Stalking the Wild Welwitschia

Last August I visited South Africa with a group of plant enthusiasts, including three Garden docents and several individuals having other ties to the Garden. The trip was jointly sponsored by the Friends of the Garden and the Jepson Herbarium. Our itinerary was limited to the winter rainfall region of the Western Cape Province—the so-called Cape Floral Region, the portion of southern Africa with a Mediterranean climate. The floristic richness of that region is enormous. The area occupies about 90,000 square kilometers and supports 8600 species of flowering plants, 70 percent of which are endemic to it. The California Floristic Province, which includes the region of western North America having a Mediterranean climate, is about 324,000 square kilometers, has 4500 species of flowering plants, with 50 percent of these endemic. Thus the Cape region is about one-quarter the size of the California Floristic Province, yet has a flora that is twice the size. The Cape Peninsula alone, which would fit easily into San Francisco Bay, supports a native flora that is about half the size of California's!

Our objective was to see the spring wildflowers of Namaqualand and to sample the vegetation and flora elsewhere in the Cape Floral Region. Because of an unusually cold winter, the Namaqualand flora was just coming into flower, but already there were showy carpets of a mauve Lampranthus and fields of orange Namaqualand daisies, mostly *Ursinia cakilefolia*. At every stop we fanned out in all directions from the bus and individually called the group's attention to a special find, whether a lachenalia, gladiolus, oxalis, lapeirousia, stone plant, or tortoise. Particularly interesting was the flora of Glenlyon, a sheep ranch whose owner has established a regime of grazing designed to encourage the wildflowers, which were present in abundance. This contrasted with Skilpad, a nature reserve where fields that were once ablaze with daisies no longer support them after the removal of grazing animals. Elsewhere, we were intrigued by the rich array of diminutive succulents growing on localized quartzite outcrops.

Our knowledgeable and informative guide, Anne Bean, had arranged for us to be met by staff members or volunteers at each nature reserve or botanical garden that we visited, even on Sunday mornings, and this enhanced the value of these visits. Particularly impressive to me was Fernkloof Nature Reserve at Hermanus east of Cape Town, where the plant species diversity is greatest in South Africa. The town has a population of about 4,000, and its botanical society has a membership of 500. The society has raised funds to construct a visitors' center, office, lecture hall, herbarium, kitchen, toilets, and a cottage for visiting researchers or students—certainly an unusual example of how the local citizenry can generate impressive results.
Namibia’s “Simple” Botany

After two weeks, our tour ended in Tsitsikamma National Park, where we examined the coastal vegetation and the temperate rain forest with its very large yellowwood trees (_Podocarpus_). Most of the group then departed for flight back home, but five of us flew to Windhoek, Namibia, to spend a few days looking at the plants and animals there. Namibia is the former South West Africa, on the Atlantic coast of southern Africa above the Northern Cape Province. It occupies an area twice the size of California, but has a flora about half the size of that of California and a human population of only 1.5 million. We were met in Windhoek by our guide, who drove us for four hours over unpaved roads and through barren but spectacular country to an isolated lodge nestled among granite and marble hills. The nearest “town,” consisting of a gas station, small general store, and one or two residences is appropriately named Solitaire.

My several days in Namibia reminded me of the book entitled “Botany Made Simple.” Namibia, at best an extremely arid country, was in the grip of a severe drought. Some areas had experienced below average annual rainfall since 1970, and most of the rivers, now dry, have not reached the ocean since 1934. We saw very few plants and most of those we did see lacked leaves. Moringas and commiphoras (the source of myrrh) were common as shrubs or small caudiciform trees. A few plants were miraculously in flower along the road and we identified most of these. Our attention was diverted from the sere landscape by frequent sightings of klipspringers, kudu, gemsbok, bat-eared foxes, wild cats, springboks, lizards, and, on our day of departure, a pair of rather skinny giraffes standing at the roadside.

My objective in joining the side-trip to Namibia was to see _Welwitschia_ growing in the wild. The Garden has several specimens, the oldest one a forty-year-old plant on display in the desert house. _Welwitschia_ is a very curious plant indeed. It is a gymnosperm, bearing seeds but not flowers. Its closest relatives are _Ephedra_ and _Gnetum_, which do not look like each other or _Welwitschia_. _Welwitschia_ produces four leaves during its lifetime. The two cotyledons or seed leaves produced on germination are ephemeral. The next two leaves are foliage leaves that last the lifetime of the plant, and grow like fingernails, from the base. In age, these two leaves eventually split and form a ring around the round, blunt, often highly convoluted stem tip that is borne at ground level.

