As part of our continuing efforts to improve and diversify the Garden’s world class collections, this past March I took a collecting trip out to San Nicolas Island. San Nicolas is one of the Southern Channel Islands, located roughly 70 miles south of Ventura and about 70 miles west of Oceanside (San Diego County). The long axis of the island runs roughly northwest to southeast. The island is about eight miles long, by three miles wide at its longest and widest points.

San Nicolas is the most isolated of the Channel Islands; not only because of its distance from the mainland but also its distance from the other Channel Islands. Due to the island’s isolation, not as many plants colonized the island, and the flora is relatively depauperate. The nearest island is tiny Santa Barbara Island about twenty miles away. The island is owned by the Navy and serves as part of its Pacific missile test range.

Access to the San Nicolas Island is somewhat restricted so I was fortunate to have the opportunity to head out there with Steve Junak, herbarium curator for the Santa Barbara Botanic Garden, who has access and permits to work on the island. Steve is a noted expert on the flora of the Channel Islands, and one of the authors of *A Flora of Santa Cruz Island*; hopefully *A Flora of San Nicolas Island* will soon be forthcoming from him.

The next day was a calm beautiful sunny day, which is somewhat of an anomaly. The island is often buffeted by strong winds and clothed in a blanket of fog. Our first stop was on top of the north escarpment. My view to the north and east consisted of acres, indeed miles of giant coreopsis (*Coreopsis gigantea*) covered with their yellow daisy-like flowers. There are no trees or large shrubs; the vegetation of the island consists mostly of low growing herbs and bushes.

As I scrambled down the steep slope into a canyon where Steve was mapping *Opuntia*, there were lots of silver bush lupine (*Lupinus albifrons*) in flower. I half-walked, half-slide/crawled through tangles of coreopsis and the island endemic morning glory (*Calystegia macrostegia* ssp. *amplissima*) until I got to the edge of the *Opuntia* patch. After helping with the mapping, we headed back up the slope where Steve pointed out a few more island endemics *Hemizonia clementina*, growing with *Malacothrix incana*.

Steve seemed to know every nook and cranny of the island, and I had the opportunity to get to know several canyons intimately during our long days out in the field. One of the most striking displays I saw was that of giant coreopsis (*Coreopsis gigantea*) in full flower with its large showy yellow inflorescence underlain by a carpet of blue dicks (*Dichelostemma capitatum*) with leaves growing so...
thickly together that it looked like a lawn. The blue dicks were chock full of dense, dark-purple flower heads. The scale of the display, floral abundance and color combination was just breathtaking. A miniature version of that association exists here at the Garden in Bed 6B of the California Area, flowering in the spring.

The relative purity and wildness of the island was inspiring. The beaches show no signs of human disturbance. The water is clear and blue, the seals gather in abundance along the shores. San Nicolas Island is an important breeding ground for elephant seals, harbor seals and sea lions. The west end of the island is covered by sand dunes and plants pruned down to low sturdy mats by the wind. The unyielding influence of wind and water has carved the rocks along the western shore into crazy shapes and sculptures. Unfortunately, the island is not entirely pristine, the influence of exotic weedy plants is evident even here, although the Navy and other interested agencies are taking steps to control it. I did my share, spending a few hours in the evening working to remove a recently introduced mustard (Brassica tournefortii) before it dropped its seed.

The plant I’m most excited about having collected is the San Nicolas endemic, Eriogonum grande var. timorum, the San Nicolas Island buckwheat, a beautiful low growing plant with rosettes of gray leaves with showy umbels of white flowers. I collected several other island endemics including Astragalus traskiae, Artemisia nesiotica, Lomatium insulare, and Lotus argophyllus var. argenteus. All of the plants are now in the hands of our able plant propagator John Domzalski, who will care for them until they have taken root and we have prepared an area for them to be planted.

The California Channel Islands are of great interest floristically; they are home to many narrowly restricted endemics as well as host to relictual taxa such as Lyonothamnus that were formerly found on the California mainland. Our Channel Island Collection provides great opportunities for research and education, providing living examples of the many special plants found there.

My hope is that we will be able to secure funding to restore one of our Channel Island beds. I have been working to eradicate the weedy exotic bulb Nothoscordum inodorum; it appears to be under control. The next steps are to amend the soil, install new paths and rock work in order to provide the additional space and cultural conditions we need to grow these exciting new collections. Over the long term I hope to develop a more complete Channel Island collection. Berkeley’s strong maritime influence, the lack of extremely hot dry summers and infrequent frost give us an unparalleled opportunity for the cultivation of the island flora. The Garden boasts the most complete California native bulb collection in the world, hopefully someday we will be able to say similar things about our Channel Islands collection.

