

# Calendar of Events

## APRIL

### Learning to Key Wildflowers in the Jepson Manual with Dr. Glenn Keator

Six Thursday eves. beginning APRIL 3

Learn to key wildflowers using California's plant "bible!" Be ready for the wonderful explosion of spring wildflowers. Previous experience using keys helpful. 7-9pm. \$60 members, \$75 non-members, pre-registration recommended.

### Sick Plant Clinic Sat, APR 5, MAY 3, JUNE 7, JULY 5, AUG 2

Mysterious maladies? Failure to thrive? The Doctor is in! Dr. Robert Raabe, U.C. Plant Pathologist will see all patients the first Saturday of EVERY month. 9am-Noon. Ornduff room. FREE

### An April Garden Tour with Assistant Curator Holly Forbes

Sat, APR 5

Join Holly Forbes for a tour of the rare plant gems of the California Native Area. 10am-Noon. \$8 members, \$10 non-members.

### Wildflower Express—A Rail Excursion to the Jepson Prairie

Sat, APR 19

A visit by rail to the vernal pools of the Jepson Prairie. Luxurious lounge car. Good eats. Knowledgeable Docents. A chance to walk among the wildflowers in a lovely, but vanishing habitat. 12:30-4pm. \$50 members, \$85 non-members, pre-registration required.

### A Filoli Tour and More

Thurs, APR 24

Our spring tour to the peninsula features the fabulous Filoli estate and gardens. A morning tour of the gardens will be followed by a catered lunch on the tennis courts. Two lovely, private gardens will be featured in the afternoon. Victor Yool will provide wit and commentary. All day excursion. \$85 members, \$100 non-members, pre-registration required.

## SPRING PLANT SALE

Members' Preview, Friday, APR 25, 5-7:30pm

Public Sale, Sat, APR 26, 10am-2pm

The time to plant is now! The Garden's finest is yours to enjoy.

## MAY

### Geraniums for Your Garden with Robin Parer

Sat, MAY 3

Celebrated geranium expert Robin Parer will share her horticultural tips with you. Wonderful varieties on display and for sale! 10am-Noon. Mirov room. \$10 members, \$15 non-members. Pre-registration recommended.

### Soft Data, Hard Impacts

Tues, MAY 6

A talk by Professor Paul Dayton of the UCSD Department of Biological Oceanography about the effects of fishing on the coastal zone. 7:30 pm. FREE. In Lecture Hall 2050 of the Valley Life Sciences Building.

### A Mother's Day Walk with Tea on the Terrace

Sun, MAY 11

A Docent tour with a wonderful Tea on the Terrace. Plants for sale. Lovely gifts at The Garden Shop. 1-4pm, \$5 at the Entrance Kiosk, call (510) 642-3352 for more information.

### Art in the Garden with Karen LeGault

Six Fridays beginning MAY 23

Create lovely botanical studies and scenes using a variety of media under the guidance of local artist Karen LeGault. 9:30am-Noon, \$90 members, \$120 non-members. For more information call (510) 642-3352.

### Booksigning: Rare Lilies of California

Thurs, MAY 29

With author Peggy Lee Fiedler and illustrator Catherine M. Watters. A lecture, with slides, on the rare and endangered lilies of California. Wine and Cheese. Books available. 7:30-9:00pm. Mirov room. \$8 members, \$10 non-members. For more information call (510) 642-3352.

## JUNE

### Borneo Trip Preview with Jerry Parsons

Thurs, JUN 5

A natural history, wonderful slides and a good dose of wanderlust are featured in Jerry Parson's preview of his upcoming Borneo trip. 7:15-8:30pm. FREE.

### Creating and Cultivating an Herb Garden

Sat, JUN 7

With Diane Kothe and Jerry Parsons. A wonderful opportunity to start your own herb garden! Participants will propagate six different herbs to take home in this hands-on workshop. More herbs available for purchase. 10am-Noon. Mirov Room. \$15 members, \$20 non-members, pre-registration recommended.

### Intensive Art with Karen LeGault

Sat, JUN 7 & Sun, JUN 8

A weekend-long exploration of garden delights, in a variety of media, under the guidance of local artist Karen LeGault. 10am-4pm, each day. Ornduff Room. \$65 members, \$80 non-members. For more information call (510) 642-3352.

### Growing Tropicals and Citrus

Sat, JUN 21

With Horticulturalist Lee Anderson. Practical advice for those living well north of the equator. Plants available for sale. 10am-Noon. Mirov Room. \$10 members, \$15 non-members. For information, call (510) 642-3352.

### GREEN STUFF SUMMER CAMP BEGINS

Sat, JUN 21

A wonderful experience for junior botanists and kids who just want to have fun. Weekly sessions throughout the summer. \$125 per session. For more information, call (510) 642-3352.

### Booksigning: A Book of Salvias: Sages for Every Garden

Sun, JUN 29

With author Betsy Clebsch. Learn about these beautiful, aromatic herbs, a booksigning and talk on companion planting by author Betsy Clebsch. Tours. Wine and Cheese. Plants for sale. 2:00-4:00pm. Mirov Room. \$8 members, \$10 non-members. For more information call (510) 642-3352.

## AUGUST

### Growing Ornamental Oreganos and Using Them for Crafts

Sat, AUG 2

With Diane Kothe. Create wonderful displays with these beautiful and aromatic herbs, a hands-on workshop. 10am-Noon. Mirov Room. \$10 members, \$15 non-members. For more information, call (510) 642-3352.

For further information on classes and events, call 510-642-3352. To register for classes, send checks made out to UC Regents 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. Preregistration 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, \$2 for seniors, and \$1 for children.

