to have been a woman of her class and time, demanding perfection in her personal life and business arrangements.

Beatrix’s gardens are a combination of European classicism and American naturalism. Not many of them survive today, but two of the best—the Eyrie and Dumbarton Oaks—still exist, albeit a bit changed by modern circumstances. Jane Brown visited these and what she could of the other gardens during the course of her studies, and concludes that Beatrix was, “far, far more perceptive and talented a gardener than Gertrude Jekyll.” This point of view, written by a qualified Englishwoman, is satisfying to American ears, and may reflect the author’s perception that Beatrix was both the architect and plant selector for her clients, while Jekyll worked to select plants for the gardens Lutyens made plans for. This account of Beatrix’s life and work is an interesting one, but it is clear that it lacks the intimacy, warmth and affection of Brown’s earlier work on her countrywoman.

New Books Recently Received

- **Best Bulbs for Temperate Climates.** Jack Hobbs and Terry Hatch; Timber Press, Portland, OR, 1994; color photos; 196 pp. Hardcover. $32.95. Originally published in New Zealand. Descriptions and cultivation information on 120+ genera and 800 spp. and cultivars.


- **Sunset Western Garden Book.** Completely rev. and updated; by the editors of Sunset Books and Sunset Magazine; Sunset Pub. Corp, Menlo Park, CA; 1995; climate zone maps; color photos; illus.; 624 pp. Softcover. $24.95. 40th anniversary edition.

The Botanical Garden might not exist today were it not for the near-addiction to tobacco of one of the early faculty members of the Department of Botany. That man was William A. Setchell who, early in this century, became Professor and Chairman of Botany at age 31. According to department historian Lincoln Constance, Setchell “established...the Botanical Garden officially.”

What has that to do with tobacco? Setchell was very fond of tobacco and virtually all extant photos of him portray him with a pipe or cigar in his hand or mouth. Although his own specialty was marine algae, in 1904 Setchell began research on tobacco and its near relatives at the Botanical Garden. It was Setchell who hired botany professor T. Harper Goodspeed, long-time director of the Garden, and suggested to Goodspeed that he conduct research on the evolution and taxonomy of the tobacco genus *Nicotiana*. When the Botanical Garden was moved from campus to its present canyon location in the 1920s, much of the former canyon pastureland was turned over to the cultivation of tobacco and its wild relatives, and this focus on *Nicotiana* persisted into the 1950s.

Seven garden expeditions to the Andes were aimed in a large part toward collecting wild tobacco; most of these expeditions are described in Goodspeed’s book *Plant Hunters in the Andes*, published in 1941, and his definitive monograph on *Nicotiana* was published in 1954.

Readers familiar with out-of-the-way places in the Garden will recall the tree-like, red-flowered rare Peruvian *Nicotiana setchellii*, growing more or less wild in the Mesoamerican Area and next to the propagators’ area near the Mather Grove. Unfortunately, the big freeze of December, 1990, exterminated these.

—Krishen Laetsch
GARDEN NOTES

Assistant Manager Judith Finn and Horticulturist Jerry Parsons won several awards and ribbons at the 46th annual Pacific Orchid Exposition of the San Francisco Orchid Society in February. Along with two special awards for recognition of cultural excellence, they were awarded 15 first prize ribbons, eight seconds, and three thirds. Out of 73 exhibitors, both commercial and amateur, the Garden's display placed fourth overall. Jerry is the current president of the San Francisco Orchid Society.

Horticulturist Elaine Sedlack won three blue ribbons and one second prize with entries at the April 22nd Rhododendron Society Show at the County Fair Building in San Francisco. The miniature Rhododendron trichostomum made the finals for Best in Show. On May 10-14th Elaine attended the 50th Anniversary meeting of the American Rhododendron Society in Portland, Oregon. Her trip was made possible by the Friends of the Botanical Garden. In June Elaine was elected vice-president and program chairman of the California Chapter of the Society.

Curator Robert Ornduff received the 1994 F. Owen Pearce Award of Horticulture from the Strybing Arboretum Society. He has also received a research grant from the National Geographic Society enabling him to conduct field work in Thailand later this year.