—Nathan Smith

For Further Reading
References on the Islands of California

- A Flora of Santa Cruz Island, by Steve Junak, Tina Ayers, Randy Scott, Dieter Wilken, David Young; Illus. by Linda Ann Vorobik; Santa Barbara Botanic Garden in collaboration with the California Native Plant Soc., Santa Barbara, CA, 1995; b/w photos; drawings; maps; keys; 397pp.; paper, $24.95.

- Natural History of the Islands of California, (California Natural History Guides, No. 61), by Allan A. Schoenherr, C. Robert Feldmeth, Michael J. Emerson; Illus. by David Mooney and Michael J. Emerson; UC Press, Berkeley, CA, 1999; b/w and color photos; drawings; maps; 491pp.; hardcover, $48.00.

—Elly Bade
Many visitors to the Garden don’t realize that it is a founding member of the Berkeley Natural History Museums (BNHM). Comprised of the Garden, the Essig Museum of Entomology, the University and Jepson Herbaria, the Museum of Vertebrate Zoology, the Museum of Paleontology, and the Phoebe Hearst Museum of Anthropology, the BNHM is the largest natural history museum west of the Mississippi! In terms of research productivity and the size and quality of its collections, the BNHM ranks among the most prominent museums in the country, including the American Museum in New York and the Field Museum in Chicago.

The BNHM is unique among the major natural history museums in having a botanical garden. As befits an institution of its caliber, the Garden plays a major role in botanical research around the world. The Garden is particularly well known for its contributions to plant evolutionary biology. Because DNA is best obtained from fresh plant material, the advent of molecular systematics (see box) has revolutionized the role of botanical gardens. Our collection is especially valuable because it is well-documented and collected from the wild. Distant researchers can peruse our collection list on the web and request material by email. The Garden’s curation staff, including Holly Forbes, Barbara Keller, and student assistants, do the important work of communicating with researchers, collecting and preparing material for them, and shipping that material around the globe.

Much of this research activity is only barely discernable to Garden visitors. More recently, however, the Garden has begun hosting a new group of researchers who are often quite visible in the Garden. In a future Newsletter, we will introduce these physiological plant ecologists, whom you may see as they connect Garden plants to various sophisticated instruments.

**PHYLOGENETIC ANALYSIS**

Much as genealogists use familial relationships to determine the origins of individuals, evolutionary biologists attempt to discern the evolutionary history of organisms by charting their relationships. If you’ve ever attending a family reunion, you may remember seeing your great-grandparent or grandparent and all his or her descendants, among them you. All these people descended from a single individual constitute a lineage. Genealogists consult historical documents for records of births, deaths, and marriages to discover the deeper history of lineages. Similarly, the fossil record sometimes provides clues about relationships among organisms that allow us to group them into possible lineages. We may see lineages that died out for lack of descendents and other lineages whose descendents are part of today’s flora. Only rarely do groups have such well-resolved fossil histories, however, leading evolutionary biologists to develop other tools in their search for the history of life.

Phylogenetics uses the characteristics of living organisms to infer the character of their ancestors and hence their evolutionary relationships. In particular, if two species share a character, it’s a safe bet that the most recent ancestor that they share in common also exhibited that trait. For example, both *Arabis* (rock cress) and *Erysimum* (wallflower) have four-petaled flowers, suggesting that their common ancestor also had four petals (Figure 1A). By cataloguing large numbers of characters, evolutionary biologists can use complex mathematical models to produce hypothetical phylogenies, or trees, of inferred relationships among organisms.

Unfortunately, though, a pair of species may share a character without having inherited it from a common ancestor. Instead, they may have lived in a similar environment and evolved similar-looking trait in response to selection by that environment. For example, both *Fouquieria splendens* (ocotillo) and *Didierea* have spiny branches. However, other data suggest that these species are only distantly related and their most recent common ancestor lacked such spines. Instead, they probably share this morphology because they both evolved in harsh environments where losing tissue to herbivory would severely reduce the number of progeny a plant could

*Fouquieria* drawing by UCBG horticulturist Judith Finn.