University of California Botanical Garden  
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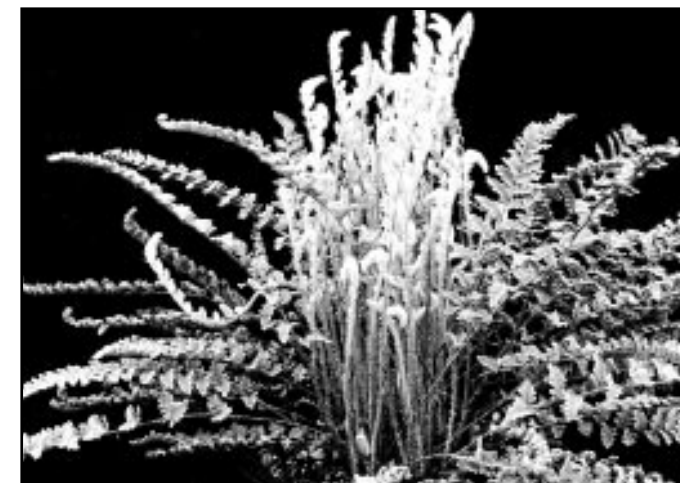
Spring 1997

## Desert Ferns

One of the newest plantings at the Garden is a striking display of xerophytic ferns in a concrete planter extending along the south outer side of the Desert/Rainforest greenhouse. Garden visitors may be surprised to find a group of plants usually associated with shaded, moist habitats placed in an exposed hot southwestern-facing position ("the fern frying pan" as I term it). But these ferns normally grow in hostile desert conditions that we have tried to duplicate in our cool, fog-shrouded canyon location. Ferns of dry habitats are variously called rock, dryland, desert, or xerophytic ferns. They belong to several genera in the family Pteridaceae, a family that includes the more typical wet-growing maidenhair ferns. These ferns are widely distributed in many dry regions of the world and are particularly diverse in the American Southwest and Mexico.

Unlike many desert plants, these desert ferns are not succulent, and their roots are the delicate threads typical for ferns of moister habitats. However, their aerial parts exhibit various adaptations to arid habitats. In some

*Cheilanthes aff. lindheimeri. Fronds covered with silvery scales, these plants spread slowly to form large clumps. They are hardy and tolerant of a wide range of soil types and watering practices but need bright light and good air circulation. (Photos by the author.)*



species, such as members of the cliff-brake genus *Pellaea*, the leaflets are very small, have a waxy cuticle, and their margins curl under like the leaflets of some desert-inhabiting flowering plants. The waxy covering on the undersides of leaves of *Notholaena* helps reduce water loss and causes these surfaces to have a chalky-white or yellowish coloration. *Cheilanthes* and the oddly named scaly cloak fern *Astroblepis* have leaves that are densely covered with star-shaped scales that give their leaves a silvery appearance. In fact, the generic name *Astroblepis* means "star-scale." Sometimes the undersides of the leaves are colored very differently from the upper surfaces, perhaps silver above and cinnamon-colored underneath. Some xerophytic ferns such as *Mildella intramarginalis* and species of *Pellaea* have leaves that are able to dry out during prolonged dry spells, turning an olive color as they dry, and then turning bright green again as they hydrate after a heavy rainfall. This ability to apparently die and then revive explains the name "resurrection plant" that is commonly given to such

*Notholaena candida. Fronds with striking white wax on the underside. These plants do not spread; old fronds persist and curl up into white balls.*



Plants are for sale at The Garden Shop all year ☎ 510-642-3343

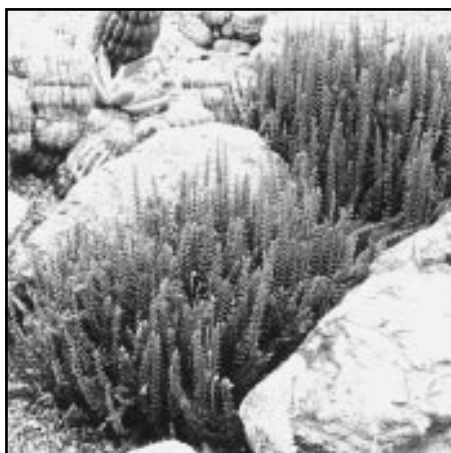
plants. (Plants with this name that are sometimes sold in a dry condition are not true ferns, but are a desert species of *Selaginella* that behaves in the same manner). Under experimental conditions, plants of *Pellaea* have survived up to five years of desiccation. Visitors to our desert regions during the summer often see xerophytic ferns that appear to be dead, but these are merely desiccated plants that are in a state of suspended animation awaiting a heavy shower that will enable them to resume photosynthesis.

### The Life Cycle of Ferns

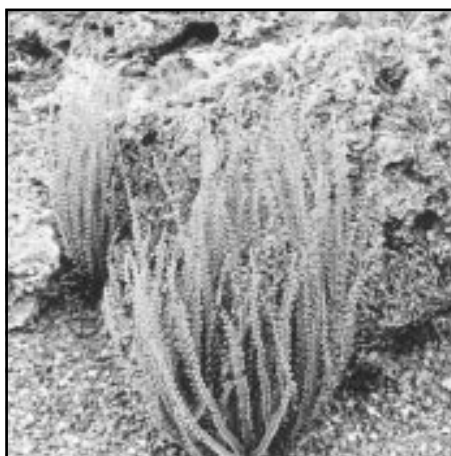
The life cycle of ferns involves the germination of spores to produce a very delicate, small, often heart-shaped fragile plant (called a gametophyte, or gamete-producing plant) that produces the eggs and sperm. Fern sperm cells are motile and require water in order to reach the egg and effect fertilization. Once fertilization has occurred, the familiar large leafy plant that we recognize as a fern (called a sporophyte, or spore-bearing plants) develops from the fertilized egg. How can the delicate, water-dependent stage of a fern life cycle occur under arid conditions? Sometimes the fragile gametophyte has a waxy coating that helps prevent water loss. Some have the ability to survive long periods of desiccation despite their flimsy nature. Some species of desert ferns have evolved an interesting alteration of the conventional life cycle that eliminates the need for ambient water for transport of sperm cells. In these ferns, an embryo forms without fertilization. Thus, sperm cells are not produced by such ferns. While spores usually have half the complement of chromosomes that are characteristic of the leafy fern plants that we all know, the spores of ferns that reproduce in the absence of sexual reproduction have the same chromosome number as the embryo that develops in the life cycle.

