The Red Dot

Visitors to the California area of the Garden often ask about the small red dots that are present on the labels of many plants. These dots identify plants that are considered to be rare or endangered by the California Native Plant Society. Of California’s 4839 species of native vascular plants, 1129 or nearly 18 percent are considered to be rare or endangered. When subspecies and varieties are added to this tally, the figure rises to nearly 28 percent. California harbors the largest number of rare or endangered plant taxa of any state (the term taxa is the plural of taxon, which refers to any taxonomic category; in this case it includes species, subspecies, and varieties).

Red dots are prominent on the labels of several species in herbaceous genera such as Brodiaea, Clarkia, Delphinium, Dudleya, Fritillaria, Horkelia, and Lewisia; in a few shrubby genera, notably Arctostaphylos and Ceanothus; and in some tree genera such as Cupressus and Lyonothamnus. If a species is rare or endangered in California but not outside the state, it still merits a red dot. An example is the Arizona cypress (Cupressus arizonica subsp. arizonica), known in California only from the Cuyamaca Mountains, but widespread in Arizona and parts of Mexico.

A few plants with red dots are well known in cultivation. These include our only native palm, Washingtonia filifera, several of the manzanitas, island mallow (Lavatera assurgentiflora), tree-anemone (Carpenteria californica), and Catalina ironwood (Lyonothamnus floribundus subsp. asplenifolius). Ironically, while the Lavatera is considered rare or endangered, it has escaped from cultivation in parts of southern California, where it has become naturalized.

Only 34 species, subspecies, or varieties of California native plants are presumed to be extinct, or extirpated in California. Many of these doubtless are truly extinct, but

Tree-anemone (Carpenteria californica) is known from fewer than ten sites. (Photo by Holly Forbes)

Chinese Camp brodiaea (Brodiaea pallida) is known from a single locality in the Sierra foothills. (Photo by Robert Ornduff)
there is always hope that an unknown population of some of these will be discovered. Indeed, in 1993 a single specimen of the presumably extinct annual clover *Trifolium amoenum*, once widespread along the California coast north of San Francisco Bay and last collected in 1969, was discovered growing near Occidental. Its discoverers, two biologists from UC's Bodega Marine Laboratory, collected seeds from this plant and are establishing a seed bank that can be used in a reintroduction program. A few imperiled species are known only from single populations or a very few populations. The vernal pool grass Crampton's tuctoria (*T. mucronata*) is now known from only three populations in Solano County. The Chinese Camp brodiaea (*B. pallida*) is known from only a single population growing in serpentine soil along a stream that traverses two private parcels in the Sierra foothills. The Presidio manzanita (*Arctostaphylos hookeri* subsp. *ravenii*), while growing on protected land, exists only as a

![Contra Costa goldfields (Lasthenia conjugens), recently rediscovered in Contra Costa County. (Photo by Robert Ornduff)](image)

single individual. Caper-fruited tropidocarpum (*T. capparideum*) was last seen in 1957 when it was collected south of Byron by Department of Botany graduate students from Cal. (I was on that field trip, but do not recall the *Tropidocarpum.*) Recent extensive searches of alkaline grasslands east of Mount Diablo have failed to turn up this plant, which is presumed to be extinct.

Among those taxa almost certainly extinct, one, the Franciscan manzanita (*Arctostaphylos hookeri* subsp. *franciscana*), last seen in the wild in 1942, is cultivated as an ornamental. But other species are known only as dried specimens on herbarium sheets. These include the single-flowered mariposa lily (*Calochortus monanthus*), last seen in 1876 growing along the Shasta River, and the Santa Catalina Island monkeyflower (*Mimulus traskiae*), last seen growing near Avalon in 1904. Both these species were named after they had become extinct.

Most of California's rare plants are ones whose natural distributions were already restricted when they were first encountered by botanical explorers of California beginning in the 18th century. These include Catalina ironwood, Presidio clarkia (*C. franciscana*), Chinese Camp brodiaea, Monterey cypress (*Cupressus macrocarpa*), and Sonoma sunshine (*Blennosperma bakeri*). These species are natural rarities, a term that distinguishes them from anthropogenic rarities, species whose current geographic ranges are much reduced as a result of human activities. The latter include alkali milkvetch (*Astragalus tener var. tener*) of the Central Valley and California jewelflower (*Caulanthus californicus*) of the San Joaquin Valley, both of whose ranges have been severely reduced as a result of agricultural activities.