The _Welwitschia_ populations we visited grow in a national park not far from the coastal town of Swakopmund, where the name of the main street—Kaiser Wilhelm Strasse—is a reminder that until 1918 Namibia was administered by Germany. Subsequently it was administered by South Africa, but became independent a few years ago. So far as I know, foggy Swakopmund rarely has rain and its outskirts support practically no plants of any kind. A few miles inland from the cold Atlantic Ocean, where the terrain is a few hundred feet above sea level, the nearly perpetual night fog brushes across the landscape and its moisture supports large fields of colorful lichens and allows an occasional shrub to grow. Traveling inland from here we encountered our first _welwitschias_; from a distance the widely scattered, low plants resembled the masses of kelp that wash up on our beaches after winter storms. The rosettes of long wind-blown leaves were irregular, split, scratched, tangled and in general exhibited signs of a prolonged series of very bad hair years. Every plant presented a different configuration. Most of the plants we saw were very large, suggesting they were quite old, and the “grandmother” plant, the largest we saw, is estimated to be 1,500 years old.

This region has an annual precipitation of less than an inch, but during normal times there are successive years when no rain falls. When it does fall it generally does so in brief localized storms. _Welwitschia_ survives in its incredibly inhospitable habitat by absorbing the fog that is deposited on its leaves. The fact that the plants we saw were producing cones indicates that they were healthy. The occasional younger individuals with two foliage leaves still distinguishable suggested that there have been periods in this century when there was sufficient water to allow seeds to germinate. The incredibly stark and barren landscape of Welwitschia Plains, as the area is called, was given an other-worldly aspect by these curious primitive plants that fascinated us. It is odd that _Welwitschia_ survives, indeed thrives, in what is the most desolate and sparsely vegetated part of the world I have ever visited.

—Robert Ornduff
We are delighted to be at the Botanical Garden. The Fall months have been a whirlwind of discovery for us of the depth of resources, programs and talents among the staff and volunteers. We are excited by the tremendous potential for interpretation of the Garden for the community and for research opportunities. We are committed to increasing research opportunities for faculty, graduate students and undergraduates, as well as to increasing interpretive activities in the Garden for the general public, especially for families.

Because the Garden staff and volunteers were limited by antiquated computers and software, we approached Vice Chancellor Cerny. He made a tangible demonstration of the value he places in the Garden and its potential by giving the Garden $58,700 in new computer equipment and software, a new chipper, plant labeler, and a van that will be used to take Garden programs out to schools. Look for the Botanical Garden van on the road this Spring! This generous investment in our new programming will connect staff members electronically, and allow staff to access the Garden collection data on our web page. These computers add new capabilities to develop interpretive signs and brochures, and to produce new educational publications. A docent office has been set up with its own computer and computer capabilities have been added to every staff workstation as well as the visitor center for eventual installation of botanically-related educational programs for visitor use. Docents and other volunteers are receiving desktop-publishing training to assist in diverse interpretive projects.

In our efforts to bring more student projects into the Garden, we have recruited six computer students to help develop the Garden’s web page. Soon all of our accessions will be available on the Internet along with stunning photographs, a colorful Garden map, and information about our educational programs and activities. Look for our evolving web page on the University’s Home Page at http://www.berkeley.edu. Let us know what you would like to have included.

On another front, Demetri Theodoratus, a doctoral student in the Museum of Vertebrate Zoology, has begun a three year study of the maternal behavior of rattlesnakes in the Garden. Additionally, he and Dr. Harry Greene will help us educate the public about coexisting with urban rattlesnakes. To encourage graduate and undergraduate research in the Garden, we will be making six monetary awards before the end of the year. Students were encouraged to submit project proposals during the Fall. We hope this will be the beginning of a series of student research projects at the Garden. Findings from these projects will find their way into our educational programming and materials for the public.

To assist in the development of a coordinated vision for the Garden, and to focus our efforts to develop the scientific and educational aspects of the collections, we have instituted a series of Garden Review Committees. These committees are formed around seven interpretive themes: Mediterranean Climate Plant Communities; Paleobotany; Disjunct Plant Populations between Asia and North America; Disjunct Plant Populations in North America, Middle America, and South America; Greenhouse Collections; Ethnobotany; and Cacti and Succulents. Faculty, docents, and outside professionals will join Garden staff for each Review. The first two Review Committees will meet in January. We hope that at least five Reviews can be made this year.

As with other departments and museums on the Campus, the Garden is more and more a “ship in its own bottle,” expected to raise revenue to cover part of its activities. Consequently, we began charging admission to the Garden on January 1, 1997. In coordination with several other Campus museums, Thursdays will be free days. The changes you see at the entrance to the Garden accommodate the staff needed to collect fees, and to provide an attractive and colorful welcome to the Garden for our visitors. Daily fees are nominal, and frequent visitors can purchase an annual pass. In addition, this staff now is able to provide effective and timely information and orientation for each visitor, and will also be able determine how many people come to the Garden each year, who comes to the Garden, when they come, and how long they stay. Additionally, visitor interest in different educational and interpretive programs can be collected. We will use this knowledge to make our programs more effective.