### Growing Ferns

This new Garden display may or may not be successful; most of the ferns and other xerophytic plants it contains have not been grown in cultivation before (as is true of a large number of



*Cheilanthes pruinata*. This species holds the elevation record for the genus at 4,400 meters in the Andes.



*Astrolepis cochisensis*. Plants spread very slowly, but they will take harsh exposures and heat. It has done well as a companion plant to cacti in the New World Desert plantings.



*Cheilanthes buchtienii*. This tough and cold-hardy species has done well in both the Xerophytic Fern Display and the New World Desert plantings.

plants elsewhere in the Garden) and thus there is no literature describing how they should be grown. However, in the New World Desert area of the Garden several different species of xerophytic ferns, largely collected by former Garden horticulturist Sean Hogan, have been planted in the ground and are thriving. Sean transformed that area from one containing mostly cacti and other succulents to one containing a number of non-succulent desert plants. These additions have enhanced the beauty of the area and have made it a more useful educational resource for classes and for docent tours. However, most of the desert ferns in the Garden collection have been housed in lath houses that were not open to the public, so at last with the financial assistance of individual donors, the Friends organization, the California Horticultural Society, and the Western Chapter of the North American Rock Garden Society, we have been able to place most of this interesting and diverse collection on public display.

For those interested in growing these ferns, I have filled the concrete planter with a soil mix of 30% fir bark compost, 30% coarse sand, 20% three-eighths inch granite gravel, 10% expanded shale, and 10% fine river sand. Volunteer propagator Sarah Wikander and I developed and installed an automatic subsoil irrigation system for watering the ferns. Sonoma fieldstone was then added to place the plants in a naturalistic setting. My impression is that many of these desert ferns are much more tolerant of summer watering and of shade than one might suspect on the basis of the conditions under which they normally live. Indeed, the lip fern *Cheilanthes lindheimeri* from southwestern American deserts has prospered for many years in the North American area of the Garden where it receives abundant summer water. If our new display proves to be a success, I hope that these beautiful plants may soon become more widely grown in Bay Area rock gardens.

—Martin Grantham

Henry May  
Stuart & Melva McDonald  
Ellen McKaskle  
Nancy McLaughlin  
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Jean Mosheim  
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Dorothy Muller  
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Patricia Wolf  
Penelope Wong  
Beverly Wu  
Jensen Young

### Special Thanks

The Friends would like to honor those members making significant contributions to the Annual Fund.

William & Dorothy Clemens  
Eleanor Cray  
Jana Olson Drobinsky  
Elmer & Pamela Grossman  
Errol Mauchlan  
Barbara & Edward Peterson  
Dr. Frank Pitelka  
James W. & Irma B. Uren  
Kathryn & David Welch

### In Memory

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

**Manuel and David Coronado** from  
Martha Coronado for use in the Garden's Mesoamerican Section  
**Ned Herringer** from  
Mary Elizabeth and Sam Stevens  
**Edgar Sparks** from  
Iris E. Gaddis  
**Ortha Zebroski** from  
Mrs. Dorothy G. Hiserman

### Gifts in Kind

The Friends offer appreciation and thanks for gifts in kind.

Peggy Blatchford  
Wendy Born  
Edwin & Kitty Dankworth  
Ann Fenn  
Judy Houck  
James Jones  
Fred Thompson  
Robert & Caroline Lichtenstein  
Thomas Livingston  
Penny Warren

### Programs and Endowments

The Friends offer our grateful thanks for the generous gifts supporting the following programs and endowments.

#### 21st Century Endowment

James Jones  
Myrtle Wolf  
Tamra C. Hege

#### California Area Endowment

Joan Rock Bailard in honor of Roger Raiche  
Trusts of Hans and Marian Ury

#### California Alive!

Marion Greene

### 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

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UC Botanical Garden, 200 Centennial Drive, Berkeley, CA 94720-5045  
\*Full-time only.

## New Members

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

Millie Armer	Jain Hutzell	Elizabeth Pigford
Randall Barnes	Valerie Jackson	Nancy Plattford
Irving Berger	Nathalie Johnson	Gail Ramsey
Alan Berling	Robin Johnson	Kristina Raupagh
Donelda Bernard	Lois Jones	Judy Sager
Frances Bishopric	Jim Kegebein	Jane Sandstrom
John R. Bola	Maureen Kennedy	Andrew Sessler
Eileen Bryson	Joy Kester	Kyle Skov
Diana Chapman	Gene Kim	Blythe Smiley
Elaine Chernoff	Carolyn Kolka	Margaret Spaulding
Tracy Dean	Danielle Kormos	Carol Thompson
Steven Desroches	Norma Kristovich	Glenn Tirsell
Ewald Detjens	David Lomba	Louis Truesdell
Louise Dutton	Steven Manning	John Tolonen
Anthony J. Figueiredo	Laurene Martin	Isaac Turiel
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Susan Gilmour	Kris McKechnie	Walter Wallace
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Richard Groeber	Melanie Mentzel	Dan Wilcox
Susan Hall	Robert Miller	Terry Wilkens
Janet Hildebrand	Janet Neilson	Laura Wilt
Carol Hofmann	Louis Penning	Elizabeth Woodbury

## Grateful Thanks

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

Ad Brugger & June Smith	Leonard Maudens
June Cheit	Camilla McCalmont
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Jane Davis	Mr. & Mrs. Elmo Morgan
Toni Fauver	Mrs. George Otto
Mr. & Mrs. Theodore H. Geballe	Eugene Peck
Luanne Gilbert	Dr. John Schieffelin
Kathleen Graeven	Julia Serences
Richard Groeber	Margaret Spaulding &
Mitchell Harvey	Ewald Detjens
Virginia Havens	Margaret Stockwell
Richard Hotaling	William & Tomiye Sumner
Susan Jensen	Kuwako Takahashi
Raymond & Mary Jewell	Wayne Thornburg
Toni Klassen	Inge von der Hude
Lewis Lawyer	Frances Wolf
LaVerne & Douglas Leach	Leslie Zander
Sterling Leisz	

## In Appreciation

The Friends would like to acknowledge all the generous contributors to our Annual Fund.