Some of our rare or endangered species are ones of ancient origin; an example is Catalina ironwood, known from the fossil record and once present on the mainland. At the other extreme are species of recent evolutionary origin. Many of these are annuals, a life form richly represented in the California flora. Many species of clarkia, goldfields (*Lasthenia*), suncups (*Camissonia*), gilia, and tarweeds (several genera) are of recent origin. Indeed, it has been suggested that the Merced clarkia (*C. lingulata*) originated within the past 10,000 years.

The California Native Plant Society publishes an Inventory of Rare and Endangered Vascular Plants of California. The current (fifth) edition of this inventory was issued in 1994 and a sixth edition is in preparation. CNPS has a five-tiered rating system for imperiled plants. At the top are those 34 species that are presumed extinct or at least extirpated in California. Next are those that are rare, threatened, or endangered in California and elsewhere (about 19% of our native vascular flora), followed by those that are rare, threatened, or endangered in California but more common outside the state (4% of our flora), taxa about which we need more information (1% of the flora), and last, plants of limited distribution (8% of the flora). Plants on any of these lists merit a red dot on their label. In devising its ranking system, CNPS considers RED: Rarity, Endangerment, and Distribution of a taxon. Rarity "addresses...the numbers of individuals and the nature and extent of distribution," endangerment "embodies the perception of the plant’s vulnerability to extinction," and distribution "focuses on the overall range of the plant."

Our red dots signal to the public an element of danger in the future of plants whose labels bear them. The California Department of Fish and Game maintains its Natural Diversity Data Base which at present contains fewer plant taxa than does the CNPS list. And a few California species are federally listed via the Endangered Species Act, an act that is currently being revised by Congress. The Garden currently has 286 accessions of rare or endangered California natives that belong to 176 taxa in 26 genera; thus, we grow about 10% of the taxa in California that merit a red dot on their labels.

In other areas of the Garden, red dots on plant labels are based on information supplied by Botanic Gardens Conservation International.

—Robert Ornduff
GARDEN NOTES

Horticulturist Roger Raiche assisted Dr. Clifford Schmidt (professor emeritus at San Jose State University) in leading a workshop on the genus _Ceanothus_ (California-lilac) for the Jepson Herbarium on April 6-7th. The class was especially appreciative of the fresh material Roger collected for their use.

Thanks to all the docents and other volunteers who helped the Garden host "Cal Day" on Saturday April 13th. Thousands of visitors toured the campus and Garden.

Horticulturist Martin Grantham taught basic plant propagation at Merritt College spring semester. Martin also spoke on fern propagation on April 26th at the International Plant Propagator’s Society regional meeting held at UC Davis.

Curator Robert Ornduff attended the symposium on plant evolution and conservation on islands sponsored by the Santa Barbara Botanic Garden in early May. He also presented a talk to the Friends of the UC Davis Herbarium in early May entitled “The Roots of the California Flora.”

A very hearty “Thank you!” to the volunteers and staff who participated in the Spring Plant Sale May 10-11.

Horticulturist Peter Klement was a participant in the Celebration of Roses exposition in El Cerrito on Sunday May 19th. This is an annual event where old-fashioned roses of historical groups are displayed.

The California newts’ (_Taricha torosa_) eggs laid February-March in the Japanese Pool have hatched and the baby newts are growing rapidly.

We are sorry to announce that horticulturist Kurt Zadnik is leaving the Garden in mid-June. He and his family are relocating to Columbus, Ohio, where Dr. Karla Zadnik has accepted a faculty position at The Ohio State University. Kurt already has a new job, as managing editor of an optometric journal! This is yet another of Kurt’s many talents (he edited the Pacific Coast Cichlid Association’s journal for many years). We wish them the best of success in their new adventure.