As these new plans develop and are implemented, we look forward to meeting all of you.

—Ian Carmichael, Acting Director
—Jennifer White, Acting Associate Director for Education
THE DOCTOR SAYS

Strawberry lovers may be interested in some new and somewhat different varieties. ‘Mara des Bois’, from France, has brilliant red, firm, tasty fruits which are bi-conical. Fragaria x ‘Serenata’ has deep pink flowers with golden yellow centers and fruits that are medium sized and sweet. Pinching the runners gives maximum fruit set but, according to the specifications, leaving the runners in place produces abundant flowers. (Cutting the runners will typically extend the fruiting period; leaving the runners on will slow fruit production and eventually stop it.) Another variety, already available is Fragaria x ‘Lipstick’. It has striking bright red flowers. Requests for more information have not been answered but eventually will be available.

Already mentioned, but worth repeating is that late January is a good time to prune roses. In this mild climate it is necessary to prune them down to the bare canes. By doing so and removing all of the leaves from the plants and the soil, the disease cycles of both rose rust and black spot can be broken. Of course, pruning has the advantage of controlling the size and shape of the plants. Large climbing roses must be handled differently.

In “The Garden” (Vol. 121 (10):646-649) are flower heads in color of 33 different cultivars of Nerine. If captivated by this plant, look up this article to see the variations that have been bred into this plant.

Did you know that acidic foods such as rhubarb, tomatoes, wine, vinegar or lemon juice are most likely to react with cookware of aluminum, iron and copper? Aluminum reacts with basic foods such as corn, dried beans and egg whites as well as with hard water. The reactions do not change texture of the foods but may alter their color or taste.

A new prostrate rosemary cultivar ‘Irene’ is available. The plants are more vigorous, the flowers are more numerous and larger than other cultivars and the flowers are a bright blue and resist bleaching in the heat.

A recent article about plant and animal invasions included the Chinese Tallow Tree, Sapium sebiferum. Although used as ornamental trees here because of their beautiful fall colors, in the East, they are spreading rapidly and considered a weed tree. They produce seeds after only 4 or 5 years and these are spread by animals and birds. A guess as to why they are a problem there and not here might be summer rains which would favor germination and establishment of seedlings.

A lover of variegated flowers will find the new rose ‘Scentimental’ a wonderful Floribunda. Flowers are red splashed with white though a few appear to be white splashed with red and no two flowers look alike. The flowers of course are scented and have a strong sweet spice odor and the flowers are borne continuously. Another new variegated rose is ‘Rockin Robin’ which has striped red, pink and white blossoms. It is a shrub rose and has a mild apple fragrance. (Interestingly, the cultivar ‘Purple Tiger’, which is not new but which has the characteristics of striped flowers in a different set of colors, is attractive, but, according to one large nursery, it is not popular and does not sell well.)

New fruit varieties for 1997 include: ‘Dapple Dandy’, a Pluot with red flesh and a wonderful plum-apricot flavor. The skin is pale green to yellow with red spots. A pollenizer is required. (Recommended are ‘Flavor Queen’ or ‘Flavor Supreme’ Pluots or Santa Rosa Plum.) ‘Flavorella’ is a bright golden yellow-skinned, yellow-fleshed Plumcot. A pollenizer is required. (Recommended are apricots ‘Royal Rosa’, ‘Gold Kist’, ‘Katy’, and ‘Fora Gold’. ‘Arctic Star’, a low chill, super-sweet nectarine has dark red skin and snow-white flesh. It is self-fruitful. Other nectarines include ‘August Glo’ with yellow flesh and a tangy flavor, ‘Liz’s Late’ with yellow flesh and a tangy flavor (rated the highest for flavor of any fruit to date) and ‘Zee Glo’, another with yellow flesh and with a zesty flavor. All are self fruitful: ‘Snow Giant’ is a large creamy white peach with a red blush and sweet, white flesh. It is self-fruitful; ‘Compact Flavorette’ is a genetic semidwarf peach up to 8 feet. The red-streaked flesh has a rich tangy flavor. Also somewhat new are ‘Doughnut’, also called Saucer or Peento Peach. It is white fleshed with a sunken center, and ‘Baby Crawford’, which according to the California Rare Fruit Growers in Santa Clara Valley is a peach that is not beaten as to flavor. (Note: Unless mentioned, it is a good idea to check the chilling requirements before planting fruit trees in the immediate Bay Area. We have about 500 hours of chilling.)

—Bob Raabe
Many thanks to Vice-Chancellor Joseph Cerny and his office for investing in the Garden these past few months. We are delighted with an influx of new computer equipment, a computerized label engraving machine, a new chipper, and the ordering of a utility van. The new equipment will help our education and communication programs attain greater levels of accomplishment.