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Diane Brett	Janet Hildebrand
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Georgia Brumbaugh	Henry Hilzinger
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Mary Ann Cobb	Norman King
Robert Connick	Selma Klett
Renate Coombs	Royal Kopperlud
Richard Cowan	Danielle Kormos
Edwin & Kitty Dankworth	Ronald Krause
George Dea	Lynn Landor
Thomas Delfino	Sterling Leisz
Steven Desroches	Louise Lidickor
Jack Dolhinow	Dr. Robert &
Ellen Due	Mrs. Caroline Livermore
Claire Dungan	Barbara Lyss
Ben Faber	Patricia Marshall
Phyllis Faber	Laurene Martin
Dave Fafarman	Christa Matty

## FROM THE DIRECTORS

The first two Garden Reviews of the Mediterranean Areas and the Greenhouses took place in late January and February. While the final reports and their specific recommendations still are being reviewed by the Garden staff and volunteers, they have provided new directions for the current budgeting process.

Garden staff and external participants alike have found the process invigorating, as it promoted a frank exchange of ideas and the freedom to entertain new ideas for managing and interpreting our collections. Of especial value has been the strong participation of our volunteers — docents and propagators alike. Their expertise and perspective concerning interpreting the collections often focused the wide-ranging discussions into recommendations that are clear and practical. Consequently, these will help set coordinated priorities for the collections and the various Garden activities.

One example of the recommendations offered by the Mediterranean Garden Review is the need to develop appropriate access to both the African Hill and the Mediterranean collections prior to extensive interpretive efforts. In order to involve the University community, we have contacted the Landscape Architecture Department so that we can offer a student design competition or special project which would result in a new path system for these areas. Such student-based activity will increase access to our rich collections as well as increase student involvement in the Garden.

In the Greenhouse Review, as you might expect, the overwhelming priority is to raze the existing cactus and succulent greenhouse and replace it with one that provides appropriate conditions for our outstanding collection, and better interpretive access. The committee also urged us to display our collections as integrated ecosystems rather than as separate specialized collections. Jerry Parsons, Holly Forbes and several docents are analyzing the impact of turning the Lowlands Tropical House into a Highlands Tropical House where ferns and orchids could then be displayed together. In House 2 (a large greenhouse in our corporate yard, currently closed to the public) we are considering changes to create a display area for plants that no longer could be in the Tropical House. Such programmatic changes can provide more appropriate display of our collections immediately, without a large outlay of money.

While the priority of recommendations from these Reviews has yet to be made, the process is providing a coordinated view that affects decisions for next year's budget and program. We are looking forward to the recommendations from the remaining Reviews. We urge you to participate. Let Jenny know of your interest as soon as possible.

—Ian Carmichael, *Acting Director*

—Jennifer White, *Associate Director for Education*

## GARDEN NOTES

The *Berkeley Natural History Museums Consortium*, under the auspices of Vice-Chancellor for Research Joseph Cerny, hired a full-time development officer in a two-year position to assist each of the five museums. The Garden is especially pleased to welcome **Laurie Sverdllove Goldman** (former executive director of Strybing Arboretum Society) to this position. The consortium also launched its annual lecture series—call 510-642-7541 for information.

The New Year's Eve rainstorm dropped over three inches of rain in the watershed above the Garden, bringing gravel, branches and debris downstream in Strawberry Creek. This clogged the grates above the Japanese Pool and forced the creek to overrun its banks, cross the road, and dump many cubic yards of mud and gravel into the pool. Emergency funding from campus allowed us to dredge much of this material from the pool in mid-January to facilitate restoration. The added benefit of this timely dredging is "re-creation" of breeding habitat for the California Newt (*Taricha torosa*). These salamanders migrate to the pool each winter to mate and lay eggs in the shallow water. They are visible throughout February and usually into March. A deeper dredging of the pool is scheduled for late summer after the newts and their offspring have left the pool.

The Garden lost (removed) two of its larger trees, a southern beech (*Nothofagus dombeyi*) in the South American collection, and *Griselinia littoralis*, a New Zealand native out-of-place in the North American collection but a welcome source of cover for the study table. Both succumbed to disease problems and had been declining for several years.

Horticulturist **Elaine Sedlack** is the current vice-president and program chair of the California Chapter of the American Rhododendron Society.

Assistant Curator **Holly Forbes** is the president of the East Bay Chapter of the California Native Plant Society for 1997.

Curator **Robert Ornduff** has been elected a vice-president of the Pacific Horticultural Foundation. Dr. Ornduff led a tour of national parks of Chile for 15 participants in mid-January, sponsored by the Jepson Herbarium. Despite the drought in the Santiago region, he collected seeds of several plant species for the Garden's South American collection. He is also the author of two chapters in the recently published Australian book, *Gondwanan Heritage: Past, Present and Future of the Western Australian Biota*.

Acting Director **Ian Carmichael** visited the offices of the National Science Foundation in early January, exploring funding opportunities for the Garden.

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### Garden Staff

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### Newsletter

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## THE DOCTOR SAYS

There is much interest in home remedies for garden problems. One recently reported is to use methyl salicylate (oil of wintergreen) which not only repels insect pests but also attracts beneficial insects. If choosing to experiment, use one teaspoon of oil of wintergreen to a gallon of water plus several drops of liquid detergent. Spray as often as necessary to keep the insect population at a reasonable level. Another remedy is to control disease-producing organisms. Control might possibly result from dissolving two uncoated 5-grain aspirin tablets in a quart of water. Repeat spraying every week or every other week. With both of these, try on only a few leaves of each plant the first time to see if injury results.