FROM THE DIRECTOR

A special event occurred in the Garden on the last Sunday of April. A myriad of Professor Robert Raabe’s friends, colleagues, and admirers from the Botanical Garden, the College of Natural Resources, and elsewhere gathered in the Garden to say “Thank You!” to Bob for all that he has done for them and for the University of California. It was a fitting and proper occasion. Bob’s contributions, service, generosity, and good will deserve our emphatic recognition and our hearty applause.

I was particularly pleased that the Botanical Garden and the Friends were co-hosts with the College for this well deserved occasion. Someone who did not know better might question Bob’s loyalty. His undue affection for the “enemies” of our beloved plants—the fungi, bacteria, and viruses that attack and sometimes kill our plants—is clearly a matter for suspicion.

In point of fact, Bob Raabe is one of the Garden’s treasures.

His diploma proclaims Bob to be a Doctor of Philosophy, but in the Garden he is our resident DPM—our "Doctor of Plant Medicine." His monthly sick plant clinic is a renowned Garden tradition that brings credit to the Garden, pride to the Garden community, and attracts visitors to the Garden from all over the greater Bay Area. The Newsletter would not be the Newsletter if the “Doctor” did not speak. As a member of the Berkeley faculty, Bob’s active participation in the Garden has for many years provided an important link between the Campus and the Garden, which has been greatly appreciated by the community.

Bob Raabe is a man of many hats—plant pathologist, professor, former Associate Director of the Botanical Garden, thespian, Monk, and even Santa Claus. Through the years I had the pleasure of seeing Bob wear many of these hats. I was, therefore, honored to have the privilege of speaking on behalf of the entire Garden when I said: “Thank you, Bob. We are deeply appreciative and proud that you are one of us. We give you our unanimous affection, and we earnestly hope you keep on being our Garden Pathologist for many years to come.”

—Philip T. Spieth
THE DOCTOR SAYS

Each year, National Gardening Magazine has many testers throughout the country that rate the best ten new vegetables of the year. Those for last year are as follows: ‘Senorita’, a large jalapeno pepper with high yields and a mild flavor; ‘Sizzler’, a tapered hot, high yielding pepper which colors early; ‘Early Choice’, an early, sweet, tender, sweet corn; ‘Sugar Crunch’, a rapid growing, hybrid cucumber good for slicing or pickling; ‘Optima’, a lettuce with large, green, buttery heads and crisp outer leaves; ‘All Seasons’, a prolific, early, high yielding, gynoecious (all flowers are females), burpless cucumber; ‘Jade A’, a small, green, high yielding winter squash with excellent color and taste; ‘ Miracle Sweet’, a disease resistant tomato producing sweet, 5 ounce fruits (though sometimes they are smaller); ‘Long Pie’, an oversized, zucchini-shaped pumpkin with smooth texture and excellent flavor; ‘Aria’, a thin-skinned bitter free slicing cucumber which may have weak vines; and ‘Bush Big Boy’, a compact version of ‘Big Boy’ with the same flavor. OK, so you counted and there are eleven. It’s because the last two were a tie.

Heirloom tomatoes. By definition, an heirloom vegetable is one which is open-pollinated (not always true because tomatoes are self pollinated) and has been grown for at least 50 years. According to some, the top five heirloom tomatoes include ‘Brandywine’, which has superb flavor, texture, and color; ‘Big Rainbow’, a bicolor beefsteak type with skin and flesh marbled; ‘Cherokee Purple’, the skin of which is dark purple to black but the flesh is brick red and of good flavor; ‘Hugh’s’, a large pale yellow to nearly white beefsteak with a mild flavor; and ‘Zebra’ which is pale orange with scattered green stripes, and has green flesh and a mild flavor.

Test gardeners last year rated ‘Super Sweet 100’ as the best cherry tomato. Interestingly, the name 100 does not come from the number of fruits produced. In field trials in California, a visitor picked a cherry tomato from a row of 100. The seeds and juice spurted all over on his dress shirt on the first bite. Laughing, he said “Boy, that 100 is a sweet little devil.”

One last word about tomatoes and that is that last year, because of the late rains and low temperatures, late blight (the same late blight that is found on potatoes and caused the Irish famine 150 years ago), was very bad. Some gardeners had to plant 3 times before conditions were no longer favorable for the fungus to attack the plants. This year, the same conditions have favored the fungus and many nurseries have lost their first crops of tomatoes. If you have started your tomatoes and have not lost them, do not overhead water them and if it rains, put some cover over them to keep the foliage dry.