We were very pleased to welcome Lawrence Lee to the horticultural staff in September 1996. Lawrence is assigned to the cactus and succulent collections. He is also assigned part-time to the California Area, assisting Roger Raiche.

Lawrence graduated from Cal in botany and genetics and went through the Longwood Graduate Program. He worked for several years at the National Arboretum in Washington, DC, where he helped develop the Asian collections, and he was most recently employed at Berkeley Horticultural Nursery.

Peter Clements, from Epsom, Surrey, England, interned at the Garden September-November 1996 on a scholarship from the Garden Clubs of America. He graduated from the University of Central Lancashire with a BS in Horticultural Technology and Management, and also spent a year at Clemson University in South Carolina. Peter worked with Assistant Curator Holly Forbes on a variety of curatorial projects, including labeling, inventory, and mapping. He is now stationed at Quarryhill Botanical Garden in Glen Ellen, California, with whom we are sharing his services (and with whom his scholarship was arranged). Thank you to Mr. Clements and the Garden Clubs of America for providing his excellent services this past fall!

Professor Xue Ji-Ru, president of the Yunnan Bamboo Association in Kunming, China, visited the Garden on October 3rd to view the bamboo collections. Professor Xue is most famous for having traveled in 1946 from the Nanjing Botanical Garden to collect specimens of the dawn redwood (Metasequoia glyptostroboides), which were used to confirm the identity of the then recently discovered tree. His trip to the United States was sponsored by the American Bamboo Society, for whom he gave several lectures.

Curator Bob Ornduff attended the annual systematics symposium at the Missouri Botanical Garden in October 1996. “Tools, Technology, Techniques, Training, & Time,” the regional meeting of the American Association of Botanical Gardens and Arboreta was held at Filoli Garden Center in Woodside in mid-October. Attending from the Garden were: Daniel Campbell, John Domzalski, Judith Finn, Holly Forbes, Martin Grantham, Peter Klement, Lawrence Lee, and Eric Schulz.

Horticulturist Martin Grantham gave a talk at Strybing Arboretum in San Francisco on the flora of the Cape Province, South Africa, on December 7th and at UC Santa Cruz on December 14th. Martin was also elected to the board of the California Horticultural Society; he will be the speaker at their annual banquet in February. Martin will be teaching Advanced Plant Propagation at Merritt College during the spring semester.

Assistant Curator Holly Forbes attended the “Conference on Environmental Sciences and Policy, Habitat Conservation and Endangered Species Protection: The Role of Science in Decision Making” on the UC Davis campus in late October.

Horticulturist Elaine Sedlack attended the American Rhododendron Society’s annual convention which was held overseas for the first time, in Scotland. She was also able to visit the Royal Botanic Gardens, Edinburgh and Kew, the Howick Arboretum, Oxford Botanical Garden, Stourhead, and Wakehurst Place (where recent collections from China and the Himalayas are being grown). Elaine vacationed in Japan in October, where she enjoyed the fall color of temperate deciduous woodlands of northern Niigata Prefecture, on the western side of Honshu.

Emil Labadie, Jr., age 81, passed away October 15, 1996. Mr. Labadie was a longtime member of the faculty of the Horticulture Department at Merritt College in Oakland and taught courses in horticulture at the Garden. He received numerous awards for excellence in horticulture, including the Education Award of the California Association of Nurserymen. Mr. Labadie published three books on native California plants.

On October 12 the Garden hosted an all-day meeting of the teachers and staff members of LITES (Leadership Institute for Teaching Elementary Sciences), a program funded by the National Science Foundation, administered by Mills College, and coordinated by Friends’ board member Krishen Laetsch. The teachers are from Oakland elementary schools and educational activities are carried out by a coalition of universities, museums, and informal science centers, including the Garden. The October program included a presentation of Grocery Store Botany by Elly Bade, an introduction to pollination mechanisms by former education staff member Carmia Feldman, an introduction to California plant communities by Curator Bob Ornduff, and tours and activities in the California Area led by several Garden docents. The program is intended to provide opportunities for teachers to enhance their knowledge of science and to reacquaint or introduce them to the availability and usefulness of science as a central component of the elementary curriculum.
Water Gardens in Containers