A new garden tool for gardeners with rocks in their soil is the rock rake. It is slightly V-shaped with spaced heavy metal tines. It will take out rocks from golf ball size up (to what is reasonable).

Those interested in ginger lilies (*Hedychium sp.*) will be interested in an article in the December 1996 issue of *The Garden*. Many species as well as hybrids are described as are their abilities to survive winters in Britain.

As tomato season approaches, the question arises as to which cultivars should be selected. Those who deal with cool springs will be interested in the list of cold set varieties (those selected for producing fruits where night temperatures tend not to be high). A list of such varieties which have good flavor include: 'Anna Russian', 'Early Girl', 'First Lady', 'Galinas', 'Kotlas', 'Medina', 'Moskvich', 'Mountain Spring', 'Oregon Spring', 'Sasha's Altai', 'Siletz', 'Sophie's Choice', 'Stupice', and 'Yellow Bell'.

Now it's official. The U.S. Food and Drug Administration has approved the petition from the U.S. Apple Association to accept data allowing apples to be labelled as containing 0 grams of fat and 5 grams of fiber.

Released is a new F1 hybrid gerbera which produces compact plants with flowers 12 inches high. The plants have multiple stems, are continuous blooming and flowers come in many colors with dark centers.

As spring approaches, there is an urge to go into the garden and "work" the soil. Soil scientists however, say that spading or tilling the soil not only destroys the structure of the soil but also allows more water loss through evaporation and causes the organic matter to break down more rapidly. Tilling should be done only for

special reasons which include: breaking crusts on top of the soil, preparing seed beds, removing weeds, or incorporating organic matter. Another that might be added is to remove tree roots.

Recently found in a garden supply catalog for urban gardeners is a reasonably-priced light meter which reads in foot candles. It comes with a booklet detailing the light needs of over 400 plant species. The same catalog has papers for measuring soil pH, pH test kits, and for those who want to invest a little more, several pH meters. Also included are: a cloning gel that contains rooting hormones and will stick to the bases of cuttings; a cloning wax that coats cuttings with a thin coat of wax that contains hormones and nutrients, eliminating the need for a mist system or a means of providing humidity to prevent cuttings from drying, and a home tissue culture kit for those wanting to try tissue culture in home conditions.

— Dr. Robert Raabe

### SOUTH AFRICA NATURE TOUR

Sponsored by UCBG With the  
JEPSON HERBARIUM

MARCH 2 - 23, 1998

Join UCBG horticulturist Martin Grantham in an exploration of the Cape floral region, the Drakensberg and Natal. The Cape with its sweeps of unspoiled beaches and magnificent mountains is one of the most dramatic landscapes on Earth and holds the most diverse and puzzling flora.

In Natal and the Drakensberg (Mountains of the Dragon) we will catch the summer flower displays and walk on what may be the original surface of Gondwanaland, the supercontinent that existed 180-120 million years ago.

Martin and South African botanist Anne Bean will provide a basic framework for understanding the amazing variety of plants.

For information call Geostar Travel, 800-642-6633.

## STAFF PROFILE

### Martin Grantham

Martin Grantham, the horticulturist in charge of African Hill and the New Zealand / Australian section of the Garden, was born on Arbor Day, which is also, incidentally, Luther Burbank's birthday. He thinks this may have been a sign that his calling life would be to things botanical! He is a native Californian, from Silicon Valley, and grew up there when it was 80% orchards, irrigated by artesian well water. His favorite "fruit of the past" is apricots.

Martin demonstrated an early interest in plants. Before he could talk he was picking seeds out of fruit and trying to grow them. A grapefruit he grew from such a seed still thrives on his family's property. His fifth birthday gift was a small portion of his family's acre for him to build a plant collection. One fascinating experiment grew out of a gift of wild annual seeds, which he planted in an old lug box. There was not enough light for the annuals to grow, but fungus did. Another sign, as Martin ended up specializing in slime molds in graduate school. His further experiments with growing plants were more successful, and he began selling extras at the Santa Cruz Flea market, more as a way to manage his collection than to earn money. This enterprise, however, wound up financing his college education!

From the very beginning, he says, he wanted to know all about plants. He majored in botany at U.C. Davis, where, he says, he did not have a clear career goal, and did as much work in zoology and mycology as in botany. He regrets not having studied horticulture and plant propagation while he was there, but there is only so much time. He received the departmental citation as the top botany student at graduation, along with election to Phi Beta Kappa and Phi Kappa Phi. He came to Cal for graduate school, and discovered that while undergraduates are expected to be "sponges," graduate students are supposed to be "sieves." Martin found that he was still an "unsaturated sponge," and that his interests were really far too broad for him to develop the focus required, so after taking as many courses as he could, and working as a Graduate Student Instructor for several years, he moved on. He says that teaching did not come naturally, and that he had to work very hard

to be effective. His labor in that respect has certainly paid off, since he has been teaching propagation techniques at the Garden, at U.C. Santa Cruz and at Merritt College for several years now and his students regard him as a very gifted teacher!

For all his other accomplishments to this point, Martin did not drive. He found himself living in Berkeley, near the Berkeley Horticultural Nursery, and wanted a job that he could walk to. With his background in botany, Berkeley Hort was glad to hire him. Berkeley Hort had a tradition of propagating unusual plants, so Martin was suddenly in his element. He learned to propagate things people had seen at our Garden and at Strybing Arboretum, and made new contacts. He heard about an opening at our Garden, and was hired part time to help develop the Mesoamerican Section. He thought that it would be a five year project, but this was his first lesson in practical horticulture. He learned that gardens are never finished!