Acting Director Philip Spieth and Assistant Curator Holly Forbes attended the annual meeting of the Association of Systematics Collections (ASC), held on the Berkeley campus June 30-July 2. The ASC is an institutional member organization supporting all types of natural history collections used for research, regardless of size or governance. Special topics of interest included the electronic networking of collection information among natural history collections nation-wide.

Assistant Manager Judith Finn and Horticulturist Gerald Ford attended an all-day program at UC Davis on July 11th, the "7th Annual Field Day of the Sustainable Agriculture Farming Systems Project." The Project was designed to compare conventional, low-input, and organic farming systems. Gerald uses the "low-input" method (the use of cover crops, companion plantings, mulches, manures, and time applications of inorganic nitrogen) in our Garden of Economic Plants.

The Center for Plant Conservation, the Garden, and the California Department of Fish & Game co-sponsored the CPC California Plant Conservation Task Force meeting August 15-16th at the Garden. Representatives from CPC participating institutions working in California (the Garden, Regional Parks Botanic Garden, Rancho Santa Ana Botanic Garden, and the Berry Botanic Garden), state and federal agencies, academia and conservation groups participated in a discussion of plant conservation priorities in California.

Horticulturist Sean Hogan, responsible for the African Hill and New World Desert collections, resigned at the end of April. He is pursuing long-time dreams of returning to Oregon, building his own garden, and establishing a nursery which he has named Cistus.
New Members

The Friends of the Botanical Garden welcome the following new members:

- Alice M. Agogino & Dale H. Gieringer
- Bill Angle
- Carol Bassett
- Bahram Behroozi
- Linda A. Bernard
- K. Blonz
- Felicia G. Bock
- Paul & Cherie Bodin
- Fraser & Sylvia Bonnell
- Linda C. Bradford
- Michele Brower
- Ellen Brown, M.D.
- Cherilyn Brunetti, M.D.
- Lori Cagwin-Leavy
- Deon Carroll
- Gale & Jack Chapman
- Judith A. Clemens
- Denise Cody
- Murray & Betty Cohen
- Ray & Norma Colvig
- Hillgia Cordes
- Fran Costa
- Anne & Leonard Cottrell
- Hunter O. Cutting, M.D.
- Joe Dahl
- Karen & Russell De Valois
- Mr. & Mrs. J.A. de Maria
- Lou Dixon
- Sandra Donnell & Justin Faggioli
- Edward Dunbar
- Mahmoud El-Gasseir
- Birgitt E. Evans
- Joseph Farrell
- Fehr & Peers Associates
- Kate Frey & Joanne Witte
- Tom Flores
- Lena Freeman
- Joan Garbarino
- Maria Gezzy
- Kay Gilliland
- P. Goldberg
- Gary & Sandra Goodman
- Hammond David Gowen
- Ruth N. Greenwald
- Joan B. Grosser
- Erika Guttenag
- Ellen W. Ham
- R. Lennon Hamilton
- Carol L. Hanson
- Leslie Harden
- Louise & Larry Harlan
- Jennifer Harris
- Sidney Hillburn
- Dr. Wolfgang Hillbrand
- Kevin Hufferd
- Dorothy H. Humphrey
- Mei-Tsuey Hwang
- Elizabeth & Keith Jaeger
- Geoffroy & Sheila Keppel
- David Kimball
- Patti Kjonaas
- Joanne & John Laffer
- Lannon & Arnold Leiman
- Bernie Levey
- Jernard R. Lewis
- Andrea Lucas
- Ian & Carol MacKinlay
- Mary B. Madison
- Erin Mahoney
- Janet L. Marth
- Chris Martin
- Donald McGuire
- Lee Patrick McIntire
- William A. McNamara
- Yvonne Meeks
- Karen & David Mitchell
- Aerin M. Moore
- Katherine E. Mortimer
- Jean M. Mudge
- Judith Murray
- Mr. & Mrs. Joseph A. Pask
- Eileen M. Perry
- Mary E. Foxon
- Jerome Rainey
- Tom Rankin & Jocelyn Real
- Lance Reiners & Lynn Jackson
- Arno W. Reinhold
- Donald A. Riley
- Brent & Lynn Robertson
- Sylvia & Irvin Rock
- Susan L. Rosenthal
- Robert Dale Sanders
- Peggy Scherer
- Rob, Carolyn & Greg Scott
- Piera T. Segre
- David Sheppard
- Alice Shiffman
- Julie J. Smith
- Pat & Michael Smith
- Sharon Smith
- Roy Streeter
- Prof. Han-Dong Sun, PhD
- Steven B. Suoj
- Leanne Swann
- Susan & Paul Teicholz
- Lora Teitler
- Lorraine Thibeaud
- Jim Vaughan
- Dorthy Walker
- Alan C. Waltner
- Roger Warner
- John & Marilyn Watson
- Shirley Watts
- Mr. & Mrs. John T. Wheeler
- Steven R. Williams
- Barbara B. Wright
- Sonja I. Yoerg & Laurence Frank
- Ortha Zebroski
- Philip & Christina Zimbardo