(continued on page 4)
Evolutionary biologists would say that these species have converged on a common morphology due to natural selection imposed by similar ecological pressures. Evolutionary biologists employ two strategies to avoid being misled by convergence. First, we use a very large number of characters, hoping to average out the effects of various potentially convergent traits. Second, we try to use characters that are less likely to experience strong selection.

Recent advances in molecular biology have provided a treasure trove of traits for phylogenetic analysis. Petal number is only a single trait; but several genes may control it. Further, each gene is spelled out by hundreds, if not thousands, of “letters.” When one letter is substituted for another (misspelling), we call it a mutation. Once a mutation occurs, the progeny of the mutant will carry the new spelling. They will share a common trait – the aberrant letter at that point in the code – which they received from their ancestor, the mutant. In the lab, we can “read” the sequence of these letters and treat each one as a character. Thus, where we once had only one character (number of petals), we now have thousands. Moreover, interspersed within each gene are sections of code that appear to have little function and hence experience little selection; these are ideal for inferring evolutionary relationships.

Using molecular methods has vastly increased the number of characters available to evolutionary biologists and has helped resolve the history of many plant groups whose evolutionary relationships had been poorly understood.

—Ellen Simms

**Figure 1.** Hypothetical relationships in two plant lineages. **A.** *Arabis* and *Erysimum*, which both have four petals, having inherited the trait from a common ancestor. **B.** *Fouquieria* and *Didierea*, which both have spiny stems, although their common ancestor does not.
BOOK REVIEW

Mr Menzies' Garden Legacy: Plant Collecting on the Northwest Coast, by Clive L. Justice; Cavendish Books, Vancouver, B.C., 2000; b/w photos, illus; maps; index of botanical names; 144pp.; paper, $17.95.

Archibald Menzies can have no better or more interested biographer than Clive Justice, a retired landscape architect and skilled plantsman, who grew up on Saltspring Island northeast of Victoria, British Columbia. In his youth and during his long and successful professional life he knew and worked with the plants Menzies described and collected during his two expeditions to the Pacific Northwest over two hundred years ago.

Born in 1754 into a family of gardeners in Perthshire, Scotland, Menzies received his early botanical training on the estate of Castle Menzies, where his father was head gardener. At the age of fourteen he went to Edinburgh to study botany and medicine under Dr. John Hope, a student of Linnaeus, who held joint appointments in medicine and botany at Edinburgh University and the Royal Botanical Garden. Upon completion of his studies he joined the Royal Navy as Assistant Surgeon. Menzies' subsequent career in the navy was promoted by Dr. Hope's recommendation of his services as botanist to Sir Joseph Banks at the King's Gardens at Kew.

For readers of Patrick O'Brien, who wrote extensively researched novels about the British Navy of these times, the position of surgeon-botanist on board ship was a breathtakingly adventurous one. Justice, however, in focusing specifically on Menzies' expeditions-the first with Captain James Colnett and the second with Captain George Vancouver-gives a more realistic picture of the hard work and frustrations of the job. From his own viewpoint as historian, geographer and forester, he describes Menzies' difficulties collecting, preserving and keeping plant material alive until it reached England safely, often in contradiction to the responsibilities and interests of the ship's crew and captain.

Today Menzies is recognized as the first person to find, describe and collect the plants of the Pacific Northwest. In 1795, upon the return of the Vancouver expedition, he lost possession of his journal and herbarium specimens to Vancouver and Banks, causing his pioneering discoveries to remain unrecognized during his lifetime. In 1802 Menzies was forced to leave the Navy. He then married and opened a surgical practice in London, where he died in 1846 without having a major work of botany to his credit.

Not many readers will be aware-and it is not mentioned in the author's biography-that Justice lived at International House and studied landscape architecture at UC Berkeley over fifty years ago. True to his training and love of plants, this book is filled with stories about the use, history, physical appearance and lore of the plants Menzies found in his travels. Every page contains a helpful plant illustration or map (some not easy to read) appropriate to his text. For all of us who know and love the plants of western North America, it is a satisfaction to learn a little about the botanist who introduced them to the scientific and gardening world.

—Elly Bade

Reviewer's note:
Readers consulting Justice's bibliography may wish to read about Archibald Menzies in Susan Delano McKelvey's *Botanical Exploration of the Trans-Mississippi West, 1790-1850*, which is also available in the Garden Shop.
Math in the Garden

Spring, a period of intense activity in gardens, was especially productive for the Garden's Math in the Garden curriculum development program. Program staff completed development of two dozen activities with local youth community groups and readied them for testing in youth programs across the country this summer. Another dozen activities will be ready.