A new plant tie, called Get-a-Grip is made of heavy duty double-sided Velcro. It can be used over and over and is so handy that it can be applied with one hand if necessary. It is 3/4” wide and this prevents it from cutting into tender plants. Source is not known yet, though it may be available.

Last issue, it was mentioned that there would be an article this time about greenhouse thrips. Dr. Nick Mills took time from his very busy schedule to write such an article so look for it if you haven’t seen it already.

Another plant to be added to this snail list is Neomarica gracilis, sometimes called the “walking iris.” It should be mentioned that a friend says that his are not bothered by snails so maybe my snails haven’t heard that this plant isn’t very good-tasting.

Although a little early to think about tulips, if the tops are still green, don’t pull them, but let them die before removing. If the tulips bloomed well, dig them late in summer and put them in your refrigerator (about 34 degrees F) for three months. Plant them about the first of December and they will bloom earlier and produce bigger bulbs for next year.

—Bob Raabe

BOOKS OF INTEREST IN THE VISITOR CENTER


Most gardeners tidy their gardens in the fall, preparing for winter and a lovely long period of reading catalogs and books on gardening. For them, spring is a time for doing and winter a time for contemplation. This year, somehow, the publishers have it backwards. Why didn’t they bring out the two volumes reviewed here in November when we could have curled up with them in front of a cozy winter fire?

Both books are of genuine interest to us in the San Francisco Bay Area. In *The Collector's Garden*, Ken Druse describes visits to gardens we have visited ourselves, and to gardeners we know. In *Rock Garden Plants of North America*, over half of the articles are devoted to western plants written by gardeners and collectors we have known for many years. It seems that west coast gardens and gardeners now are being recognized as part of the mainstream of American gardening experience.

- **The Collector's Garden**, Designing with Extraordinary Plants. Ken Druse; ed. by Margaret Roach; design by Richard Ferretti; Clarkson Potter Pub., New York, NY, 1996. Color photos; mail-order and plant society references; bibliography; 248 pp. $45.00.

Most of us pick up Ken Druse’s books (*The Natural Garden*, *The Natural Shade Garden*, *The Natural Habitat Garden*) because his photographs are so lush and colorful. This is also true of *The Collector's Garden*. Only after closely scrutinizing all the photos do we turn to the text. We begin first, skipping around with delight, with the gardeners and gardens we are familiar with—Ruth Bancroft, Tom Chakas, Betsy Clebsch, Marcia Donahue, Western Hills Nursery—all Friends of UC Botanical Garden. Afterwards we settle down to serious reading. We find that these plant collectors and garden creators, and their eastern counterparts, have a lot in common: a love and knowledge of plants and a passionate interest in growing them. The author himself seems to fit into this personal gardening pattern more comfortaby than in his earlier books, making this book more substantial than the earlier conventional ‘coffee table’ volumes. There are a few faults. Some plant photos are mislabeled, and a few readers may find the photos too brightly processed, distorting some colors. On the other hand, the mail-order and plant society references are useful, and the bibliography informative. This is a book many readers here will want to give to friends while keeping a copy at home for themselves.


Over 50 years ago a group of enthusiastic gardeners interested in miniature and alpine plants founded the American Rock Garden Society (which has recently become the North American Rock Garden Society). They began publishing a journal about plants of North America and other parts of the world. The first *Bulletin* appeared in January-February 1943, and issues have been published continuously until today. This anthology of previously published articles from the *Bulletin* has been issued in honor of the 50th anniversary of that first volume in 1943.

The selection process was begun by a large group of NARGS volunteers who read all issues of the *Bulletin* through 1991 and filled out evaluation sheets on each article. These were next separated into subject categories, and were read by experts in these fields. The results of the two reviews were tabulated, and about 200 of the most highly rated articles were sent to the editor, who made the final selection of the articles to be approved by a committee appointed by the president of the Society. The outcome of this careful review process is a volume of 58 articles grouped by geographic regions of the United States, representing the most informative and interesting articles published in the *Bulletin*.