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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
- Discount on subscription to Pacific Horticulture
- Reciprocal admission to more than 120 gardens nationwide

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

- [ ] Student* ................... $10
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- [ ] Supporting ................. $100
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Contributions are tax deductible. Please make checks payable to Friends of the Botanical Garden and mail to: Friends of the Botanical Garden, Centennial Drive, Berkeley, CA 94720-5250

*Full-time only.
In Honor
The Friends offer appreciation and thanks for gifts from these donors in honor of:

Mrs. S.B. (Helen) Breck on her birthday from Nancy and Hugh Ditzler.

Elly Platou on her birthday from her daughter Karen Zamudio.

Grateful Thanks
The Friends wish to thank these donors who have made a substantial gift over and above membership:

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The Friends offer appreciation and thanks for gifts in kind.

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Steve Finacom
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Ted Kipping, Tree Shaper
Margaret A. Marie
Moraga Garden Center
Marcia & Ed Murphy
Dr. Robert Ornduff
Roger Raiche
Saso Herb Gardens
Dr. William Weeden
Philip Wight

Special Projects
The Friends offer appreciation and thanks for gifts from these donors to support the special projects noted.

In Memory

The Friends offer appreciation and thanks for gifts from these donors in memory of:

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Calendar of Events

PLANT CLINIC
Sat, SEPT 2
Bring your sick plants to see Dr. Robert Raabe and his associates, for diagnosis and advice. Free. Conference Center 9 am-noon.

FRIENDS’ ANNUAL MEETING
Sun, SEPT 17
All members of the Friends of the Botanical Garden are invited to hear how we did this year and to honor retired Board members Bob Riddell, Gladys Eaton, Ramsoda Davis, Tom Shaw, Jim Van Sicklen, Bob Ratcliff and Elly Bade. 4-6 pm. RSVP to Deborah Darnell, 510-643-7265 by Sept. 8.

DRAWING & PAINTING FROM PLANTS & FLOWERS
Wednesdays, SEPT 20 -NOV 8
East Bay Artist Karen LeGault will teach an 8-session class in the Botanical Garden on Wednesday mornings from 9:30 am-noon. All levels of experience, including beginners, are welcome. Members $55, non-members $70.

FALL PLANT SALE
Sun, SEPT 24
Just in time for prime planting season in our area. Natives, cacti, succulents, rhododendrons, ferns and more, grown by the Garden’s Volunteer Propagators. 10 am-2 pm.

FLOWER ARRANGING
Sat, SEPT 30
Horticulturist Jerry Parsons will demonstrate flower arranging techniques, modelling his presentation after “Bouquets for Art.” Jerry is the current president of the San Francisco Orchid Society. 10 am-noon. Members $10, non-members $15.

PLANT CLINIC
Sat, OCT 7
Bring your sick plants to see Dr. Robert Raabe and his associates, for diagnosis and advice. Free. Conference Center 9 am-noon.