Water gardening is becoming increasingly popular across this country. Despite Californians' concern for water use in gardens, small water gardens may actually consume less water for their volume than do planted containers of the same size with soil. I have maintained water gardens in several containers for a number of years, enjoy them, and offer my experiences to encourage readers to try them. My containers are not the most beautiful—they are black or white plastic barrels that have been cut to one-half or three-quarters length and are from two to over three feet tall. Old wine barrels, cattle watering troughs, even bath tubs will suffice if their aesthetics do not disturb you (or your neighbors). My tubs are kept filled with water the year round. One is devoted to water hawthorn, *Aponogeton distachys*, a South African plant that flourishes in the Garden's Japanese Pool. This aquatic has attractive, strap-shaped floating leaves and white flowers that are produced throughout the year. In its native home, this species usually grows in temporary pools and does not flower in the summer, but persists as a dormant tuber. Another favorite of mine is what I consider the best water lily for small containers, a yellow-flowered *Nymphaea* hybrid called 'Helvola'. The mottled leaves are up to 3 1/2 inches long and about 3 inches wide; the pale yellow flowers are about 2 inches in diameter. This water lily flowers constantly throughout the summer, but goes dormant during the winter. Its developer, famed French water-lily hybridizer J. B. Latour-Marliac is reported to have described his miniatures thus: “The small water lilies are, like Diogenes, content to live in a tub.” Other water lily cultivars are said to do well in small containers, but in my experience they do not—their large leaves often “creep” out of the container and flowering is erratic.

The so-called “banana plants” stocked by tropical fish stores and called that because of their curious clumped fleshy roots usually are the eastern North American water snowflake (*Nymphoides aquatica*) which in time will produce floating leaves and small white flowers during the summer. Other species of water snowflake have yellow flowers and do well in tubs. One can also try water hyacinth (*Eichhornia crassipes*) with its curiously bulbous, floating leaves; if placed in a sunny, warm location the plants may produce their attractive pale-blue flowers, but its leaves alone justify growing it. It grows in the slough along Highway 4 east of Brentwood, where you can collect it (since it is considered a noxious waterway weed). You may find the dwarf cattail (*Typha minima*) or dwarf papyrus (*Cyperus isocladus*) interesting to grow; these rooted plants can be grown in containers along with floating plants. If you live in an area with warmer summers than Berkeley, the dwarf lotus (*Nelumbo* 'Momo Botan') with its red, double flowers is attractive for its flowers and its umbrella-like leaves. I have tried it and it did poorly in Berkeley. There are also various cultivars of taro, including one with variegated leaves that are ornamental; these, too, will probably do better in warmer locations. Aquatic irises provide showy floral displays and their leaves are attractive as well. A plant that requires no special care, and one that will likely appear in your water garden on its own, is the rush (*Juncus sp.*). Its flowers are inconspicuous, but the erect, evergreen, dark green, cylindrical stems are striking. You might specialize in plants with variegated leaves—ribbon grass (*Phalaris arundinacea*), creeping jenny (*Lysimachia nummularia*), or combinations of other such plants. The plants in the Garden’s aquatic display pool are other examples of attractive water plants that will do well in our climate.

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*Water hawthorn (Aponogeton distachys) flowering happily in the Garden's Japanese Pool (photos by the author)*

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*The very dwarf waterlily Nymphaea 'Helvola' growing in a tub*
My containers are on a fenced deck that receives sun for several hours during the middle of the day. To add to their attraction, each container has two or three goldfish to eliminate mosquito larvae. These were bought for about ten cents each at a pet store where they are sold as “feeder fish” for larger aquarium fish. If you buy these, be sure they are healthy; a newly arrived shipment offers the best selection. Even in small containers, my goldfish have occasionally spawned and produced a few youngsters that survived to adulthood. I feed them uncooked dry oatmeal once or twice a week. Goldfish may experience stress during warm summer days when water temperatures rise and oxygen content drops, so do not overpopulate your containers with them. You may also try small mosquito fish, but these are not ornamental. Some sellers of water plants recommend what they call scavengers (mussels, tadpoles, snails) but these generally add to the detritus rather than remove it.

My plants are all potted in ordinary garden soil to which coarse sand has been added with a half-inch layer of coarse sand or gravel on the top to keep the soil in the pot. After they are planted, the clay pots are very slowly submerged to allow the soil to become saturated with water and then placed on the bottom of the tub. For small or shallow-water plants, the pots are placed on bricks or inverted empty flower pots to raise them. Every two years or so it is advisable to remove the pots, divide the plants if necessary, and repot them in fresh soil. I never use fertilizers and advise against them since they may encourage the growth of algae or distress the fish. But a little well-rotted cow manure in the spring will stimulate new growth and free flowering.

The most serious problem facing bay area water gardeners is raids by raccoons. My deck is enclosed with an electric wire on a timer that turns on the current at night. However, the timer has failed at least twice in past years as evidenced by the mayhem present on the deck the following morning. Fish are gone, the water lily leaves are shredded, and the plants are uprooted. Clearly, the raccoons test my electric barrier frequently and, when it is not working, come in for the kill. If feasible, you might consider a freestanding container with a surface that is at least four feet above its base and which is not near any plant or structure that can be climbed by raccoons. I am told this arrangement is too high for raccoons to scale successfully. Another possibility is to keep the water level a couple of inches below the container top and to cover the container with a wire mesh that is firmly secured. If you paint the wire with a weatherproof black paint it might not be too unsightly. If you have other suggestions that work, let me know, and I will pass them on.