A little over one-third of the articles are devoted to plants in the Far West, and another ten describe plants in the Great Basin and Rocky Mountain region. Many of the authors—Wayne Roderick, Sean Hogan, and Margery Edgren—belong to the western chapter of NARGS and are members of the Friends of UC Botanical Garden. Gardeners will find these articles a source of background information about common and uncommon small plants they may wish to grow—or if that is impossible—see in the wild.

—Elly Bade
1995 Seed Collecting Trip

In March, the Garden’s 28th Seed List was sent to over 600 botanical gardens and researchers in 43 countries. It is through this free exchange of plant seeds, spores, and bulbs that botanical gardens augment their collections and researchers sometimes find their raw materials. The Garden receives approximately 40% of its new plant materials via this exchange. In order to produce this list, Garden staff and associates collect seed from native habitats, primarily in California.

In October 1995, horticulturists Roger Raiche and Kurt Zadnik and myself, Assistant Curator Holly Forbes, gathered our equipment and set off for a week-long trip in search of ripe seeds in northwestern California. After acquiring all the necessary collecting permits (thank you to agency botanists!), we traveled many back roads east and north to Eureka and Crescent City. The abundant rainfall seemed to have a negative impact on seed set in 1995 in northwestern California. We hypothesized that rainfall knocked flowers off plants earlier in the year—no flowers, no seeds! The low seed set could also be the result of reduced pollinator activity or the washing away of pollen. We were inspired to search longer and farther. The trip was frequently punctuated with cries of “stop!” and “there it is!”

This trip offered fewer risks in tree climbing—so no death-defying photos accompany this article. The size of the rented van corresponded nicely to the size of the pole-pruner, which made collecting from the ends of branches much safer and easier. Even a partially repaired landslide did not deter us. The road-building operation slowed us down enough to afford a good look at the gigantic rock-crushing machinery being used to make roadbase on-site. It was deafening but very effective.

We returned exhausted but relatively unscathed from our forays into the field, previously untrod restaurants, and motels (some great, some moldy). Highlights included sparkling fall color of brilliant yellow big-leaf maples (Acer macrophyllum) nestled along creeks on mountain sides of green douglas-fir and pines. The flaming red leaves of the dogwoods (Cornus nuttallii) greeted us at higher elevations. California’s version of fall color can be spectacular in its own ways. We were awestruck by the giant old-growth redwoods in Jedidiah Smith Redwood State Park near Crescent City. We were there late in the afternoon as the fog was coming in and saw only two other people. A visit is highly recommended. A pair of pileated woodpeckers along the Klamath River greatly impressed us with their size and their ability to rapidly strip the bark from sections of a sycamore (Platanus racemosa).

We couldn’t produce the Seed List without the help of friends and volunteers. The California Native Plant Society, East Bay Chapter, assisted greatly with funding. Volunteers cleaned and packaged seeds and filled requests, especially Margriet Hecht and Diane Wren.

—Holly Forbes

Fish Lake, Six Rivers National Forest—one of dozens of picturesque sites visited while collecting seeds. (Photos by Holly Forbes)

Kurt Zadnik and Roger Raiche collecting Tanacetum camphoratum (dune tansy) seeds at Dry Lagoon, south of Eureka.
The Curse of the Thrips

Many of you will have noticed that one of the most persistent problems in the garden over the last couple of years is the silvering of the beautiful dark green foliage of a wide variety of shrubs, particularly evergreen shrubs, such as azalea, camelia, fern, laurel, rhododendron and viburnum. This silvering of the foliage is the work of a tiny slender insect known as the greenhouse thrips, *Heliothrips haemorrhoidalis*, thrips being both singular and plural. This little insect derives its name from the fact that it was first discovered in a greenhouse in Europe. It is thought to have originated from Tropical America and although it is primarily known as a greenhouse pest throughout much of the US, in California it is most often encountered outside on a broad range of ornamentals.