GROWING TROPICAL FRUIT TREES IN THE EAST BAY
Tues, OCT 3
Lee Anderson is owner of Copacabana Gardens nursery in Moraga. He will share some of the knowledge he has gained in a lifelong passion for tropical plants. Members $5, non-members $8.

EAST BAY FALL GARDENS
Thurs, OCT 5
A tour of five East Bay gardens that will give you ideas for what to plant for interest at this time of year. Bus transport and lunch at the Botanical Garden are included. 9:30 am-3:30 pm. Members $50, non-members $75.

TREES OF CALIFORNIA
Tuesdays, OCT 10-NOV 21
The ever-popular Glenn Keator will focus on the myriad native trees of our State in this six-session course. Members $45, non-members $55.

A WORKSHOP IN DRAWING AND PAINTING
Sundays, OCT 15 & 22
A chance for those of you who can’t join us on Wednesdays, to enjoy learning from Karen LeGault. The class is suitable for beginners as well as more experienced students. 10am-4pm, both days. Members $35, non-members $70.

PLANTS OF THE CAPE FLORAL KINGDOM
Thurs, OCT 19
Dr. Robert Ornduff, former Director and present Curator of the Botanical Garden will share his extensive knowledge of the flora of the Cape region of South Africa. This region, about 180 square miles, boasts more than 2,700 native species of flowering plants and ferns. 7-8:30 pm. Members $5, non-members $8.

PLANT CLINIC
Sat, NOV 4
Bring your sick plants to see Dr. Robert Raabe and his associates, for diagnosis and advice. Free. Conference Center 9 am-noon.

HOLIDAY WREATH MAKING
Sun, NOV 19
Nancy Swearengen and Jerry Parsons, talented members of the UCBG staff, will help you make gorgeous holiday wreaths. You’ll create a showpiece and leave eager to do more on your own. 1-4 pm. Members $30, non-members $40.

PLANT CLINIC
Sat, DEC 2
Bring your sick plants to see Dr. Robert Raabe and his associates, for diagnosis and advice. Free. Conference Center 9 am-noon.

HOLIDAY PLANT SALE
Sat, DEC 2
Our popular annual sale of plants suitable for giving during the holiday season. 10 am-1 pm. Conference Center.

COMING ATTRACTIONS

LANDSCAPES ALONG THE MISSISSIPPI
MARCH 26-APRIL 5, 1996
Visit private gardens of Jackson, Vicksburg and Natchez, and St. Louis, including the world famous Missouri Botanical Garden. Call Geostar Travel, 800-624-6633, for more information.

NAMAQUALAND AND THE CAPE FLORAL KINGDOM
AUGUST 17-SEPT 2, 1996
Experience the natural wonders of the Cape of South Africa first hand with Dr. Robert Ornduff, former director of the Garden. Call Geostar Travel, 800-624-6633, for more information.

FLORA OF THE GREAT SMOKY MOUNTAINS
MAY 26-JUNE 1, 1996
Botanizing in and around Great Smoky Mountains National Park, with Glenn Keator. The trip will also include visits to some gardens in Asheville, North Carolina. Call The Friends, 510-643-7265, for more information.

GARDENS OF THE PACIFIC NORTHWEST
JUNE 5-14, 1996
Visit premier private and public gardens and specialty nurseries from Vancouver, B.C., to Portland, Oregon, with Scott Medbury, PhD candidate in environmental planning at UC Berkeley. Call Geostar Travel, 800-624-6633, for more information.

For further information on classes and events, call the Visitor Center, 642-3343. To register for classes, send checks to UC Botanical Garden. Two weeks advance notice is necessary to accommodate individuals with special needs. No refunds the week before the class date unless class is cancelled. Pre-registration is suggested, as classes fill early. The Garden is open every day of the year except Christmas from 9:00am to 4:45pm. Free public tours led by docents are given on Saturdays and Sundays at 1:30pm. Admission to the Garden is free.

Friends of the Botanical Garden
University of California
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