Some local nurseries carry a small but interesting selection of aquatic plants, and a few are devoted exclusively to such plants. Or, if you prefer, there are mail-order nurseries outside this area that offer a variety of water plants in their catalogues; their addresses are available from their advertisements in national garden magazines. Water lilies are usually fairly expensive—$30 or more, so you might locate someone nearby who already has a thriving water garden and ask if you can help divide the plants when the time comes. You may end up with the extras and can start your own plantation with minimal cost.

—Robert Ornduff
BOOK REVIEWS

**Gardens of the Sun**, Trevor Nottle; Timber Press, Portland, OR; 1996. Color photos; section on seeds, sources and societies; 208 pp. hardcover $29.95

**The Dry Garden**, Beth Chatto; introduced and updated by Thomas Fischer; Sagapress, Inc., dist. by Timber Press, Portland, OR; 1996. Line drawings; color photos; sources list; 200 pp. hardcover $29.95

Gardeners who garden in Mediterranean areas of the world have a special affinity and affection for one another even though living at the far corners of the earth. It is remarkable how we have all come to know one another through letters, plant societies, gardening books and now through e-mail. This fall two books—one new and one updated—are newly published for those of us who garden where summers are warm and dry and winters cool and wet. The authors of both these books are well known and respected here. They have spent many years gardening where water is scarce and must be conserved. They write about how they have planned and worked to establish their own gardens under these difficult conditions. Interestingly enough, as one would expect hands-on gardeners to do, each author has arranged his/her book as if setting out to plant a garden from scratch. Both begin with garden soils and how they must be treated, amended, pampered even, if the plants are to flourish. They go on to describe what has inspired them in planning their gardens, and they talk about the plants they have come to use successfully.

Beth Chatto's *The Dry Garden* has long been a reference for gardeners in England, Australia and California. Even though she lives and works in England, her written advice to us has been useful and sound. She was one of the first, to tell us to look at the natural areas plants come from in order to learn how to place them in our own gardens.

In her case she studied European habitats and the French MAQUIS became the inspiration for her own dry garden. In California it has been an easy step for us to look at our own chaparral with her advice in mind. English garden writers today are not read as often as they once were, in part due to our frustrations over the suitability and availability of the plants they write about. There has been an attempt to remedy this complaint in this new edition. Fresh color pictures are used to bring it up to date, while the text, drawings and alphabetical list of plants are the same as before. Thomas Fisher, who introduces this edition, has added a United States plant hardiness zones map and a plant sources list.

Even so, he directs himself principally to eastern, midwestern or New Mexico gardeners. It seems we must tolerate our own eastern garden writers' biases in learning to select the good and wise information Beth Chatto has for us in California.

We at UC Botanical Garden first became aware of Trevor Nottle some years ago when our rose garden was being planted. He had already written two books on roses and was a member of the international group of enthusiasts who promoted the use of old, heirloom roses in modern gardens. Even though he lives and gardens near Adelaide, Australia, he has visited California nurserymen and gardeners frequently. In *Gardens of the Sun*, his newest book, he packs a lifetime of gardening experience, travel, reading and writing into a wry, sometimes repetitious, chatty account of his experiences gardening in a Mediterranean climate, albeit in the southern hemisphere. He, too, gardens within the English tradition. His prickly, frustrated adjustments with that system are twice as great as ours—not only because his plants are different, but because his seasons are, too. He is the first garden writer I know to write tolerantly, fondly and a little defensively about drought induced plant dormancy during summer. He is not very tolerant of those who complain about this, when after all THEY have to put up with the cold induced dormancy of their northern winters.

*Gardens of the Sun* and *The Dry Garden* contain good gardening advice and are good reading. Beth Chatto has an easy, conversational style when she talks about gardens and plants. Her alphabetical list of plants is helpful. Trevor Nottle uses a conversational style, too. His plant information has to be gleaned from the text, much as though he has been talking with us about plants the whole time. Of the two, *Gardens of the Sun* is best illustrated. Perhaps *The Dry Garden* is better suited to beginners and *Gardens of the Sun* to those going on with further reading.

There is a group of gardeners interested in Mediterranean plants who contact one another by e-mail. If you have access to e-mail their discussions are available through: medit-plants@ucdavis.edu.