Activities include planting in circles, locating crops on a coordinate grid, developing estimation, percentage, and measuring skills, discovering geometric shapes among plants, recording and analyzing growth rates, using non-standard and standard measuring tools, and developing rating scales to assess predator damage. The activities are tied into the new national standards for mathematics education. Local trials indicate that the activities are fun, compelling and teach math. This summer’s trials will determine if this remains true when youth leaders, who themselves may be leery of math, are teaching the activities.

The proven development process used in this project begins with project staff trying out activity ideas in diverse garden settings with children. Staff worked with children around the San Francisco Bay Area, including afterschool and summer programs at Malcolm X, Oxford, Lazear and Downer elementary schools, and at Martin Luther King Jr. Middle School. Staff held development days in conjunction with the Richmond Recycling Center’s Earth Day

The step we are involved in this summer is critical to producing activities that work in diverse settings and programs. Ten youth programs across the country will be testing our activities in their programs. These national test sites include the UC Davis Arboretum, Brooklyn Botanic Garden, Missouri Botanical Garden, Atlanta Botanical Garden, three 4-H county-test sites in California, a girl scout summer camp. Each site tests 6 to 12 activities in youth botany camps, community gardens, teacher training institutes, and/or “family day” programs. Every site receives the written activities and all the equipment needed to use with their participants. This is a real test of how well staff has communicated procedures, background and the math content in written form as leaders do not receive training but learn to do the activities solely by reading the activities.

While national test sites committed to testing the materials with a total of 400 children, their enthusiasm for the materials has resulted in this summer’s national test involving over 1200 youngsters. We are delighted. We look forward to seeing the written evaluations from each leader each time they try an activity.

Math in the Garden also received national exposure this spring when it was featured in the Time Magazine supplement, Find Out Why, that is sent to elementary classrooms across the country. Math in the Garden is funded by the National Science Foundation.

—Jenny White
Here is a quick sample of an activity you can do with children in your own garden, now, or when your tomatoes are ripe.

**How Many Seeds in a Tomato?**

**What You Need**
A piece of paper, crayons and pencils, toothpick, cutting board, serrated plastic knife, 6-inch string, 6-8 “cherry” or ‘Sweet 100’ tomatoes (from the garden or the store), 2-3 additional different-sized tomatoes

**Now We Begin**
Eat a cherry tomato for a snack. As you eat ask how many seeds do you think are inside each tomato. Does each tomato have the same number of seeds? How can we find out?

**Estimate the number of Seeds**
Give each child (or pair of children) a 6-inch length of string and ask them to select 4-6 tomatoes that appear similar in size. Ask them to wrap the string around a tomato, mark that distance and check to see if the others are a similar size.

1. **Give each a cutting board, toothpicks, paper, crayons and pencils.** Have the children examine and draw the tomato in its actual size.

2. **Before cutting open the tomato, ask each child to estimate the number of seeds inside.** Record this number next to the drawing. Put a big “E” by it to remind them that it is their estimation of the number of seeds.

3. **Cut one tomato in half and count the seeds.** Encourage them to look closely at the seeds. Are they all the same size? Do any look dead?

4. **Record the number of seeds counted next to the estimation.** Put an “A” by it for actual number of seeds.

Make a better guess. Estimate the number of seeds in a second tomato. Cut it open and count and record the number of seeds. Is the number of seeds the same in all tomatoes that are the same size? If not, how close is the number of seeds? How many more? How many fewer?

How much better would your guess be with a third tomato? Go ahead and try it.

Repeat this activity until each child is confident about estimating the number of seeds inside a new cherry tomato.
GARDEN NOTES

WILDFLOWERS GALORE… In concert with the California Native Plant Society, the Jepson Herbarium, the Natural Science Guild, and the Oakland Museum, the UC Botanical Garden annually co-sponsors the Wildflower Show at the Oakland Museum. Curator Holly Forbes, Curatorial Assistant Barbara Keller, and horticulturist Nathan Smith, along with volunteer and plantsman extraordinaire Wayne Roderick, were one of four teams who collected wildflowers throughout northern California to display at this show. Horticulturist Roger Raiche played an important role in identifying dozens of species brought in for the show. Horticulturist Jerry Parsons, with assistance from intern Akemi Awaya, created several beautiful flower arrangements for the show. If you missed it, mark it on your calendar for next year’s Mother’s Day weekend.