**Damage Done By Thrips**

The greenhouse thrips is little more than one millimeter in length and is dark brown to almost black in the adult stage with pale legs and very thin pale feather-like wings that are folded along its back. Adults occur at almost any time of the year and are most often found on the underside of the leaves. Males of the greenhouse thrips have seldom been seen and the adult females are parthenogenetic, meaning that they reproduce clonally like aphids. The thrips' eggs are inserted singly into the tissues of the leaves, the hatching juvenile thrips are pale green, in contrast to the dark colored adults, and they pass through two feeding larval stages before entering a so-called pupal stage, a non-feeding but mobile stage remains on the foliage. The life cycle is completed in 20-30 days depending on temperature, and so in the Bay Area we frequently see 5-7 generations each year. It is the larval stages and the adults that damage our ornamentals and produce the characteristic silvered appearance of the foliage.

The silvering of foliage caused by thrips can readily be distinguished from that caused by spider mites, that can also discolor the leaf surface, by the tell-tale blackish liquid spots that accompany the silvering caused by thrips. These blackish spots are in fact fecal droplets of the thrips that are often carried around on the end of the upwardly arched abdomen as a deterrent to potential natural enemies. The thrips also produce honeydew, sugary droplets that rain down onto the foliage and ground below leaving a sticky residue. The silvering is most frequently observed in late summer around the base of shrubs or on the more shaded and sheltered parts of the canopy, but if left undisturbed the damage can spread throughout the canopy of more susceptible plants. At this point the foliage is already destroyed and must be pruned out or badly affected plants removed from the garden. Plants can only be protected if the thrips are detected earlier in the season, before they have caused widespread silvering of the foliage. The greenhouse thrips reproduces most rapidly in the Bay Area in spring and late summer, the times of the year when we experience those warm sunny days. In mid
summer, the typical fog cover reduces temperatures and the thrips are unable to reproduce so quickly. The best time to try to control the thrips is in spring and late summer when they can be seen on the underside of the foliage before the silverying has progressed too far. When the thrips are detected, however, the problem is to find an effective control measure.

Natural Enemies Not Effective in the Bay Area

The natural enemies of thrips include parasitic wasps, that develop in the egg or the larval stages, and predators such as the minute pirate bug, green lacewings and predatory mites that feed on the larval of the thrips. Although an effective parasitic wasp, *Thripobius semiluteus*, has been introduced from Brazil to southern California avocado orchards and is commercially available from Buena Biosystems (phone: 805-525-2525), a beneficial insectary in Ventura, this wasp is unable to survive the cooler temperatures of the Bay Area. Laboratory studies at the Riverside campus of the University of California also indicate that the fecal droplets of the greenhouse thrips effectively prevent predators from attacking this particular thrips.

In the absence of good natural enemies there are several treatments that can be used to combat the greenhouse thrips. It is sometimes possible to get rid of the thrips by washing them off with a stream of water from a hose. Failing this an insecticidal soap, commercially available from horticultural suppliers or made at home from one teaspoon of Ivory dishwashing detergent to one gallon of water, can be sprayed onto the foliage. Another least toxic approach is to use a summer time oil, such as Sunspray, but always check on a small section of foliage for phytotoxic effects first as some plants can be sensitive and burnt by the oil. Each of these approaches will require diligence, to cover the underside of the foliage rather than just the top, and to treat again at weekly intervals until thrips are no longer seen on your shrub. For those who are willing to use more toxic products, it is frustrating to learn that the thrips is resistant to a number of contact insecticides, but you may want to try a systemic insecticide, such as acephate. Whatever method of control is chosen it is essential to be on the look out for the thrips, particularly in spring and late summer, and to control them before they have a chance to disfigure the plant. By the time that a large patch of foliage has been silvered, the insects are often gone and it is too late to try to control them.

Why the greenhouse thrips has suddenly become so damaging to ornamentals in the Bay Area is something of a puzzle. The development of insecticide resistance could account for its increased activity on a broader range of ornamentals, as resistance allows insects to more readily overcome the natural defenses of plants. However, some taxonomists believe that the greenhouse thrips is really a complex of species, distinguishable only by characters of the elusive males, and so the possibility remains that we are experiencing an invasion by a closely related species of thrips that was not present before. Whatever the cause you can be sure that the thrips will continue to be abundant this season and that we will need to be on the alert for signs of early damage.