—Elly Bade
JUDITH FINN
Garden Assistant Manager

Artist, certified pest control advisor, expert on palms, cycads and carnivorous plants, mother, always cheerful, and utterly unflappable, all describe Judith Finn, Assistant Manager of the Botanical Garden. Judith graduated in Art from George Washington University in Washington, D.C. Then, in search of "adventure," she moved west. She worked for a time as a potter at Taylor and Ng, and then as an editorial liaison for Scientific American. At Scientific American, she had the opportunity to read a lot about botany, and became quite interested. She went to work for a nursery for a year to see if she really wanted to pursue a career with plants, and then studied greenhouse management at City College of San Francisco. Feeling qualified to look for a job in the field, but advised by everyone she knew not to bother with the UC Botanical Garden, she walked into our Garden and was immediately hired and was named Assistant Manager five years later.

Her first assignment was management of all the greenhouses, and their contents. Her next task was to obtain a pest control advisors license, and she has been responsible for all the chemicals used at the Garden and the Garden's bio-control liaison with the campus ever since. You may spot her on your next visit to the Garden: she's the one in the green "Gumby suit," with mask and sprayer, making the rounds. A logical extension of this responsibility is her duty as Garden Safety Officer. She's also the overall supervisor of the horticultural volunteers, and key coordinator of staff celebrations. Occasionally, she has time to go back to her artistic origins, and create fabulous botanical illustrations for this Newsletter, or for a Garden brochure.

Away from the Garden, Judith is the devoted wife of Richard and mom of 8 year old Brandon, who attends Wilkwood School in Piedmont. As a family, they love hiking and swimming, and among their favorite adventures is exploring the "spas of the world," and "taking the cures!" However like everyone else who works at the Botanical Garden, she jumps at the chance to see her special plants in the wild. Last year, Judith spent three weeks with fellow orchid and carnivorous plant experts, plant hunting in Borneo! She wrote an account of a portion of this adventure for the Spring 1996 Garden Newsletter.

Judith says that working at the Garden brings daily new adventures. You almost never encounter the plants you already know about when you take on a new assignment here, at least partly because so many of the plants are wild-collected, and therefore, little known and seldom seen. She feels we are very fortunate to live in the Bay Area which has such a wonderful variety of great gardens and incredible resources. Judith herself belongs to the Carnivorous Plants Society, the Palm Society and the Fern Society, and reminds us that the area is full of such organizations, which have attracted dedicated experts who are always happy to help others learn.

—Nancy Swearengen

New Directors Elected to Friends’ Board

The Friends of the Botanical Garden extend a warm welcome to the three new Directors elected to the Board. Outgoing Directors Tanya Muschietti, Dr. William Weeden, and Dr. Richard Lee are commended and thanked for their years of dedicated service.

Thomas J. Branca has, since 1980, chaired the Department of Landscape Horticulture at Merritt College. An active member of many horticultural societies, and a former board member of the League of Urban Gardeners, Tom's background in botany, horticulture, and nonprofit management brings a new level of expertise to the Board.

Ray Colvig is the recently retired campus Public Information Officer, a position he held for nearly 30 years. Prior to that, he spent five years as the University's chief science writer. Ray's extensive knowledge of media networks and his adeptness at making scientific concepts accessible to the community make him an invaluable asset.

Dr. Samuel M. Taylor became the California Academy of Sciences first Curator of Education last June. Prior to that appointment, Sam served as Director of Exhibits at the American Museum of Natural History in New York, and Biology Director at the New York Hall of Science. His expertise in informal science education will be a tremendous resource for the Garden's interpretive and public education programs.
New Members
The Friends of the Botanical Garden welcome the following new members.

Randy Baldwin
Donelda Bernard
John Bleck
Thomas J. Branca
James Calhoun
Jeff Chemnick
Marie Cleasby
Barbara Coe
Bill Crinklaw
Norma Cristovich
Nick and Eleanor Crump
Mary Crychly
Patricia and Richard Daly
Kimberly DeFay
Curtis Dennison

Gita Dev
Howard and Carol Dienger
Carol Dochef
Bill and Barbara Donald
Juanita Doran
Fred Dport
Robert Ford
Brenen Anne Guyol
Carol and Dexter Hake
Sally Hughes
Ann Hutcheson-Wilcox
Krishen Laetsch
Andre L. Le Palud
Geoff and Ann Machin
Mrs. George McKeegney

Meet Eric Schulz, a new member of the horticulture staff profiled in the previous issue.

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

Mollie Balamuth
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Robert Wright

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Jerry Parsons

Roger Raiche
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Printed by TechniPrint

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

Henry F. Benkiser from Iris Gaddis
Michael Good from Elsa Meyer

Gifts in Kind
The Friends offer appreciation and thanks for gifts in kind.