Working at the Botanical Garden has offered other opportunities. Finally, Martin learned to drive, partly for getting to work in a timely way, and partly to be able to maneuver Garden vehicles. He now proclaims himself as addicted to the automobile as anyone else in our society. Martin had never flown before he came to the Garden, but has now discovered the excitement of world travel. His first adventure was a five week trip to Costa Rica, and he has since visited Chile, Ecuador, Argentina, northeastern Mexico, Vera Cruz and South Africa, sometimes on professional business and sometimes for pure pleasure; always to see plants in habitat and to collect if possible.

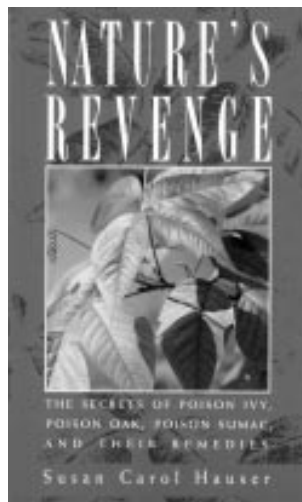
The South Africa jaunt was a ten-week work-study exchange sponsored by the International Plant Propagator's Society, and provided Martin with great experience to make the transition from the Mesoamerican Section to African Hill. He is looking forward to leading a Garden-sponsored trip to the Drakensberg Mountains in 1998. But the next thing, some would be willing to bet, is that he will figure out a way to get to New Zealand!

—Nancy Swearingen



### β Nature's Revenge, The Secrets of Poison Ivy, Poison Oak, Poison Sumac, and Their Remedies.

Susan Carol Hauser; Lyons & Burford, Pub., New York, NY, 1996. Illus; black and white and color photos; 111 pp., Paper. \$13.95



In middle age, for the first time, Susan Hauser developed a severe allergic reaction to poison ivy when she cleared brush from a friend's back yard. Just as she was recovering from this uncomfortable encounter, she again innocently exposed herself to the toxic oil of these plants because she continued to wear her (unwashed) favorite work clothes over and over. After a six-week ordeal, she determined that the best thing she could do was to learn

all she possibly could about poison ivy, poison oak and poison sumac. This book is the result of her research. Written with wit and humor, it describes how to identify these three related plants so that exposure to them can be avoided. She reviews the myth, lore and history surrounding them, and goes on to provide information on the best treatment available to those suffering from contact with them. Recommended as an extremely useful reference for parents, hikers, gardeners, naturalists and anyone else likely to encounter these toxic plants.

β **Rare Lilies of California.** Peggy Lee Fiedler; illus. by Catherine M. Watters; California Native Plant Society, Sacramento, CA. 1996; 153 pp., Paper. \$24.95

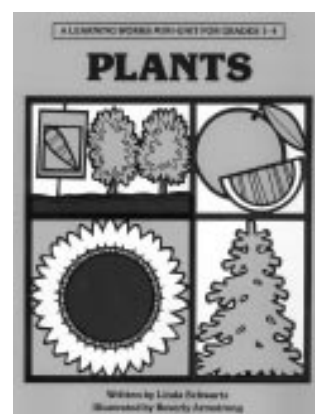


Peggy Lee Fiedler, associate professor of conservation biology at San Francisco State University, has written a readable, authoritative, in-depth reference on the rare lilies of California. Beautifully illustrated by Catherine M. Watters' lovely water colors, it appeals both to our heads and our hearts. It is a fitting resource for all of us working to preserve and care for these treasures within our state.

—Elly Bade

The Garden Shop stocks a small number of books suitable for teachers and parents living in our area. Bob Hood, a teacher at the Carl B. Munck School in Oakland, visited the Garden during his participation in the LITES program. We asked him to review the following teachers' workbook for us. Thank you, Bob, for this review.

β **Plants.** Linda Schwartz; Illus. by Beverly Armstrong; ed. by Sherri M. Butterfield; The Learning Works, Santa Barbara, CA, 1990. (A Learning Works mini-unit for grades 1-4); 48 pp., Paper. \$6.95



### GROWING MINDS FERTILIZED

In a recent visit to the Garden, I discovered a wonderful resource for elementary educators. *Plants*, written by Linda Schwartz and illustrated by Beverly Armstrong, is a terrific summary of basic information on plant life. It is well organized and thoughtfully put together

to assure success for all the varying levels of learners found in today's classrooms.

This mini-unit is designed for grades 1 to 4, but I have had some success reinforcing important life science concepts with my sixth grade students, and some of the pages could be adapted for pre-schoolers. Its wide range of activities include text passages, pictures, coloring sheets, mazes, crosswords and more. It addresses basic thinking strategies like sequencing and classifying. The curricular content is rich in language arts skills like phonics, vocabulary and poetry.

The subject matter grows from the ground up. Starting with roots, emerging toward stems, sprouting forth leaves and then blossoming into flowers, fruits and seeds—it's all there. TEACHERS, PARENTS, GRANDPARENTS: I urge you to check it out!

—Bob Hood

All members of the Friends of UC Botanical Garden receive a 10% discount for purchases of books and gifts at The Garden Shop.

## UCBG SPRING PLANT SALE LIST April 1997

• **BROMELIADS:** A wide selection, acclaimed on the internet, including many species and hybrids of *Cryptanthus*, *Vriesia*, *Neoregelia*, *Guzmania*, *Aechmea*, *Bilbergia*, also cork-mounted *Tillandsia* species that will thrive in mid-air with misting as well as a limited number of UCBG horticulturist Martin Grantham's hybrid between *Puya berteroniana* and *P. coerulea* for deep blue-green flowers several times a season!

• **CACTI AND SUCCULENTS:** A diverse assemblage from miniatures to future giants with *Anacampseros*, *Lithops*, *Rebutia*, *Mammillaria*, *Trichocereus*, *Agave*, *Aloe*, *Haworthia*.

• **CARNIVOROUS PLANTS:** This Spring we will offer the cutting-propagated *Nepenthes* (Old World pitcher plants) collectors have been waiting for as well as a good crop of Venus fly-traps, many sundews, *Drosera capensis*, *D. aliciae*, *D. binata* and *Utricularia* spp. Bring the Kids!