—Dr. Nick Mills
STAFF PROFILE

Peter Klement, the Garden’s resident rosarian, was born in Wisconsin and graduated from the University of Minnesota with a degree in Horticulture. He also studied architecture, but confesses that when he was supposed to be attending to buildings, his mind was always on plants, instead. He worked for a rose grower during college, and his experiences persuaded him to switch to horticulture.

After college, he came West, first to Oregon, and then to California. He arrived at the Garden in 1980. His first assignments were the Herb Garden and the Garden of Economic Plants, which was reminiscent of his early childhood experience gardening with his family on a large lot at home.

When the Rose Garden at the Garden was established in 1982-83, Peter was given responsibility for it, too. He traveled to the annual Rose Symposium at the Huntington Library and Botanic Garden, and got involved with the various symposia the Friends produced during the 1980s. Subsequently, he was able to attend the International Rose Conference in Hawera, New Zealand. He continues to educate with his annual Rose Pruning workshops here in the Garden, which are sold out every year.

Peter could be described as something of a “joiner.” He professes to have “given up on a lot of plant societies” for lack of time, but nevertheless is active with the Rock Garden Society, the California Rare Fruit Growers, the North American Fruit Explorers, the Heritage Rose Society, the Royal National Rose Society and the American Rose Society.

In 1987, Peter relinquished care of the herb and vegetable gardens, and took on the European and South American Sections. Of this, he says that the South American, or more accurately, Chilean, collection is the more difficult to set a direction for. While nearly all the plants of European origin that one might want will sooner or later turn up on a seed list, virtually nothing from South American is easily available, making planning quite difficult.

Listening to Peter talk about plants, one has the feeling that he may be most interested in the many variations on the commonplace. He waxes enthusiastic, for example, about learning to grow winter crops in California, after a midwestern upbringing, and having discovered that there are “seasons” during the winter for growing different crops. Here are Chinese cabbages that mature late in the year as the days grow shorter. There are crops that sit still during winter and are ready to pick in the early spring, such as certain radishes, leeks, French sorrel, and with skill, carrots, and so on.

Peter describes his own garden as a collection of things he can’t grow at the Botanical Garden, including plants given him by friends, plants that have other sentimental attachments, and modern roses. In his spare time, he cooks (he is a devoted and prolific baker). His advice to gardeners is, “find out what you can grow, and grow lots of it!”

—Nancy Swearengen
New Members
The Friends of the Botanical Garden welcome the following new members.

Nabil M. Amer
Catherine L. Anderson
Janan Apaydin
Florie & Fred Baumann
John Benson
Patricia Bondesen-Smith
Anne N. Bonnet
Betsy Boffogo
Thomas Brown
Robert R. & Jean C. Buell
Monique Bueffler
Terry Camiciia
Charles Chisolm
Margaret Colbert
Tim Cooke
E. Patrick Creehan
Mike Dahlin
Meike De Jonge Sacks
Catherine DeHeer
Joseph A. Donohoe
Cheryl Douglas
Nora Elliott
Robert Epstein
Gerldine Fink
Nini FitzPatrick
Juon-Kin K. Fong MD
Kim Fujishige
Marlaea Graham
Robert & Margaret Greulich
Nancy Hanna
Mary Heck
Ken H. Henderson
Gerda Janos
Kathleen Karol
Bohun Kinloch Jr.
Pamela & Richard Kramlich
Jeff Lance
Lawrence E. Lee
Kevin Leichner

Due to administrative staff changes, we were unable to compile the regular list of special gifts to the Garden. We will have a complete list in our next issue.

Members of the Friends get a 10% discount on all purchases in the Visitor Center.
VISITOR CENTER UPDATE

Changes have been taking place to freshen its look. The back room glass has been cleaned and covered with a protective film to reduce ultraviolet penetration into the atrium. New lights have been installed to highlight the selling area more effectively and the floor covering was replaced in May. Additional selling space has been made available, also. You are invited to stop in, meet the volunteers, inquire about Garden activities and browse the selection of books, gifts and plants.