Randy Baldwin
Peggy Blatchford
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Bill Crinklaw
Tom Delfino
Bernard Dietz
Cynthia Dong
David Gress
Virginia Hambley
Thomas Livingston
Tim McDonough
Roger Warner

The Friends wish to thank the following businesses for giving very generously to our fall plant sale:
A Sticky Business
Berkeley Horticultural Nursery
Emerisa Gardens
Harlequin Gardens
Homestead Gardens
Marced Orchids
Native Sons Nursery
Orchard Florist & Nursery
Rosendale Nursery
Soquel Nursery Growers
Suncrest Nurseries, Inc.

Special thanks to:
Ernie Wasson for his tireless labor in coordinating fall plant sale donations
Dick Kolbert of Hand Associates for his kind donation of many "hard to get" books for our Visitor Center

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

Entrance Project
Hammond Trust

Join Friends of the Botanical Garden or Give a Gift Membership

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

- Student* $10
- Basic $35
- Family/Dual $50
- Supporting $100
- Sponsor $250
- Patron $500
- Benefactor $1000
- New
- Renewal

Name
Address
City/State/Zip
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- This is a gift from
- 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 Botanical Garden and mail to:
Friends of the Botanical Garden, 200 Centennial Drive, Berkeley, CA 94720-5250

*Full time only.
Calendar of Events

JANUARY
SICK PLANT CLINIC
Bring your ill plants to see Dr. Robert Raabe, UC Plant Pathologist. First Saturday of every month. 9am-Noon. Ornduff Room. FREE.

ROSE PRUNING WITH PETER KLEMENT Sat, JAN 11
Join horticulturist Peter Klement for advice, tips and instruction on the art and technique of rose pruning. 10am-Noon. $10 members, $15 non-members, pre-registration recommended.

A VISIT WITH DR. HORT Sat, JAN 25
Victor Yool, alias Dr. Hort, alias Dr. Chlorophyll, gives advice and support for horticultural caregivers. Bring him what's bugging you. 10am-Noon. $8 members, $25 non-members, pre-registration recommended.

FEBRUARY
CALIFORNIA NATIVE FERNS AND THEIR RELATIVES WITH DR. GLENN KEATOR Sat, Feb 1, 10am-1:30pm and Fri, Feb 7, 7pm-9:30pm
This course will focus on the identification, life cycle, ecology and growing of major native ferns and their relatives. $30 members, $35 non-members, pre-registration recommended.

VISIONS OF SPAIN WITH KATHERINE GREENBERG Thurs, FEB 6
A preview of a spring, 1997 trip, Spain in Private Splendor, featuring the gardens, castles, and cuisine of Spain. 7:30-8:30pm, FREE.

MARCH
CARE AND CULTURE OF ORCHIDS WITH JERRY PARSONS Sat, MAR 1
A demonstration class featuring the culture and care of warm and cool growing orchids. Orchids propagated from the Garden will be available for purchase. 1-4pm. $15 members, $20 non-members.

INTRODUCTION TO USING WILDFLOWER IDENTIFICATION KEYS WITH DR. GLENN KEATOR Sun, MAR 2 & 16
A first step course in using keys to identify wildflowers. Be ready for the spring explosion! Graduates will be ready to tackle the Jepson Manual! 10:30am-2:30pm. $60 members, $75 non-members, pre-registration recommended.

PEET'S COFFEE AT THE GARDEN WITH JIM REYNOLDS Sat, MAR 8
A tasting of several different types and roasts of coffee, with a slide lecture on the history and socio-economics of the coffee plant. 10am-1pm. $10 members, $15 non-members, preregistration recommended.

APRIL
GARDEN TOUR TO SANTA BARBARA: LOTUSLAND AND SANTA CRUZ ISLAND Mon, APR 7 through Fri, APR 11
We board Amtrak's Coast Starlight, beginning a five day excursion to Santa Barbara. Major Ports of Call include Lotusland and Santa Cruz Island, with many fascinating stops in-between. $650 members, includes a donation to the Garden. Limit 20, pre-registration required.

A FILOLI TOUR AND MORE Thurs, APR 24
Our spring tour to the peninsula features the fabulous estate of Bowens & Roth, plus a catered lunch at Filoli followed by a garden tour. Victor Yool will provide wit and commentary! $85 members, $100 non-members, pre-registration required.

SPRING PLANT SALE
Member's Preview: Friday, APR 25, 5-7:30 pm
Public Sale: Saturday, APR 26, 10am-2pm
The Garden's finest can be yours to cultivate and enjoy! Come to our biggest and most diverse plant sale of the year!

COMING IN APRIL, DATES AND DETAILS TO BE ANNOUNCED...

• A BOTANICAL GARDEN TOUR WITH ASSISTANT CURATOR HOLLY FORBES
• A RAIL EXCURSION TO THE VERNAL POOLS OF THE JEPSON PraIRIE

Look for more information in your spring program brochure, arriving in January!

For further information on classes and events, call the Visitor Center, 510-642-3343. 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 canceled. 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 $3 for adults and $1 for children.