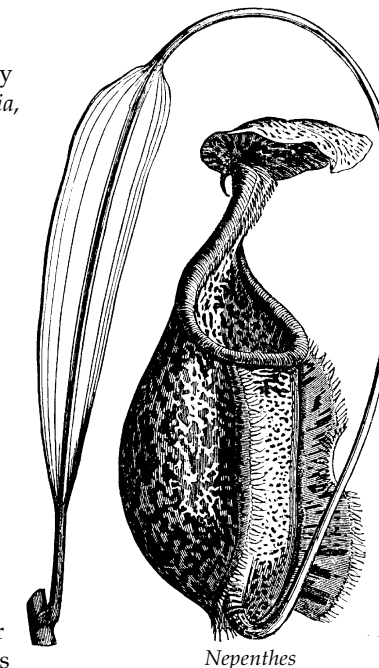
• **FERNS:** Look for a first offering of the unusual *Sinephropteris delavayi*, an Asian fern with reniform fronds and a thick indumentum, a good selection of the genus *Doodia* known for pink, red and purple new fronds including *D. aspera*, *D. caudata*, *D. dives* and *D. media*. Other offerings include hardy *Athyrium asplenoides*, *A. otophorum* with purple new foliage, the rare *Asplenium billottii*, the tiny and delicate *A. fontanum* as well as the long-lived *Cyrtomium falcatum* and *C. caryotidium*.

• **FUCHSIAS:** Mite resistant species and a few select hybrids including *Fuchsia glazioviana* and the newly registered 'Millie's Pink Fanfare' hybridized at home by UCBG horticulturist Martin Grantham.

• **HERBS:** Thymes, oreganos and other Mediterranean offerings from the UCBG Herb Garden.

• **HOUSE PLANTS:** *Anthurium* and *Begonia* species and hybrids as well as a good selection of Gesneriads including the exotic *Chirita moonii*.

• **ORCHIDS:** There will be an abundance of flowering *Cymbidium* hybrids as well as hardy *Bletilla* species and hybrids including *B. striata*, *B. striata* var. *alba*, with a pink blush, *B. striata* 'white', without a pink blush, the rare *B. ochracea*, seedlings from Dr. Robert Ornduff's remake of the hybrid *B. 'Yokohama'* (*B. striata* x *B. formosana*) with limited numbers of Garden selection *B. 'Yokohama Robert Ornduff'* with the darkest color of any of the seedlings. We will also have a wide selection of tropical orchids in flower for the satisfaction of those seeking an elegant gift as well as those



*Nepenthes*

avid collectors ready for another fix of the unusual. Incredibly fragrant *Stanhopea* species from the Garden collection will be available in hanging baskets.

### • PERENNIALS AND ROCK GARDEN:

Always a large selection of choice plants here including limited quantities of the sensational *Verbascum undulatum aureum*, *Iris unguicularis alba*, *I. unguicularis* 'Oxford Dwarf', *I. forrestii* stand out in a good selection of bearded and unbearded iris, *Luzula sylvatica* 'Aurea', *Euphorbia pekinensis*, *Incarvillea arguta*, *Lobelia tupa*, *Eomecon chionantha*, *Epimedium* spp., *Campanula* spp. and cultivars, *Tricyrtis* spp. and more.

• **RHODODENDONS:** This Spring we offer a good selection of the subsection *Maddenia* with large fragrant flowers of great beauty, often white flushed with pink or yellow. These plants are especially well suited to the Bay Area where they need protection from severe frosts. Also offered will be tender section *Vireya* hybrids which may flower most of the year with flowers of yellow, orange and other unusual colors for the genus.

• **ROSES:** A rich selection of old roses, many procured through the passionate efforts of UCBG horticulturist Elaine Sedlack, to include 'Emily Gray' with her luscious foliage, the red-leaved 'Robert le Diable', 'Alberic Barbier' with glistening foliage and pure white flowers, 'Ghislane de Feligonde', *Rosa* 'Cantabrigiensis', the evergreen 'Aimee Vibert', 'Prosperity', 'Honorine de Brabant', 'Cramoisi Superieur' and more.

• **TREES, SHRUBS AND TROPICALS:** This year we offer *Araucaria araucana* (monkey puzzle tree) seedlings, *Nothofagus dombeyi*, *Cunninghamia lanceolata* var. *glauca* as well as the selections of UCBG horticulturist Roger Raiche: *Ribes sanguineum* var. *glutinatum* 'Inverness White' and 'Joyce Rose.' Other offerings include *Coprosma* 'Beatson Gold', New Zealand violet relative *Meliclytus ramiflorus*, and *Eucryphia intermedia*. Tropicals will include hardy bananas, palms, cherimoya and Malabar cardamon.

• **VINES:** Here you will find an acclaimed collection to satisfy novice and advanced collectors alike with many first offerings for Spring including a new *Bomarea* sp. from Ecuador, the pink and blue-flowered *Bomarea salsilla* from Chile, a ferny-foliaged *Paullinia* sp. from Chiapas, Mexico, and the yellow color form of *Pandorea pandorana*. Look for limited offerings of named *Lapageria rosea* cultivars 'Mission Lace' and 'Ligtromu' along with a dark red, unnamed selection of exquisite beauty. Other unusual offerings include *Canarina canariensis*, *Schizophragma integrifolium* var. *glaucescens*, *Campsidium valdivianum*, *Kadsura japonica*, the double-flowered form of *Philadelphus mexicanus*, climbing evergreen *Hydrangea seemanii* and *H. astrolasia*.

## Japanese Sojourn



*I have always known  
that at last I would  
take this road, but yesterday  
I did not know that it would be today.*  
-Ariwara no Narihira, 9th century

A bicycle is a great way to travel in any country, and when I was offered the use of a shiny blue mountain bike, I eagerly accepted. This allowed for in-depth exploration of the village and was a big hit at the local market. Not only that, it enabled me to get to the mountains in one-third the time of walking, and this is what I had come for.