Gift selections for Summer include three lines of American-made jewelry plus Baltic amber. The greeting card selection has been expanded to include a variety of note card packages and journals. Botanical Garden logo apparel in seasonal colors has been added as well as additional stock of the popular hand-screened wildflower aprons, sweat shirts and t’s. The acclaimed Discovery Scope, a high-optics viewer, is also on hand.

The Visitor Center is staffed wholly by volunteers with operating hours being dependent upon volunteer coverage. There is always a need for more volunteers to work in the Visitor Center. If you are interested, please contact Nancy Swearengen, Education Assistant at 510-642-3352.

Join Friends of the Botanical Garden or Give a Gift Membership

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
☐ Basic ...................... $35
☐ Family/Dual .............. $50
☐ Supporting ............... $100
☐ Sponsor .................. $250
☐ Patron .................... $500
☐ Benefactor ............... $1000
☐ New ☐ Renewal

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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, 200 Centennial Drive, Berkeley, CA 94720-5250
*Full-time only.
Calendar of Events

JUNE

PLANT CLINIC  Sat, JUNE 1
Bring your ill plants to see Dr. Robert Raabe, UC Plant Pathologist. First Saturday of the month, 9am - noon, Ornduff Room. Free.

DRAWING AND PAINTING FROM PLANTS AND FLOWERS
Wednesdays, JUNE 12 - JULY 31
Karen LeGault is with us again, helping artists, new or experienced, to explore the underlying principles that make nature paintings look alive. 9:30 am - noon. Mirov Room. Members $80, Nonmembers $90.

DRAWING AND PAINTING FROM PLANTS AND FLOWERS
Sat & Sun, JUNE 15 & 16
Pencil, Pen and Ink. 10am - 1pm. Mirov Room. Members $30, Nonmembers $35.

DRAWING AND PAINTING FROM PLANTS AND FLOWERS
Sat & Sun, JUNE 22 & 23
Chinese Brush Painting. 10am - 1pm. Mirov Room. Members $30, Nonmembers $35.

DRAWING AND PAINTING FROM PLANTS AND FLOWERS
Sat & Sun, JUNE 29 & 30
Watercolor. 10am - 1pm. Mirov Room. Members $30, Nonmembers $35.

DRAWING AND PAINTING FROM PLANTS AND FLOWERS
All the above weekend sessions. Members $75, Nonmembers $90.

JULY

SICK PLANT CLINIC  Sat, JULY 6
Dr. Robert Raabe and his colleagues will diagnose your sick plant. 9 am - noon. Ornduff Room. Free.

GREEN STUFF DAY CAMP  JULY 8 - 12
A jolly week in the Garden, learning about plants and how people use them. Ages 5-7, 9am - 2pm. $125.

MORE GREEN STUFF  JULY 15 - 19
Ages 8-11, 9am - 3pm. $125.

GREEN STUFF AGAIN  JULY 22 - 26
Ages 5-7, 9am - 2pm. $125. SESSION FULL

STILL MORE GREEN STUFF  JULY 29 - AUGUST 2
Ages 8-11. 9am - 3pm. $125. SESSION FULL

AUGUST

SICK PLANT CLINIC  Sat, AUG 3
Dr. Robert Raabe and his colleagues diagnose and recommend treatment for your sick plants. 9am - noon. Ornduff Room. Free.

GREEN STUFF DAY CAMP  AUGUST 5 - 9
The fifth session of our popular day camp for the summer. Ages 5-7. 9am - 2pm. $125. SESSION FULL

GARDEN TOURS
WILDFLOWERS OF THE HIGH SOUTHERN SIERRA  AUGUST 10 - 13
Observe myriad wildflowers of the high southern Sierra as they reach their summer peak, with our ever-popular guide, Glenn Keator, PhD. Space is limited. Members $125, Nonmembers $140. Call the Garden for more information.

NAMAQUALAND AND THE CAPE FLORAL KINGDOM  AUGUST 17 - SEPT. 2
Experience the natural wonders of the Cape of South Africa first hand with Dr. Robert Ornduff, Curator of the Garden. Call Geostar Travel, 800-624-6633 for more information. TOUR FULL. This tour will be repeated August 17 - September 3, 1997 to benefit The Pacific Horticultural Foundation.

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 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.

Plants are for sale at the Visitor Center all year  510-642-3343