In Japanese culture the silvery, fan-shaped panicles of autumn grass, *Miscanthus sinensis*, are as symbolic of autumn as maple leaves, and are indelibly part of my memory now. It was the first plant I saw on the railroad tracks and roadsides, from forest margins to the top of Sado Island, where wind-stunted maples nestled in the drying grass blades. Until I got to Sado, the best color was provided by *Viburnum furcatum*, *Hamamelis japonica* (Japanese witchhazel, enameled red), and *Rhus trichocarpa*, the lacquer source for the area. The next town to the north is Murakami, famous for its fine lacquerware.

The wildlife was intense. Birds loved the dense cover (kudzu has its purpose). On Sado I saw ospreys, and everywhere there were cranes in the rice fields. I startled a pair of pheasants in the woods. There were exotic, orb-weaving spiders (*Argiope*), dragonflies, butterflies, and frogs, as life imitated art. Children really do play with grasshoppers in Japan. Also, in the mountains reportedly there are snow monkeys and black

*Above left, Japanese chestnut, Castanea crenata, graced by Viburnum furcatum foliage. Below, sacred straw rope at Shinto temple. There is an ancient belief that the spirit of the grain resides in the husk, which may explain why the Great Shrine at Ise resembles the rice storehouses of the Yayoi period. (Photos by the author.)*



Botanical garden horticulturists often travel vicariously; that's one attraction of growing plants of known wild origin. Small seedlings which come from far away and hopefully won't be too homesick will grow as evocations of another place. Opportunities to actually travel and experience firsthand the natural environment of plants in one's care are an immense aid, one picture of a plant in its native habitat being worth at least a thousand words!

I carried the letter from my friend in Japan with me for weeks, wondering how to afford her invitation. She had taken a job for only one year at a small American campus in Niigata Prefecture in northern Honshu. She was living near the mountains with an extra bedroom, a key consideration given the cost of hotels. So I scrambled for tickets and a railpass and finally found myself in Nakajo, a rice growing region between the mountains and the Japan Sea, at roughly the same latitude as San Francisco. The best rice in Japan is said to come from Niigata Prefecture.

I tried to plan my trip for the spectacular color of the autumn maples. However, no one could tell me exactly when to go. In Japan, there is a nightly news report about the status of the autumn leaves, and cherry blossoms in spring. It's a good idea to plan travel from one latitude to another, so that at some point you will pass through an area where the color will be at its peak.

## BOOK REVIEWS

♣ **A Sierra Nevada Flora.** Norman F. Weeden; 4th edition new drawings by Amy David; Wilderness Press, Berkeley, CA, 1996. Keys, line drawings; 259 pp., Paper. \$15.95



Since 1975, when the first edition was published, every hiker in the Sierra Nevada could be found with a "Weeden" in her/his backpack. As a reference on Sierra wildflowers, it was the hiker's field guide of choice through three editions (Munz' *A California Flora* was pretty heavy!) until it went out of print several years ago. At that time *The Jepson Manual: Higher Plants of California*, with its extensively revised treatment of the

California flora, had been completed, so a revised and updated edition of *A Sierra Nevada Flora* was necessary.

This new field guide (measuring in at 8 1/2" x 5 1/2" x 5/8" and weighing 13 oz.) may, at first, be a disappointment to those expecting the earlier (6" x 4 1/2" x 1", 10.5 oz.) handbook format. However, the author, a professor of plant genetics at Cornell University, has been careful to keep the user-friendly features of the former editions. His nomenclature and treatment of plant families, genera and species follows that of *Jepson*, making it possible for beginners to consult and switch over to the *Jepson Manual* easily. References to edible wild plants, and caution on the use of some, remind us that this flora was first published twenty years ago when conservation of wild California plants was not the issue it is today.

Many members of the Friends of UC Botanical Garden know Norman Weeden's parents. They are Bill and Pat Weeden, who have given us so much of their time and energy all these years.

(continued, p. 8)

bears (thankfully more elusive, although bears had killed two farmers in their fields the year before).

I hiked through *Cryptomeria* groves at the lower elevations, cut over about 60 years before, into mixed deciduous woods comprised mainly of *Lindera umbellata*, *Castanea crenata*, *Evodia*, *Prunus* and *Acer* (three species), with occasional *Magnolia obovata*, *Paulownia*, *Morus* and *Zelkova*, and an overstory of red pine. At the higher elevations there were stands of *Fagus crenata*. Most striking was the rich shrub layer—practically every temperate Japanese plant which we have growing at the Garden was present in a wild tangle: *Callicarpa*, *Hydrangea*, *Stachyurus*, *Euonymus*, *Weigela*, *Camellia*, and *Eurya* mingled with *Rubus* and *Sasa veitchii*. A variety of ferns and ground covers, including *Shortia*, *Epimedium*, *Ardisia* and *Euonymus* shared space on the forest floor. In sum, all my old friends were there, growing with abandon. *Wisteria* was indiscriminate in its choice of trees, and the persimmon which was in every courtyard in town was curiously absent in the woods. It turns out the farmers spray the trees with hormones to suppress seed formation. I found persimmon wine, persimmon candy and paintings of persimmons, but no trees in the mountains. The local specialty is persimmons which have been soaked in wine and hung to dry. These provide sustenance during winter when as much as 3 meters of snow fall. Maybe this accounts for the tulip being the city flower of Nakajo!

Although my visit was brief, I have fond memories of the people and plants which I met during my trip to "the backside of Japan."

—Elaine Sedlack



*The ubiquitous Miscanthus sinensis has flowers reminiscent of silk embroidery. This grass is not to be confused with pampas grass, Cortaderia, another robust genus native to South America and New Zealand. Both are sold commercially.*

## ■ VISITORS TALLY ■

We are pleased to report that our new admissions procedures have given us the following information: During the period January 1, 1997-March 6, 1997 we hosted 3,381 visitors and logged 3,184 volunteer hours.