SLIDE TALK… Volunteer Services Coordinator Nancy Swearengen gave her slide talk “Around the World in 30 Minutes” to the Berkeley City Commons Club on February 16th.

RHODODENDRON CONVENTION… Horticulturist Elaine Sedlack attended the 56th annual convention of the American Rhododendron Society, held in April in Eugene, Oregon. During the trip she was able to visit Hendricks Park Rhododendron Garden, a spectacular, 50 year old municipal park on top of a hill with an overstory of mature Quercus garryana (Oregon white oak). Magnolias, dogwood and various garden-worthy trees and shrubs create a setting for extensive plantings of rhododendrons, which were in beautiful full bloom.

TRIPS TO THE CEDARS… Horticulturist Roger Raiche lead the following trips to his property in The Cedars (Sonoma Co.): a day trip for the Western Chapter of the American Rock Garden Society on April 1st; and a camping/botanical field trip for Jon Price and 10 graduate students from UC Davis on May 1st.

NEW ROAD BUILDING… Horticulturists Nathan Smith and Roger Raiche, with the assistance of student employee James Pipkin, built a new road between beds 72, 9 & 7 to allow vehicular access to this area. This will facilitate renovation of Channel Islands bed 72, see Nathan Smith’s article, Collecting Trip to San Nicholas Island, this issue. The California Area Endowment Fund is making this work possible.

ROSE CELEBRATION… Horticulturists Peter Klement and Elaine Sedlack participated in the Heritage Rose Group’s “Celebration of Old Roses”, held in El Cerrito in May. Peter provided roses from the Garden as cut flowers for the display. Elaine contributed flowers from her home and helped with the display.

SUCCESSFUL SALE… The Spring Plant Sale went very well indeed bringing in $21,444.00 for Garden operations! Thanks to all volunteer propagators, staff and event volunteers who made the sale such a huge success!

LIVE OAKS REMOVED… The California live oaks removed from the Asian area of the Garden recently suffered from oak root fungus (Armillaria mellea) and had to be removed in order to ensure safety for Garden visitors and staff—he trees had become unstable due to diseased roots. New plants to be planted in the area include some rare Asian conifers and Japanese trees which will provide some splendid fall color in the Asian section.

Garden Tips

- A company in Maryland composts crab chum, the leftovers of crab processing. Recently, a second business has emerged in which the chitin is removed from the wastes before the materials are composted. Chitin, supposedly the second most abundant organic compound on earth, has many uses including increasing the shelf life of fruits, vegetables, flowers, and meats and in making bio-degradable sutures or second skins for burn victims and bandages that stop bacterial infections and bleeding. When processed so that it becomes soluble in dilute acids, it becomes ‘chitosan’ a material effective in waste water management by removing organic molecules, heavy metals, and PCBs. It recently has become popular as a health product because reportedly it can remove body fat. *Bicycle 41*; (12): 30-33.

- In *Horticulture* 97 (3): 20 is a list of the following organic fertilizers including their components: “Grow Joe”—coffee grounds, tea wastes, hydrated lime and other ingredients (undisclosed); “Squantos’s Secret”—fish scraps; “Poo Pets” including ‘Stool Toads’ and ‘Turtles’—baked cow manure; “Zoo Doo” including ‘Dung Buddies’ and ‘Poolitics’ such as ‘Repooblican’ and ‘Democrap’—composted zoo manure; “Kricket Krap”—droppings from crickets raised for fish bait along with cricket food; “BaaBaa Doo”—sheep manure; and “Cockadoodle Doo”—chicken manure.

—Robert D. Raabe
Research at the Garden

Research materials from the Garden’s collection were provided to the following:

Dr. Kevin Tu, post-doc in the UC Berkeley lab of Prof. Todd Dawson, measured photosynthesis on a wide variety of Garden plants and collected leaves for further analysis.

Dr. Catarina Rydin, University of Stockholm, received dried stems of several species of Ephedra and of Gnetum for her molecular study of the group.

Dr. Paul Madeira and Dr. Bob Pemberton, USDA Agricultural Research Service Invasive Plant Lab in Florida, received dried material of the ferns Lygodium lanceolatum, Lygodium circinnatum and Anemia phyllitidis for their research program on the control of the highly invasive species Lygodium microphyllum in Florida. This problem was mentioned in Dr. Raabe’s column of the Spring Newsletter. One of the first steps in assessing biological control agents is the determination of host specificity for the agents. This is an expensive and time consuming process. Choices have to be made as to what plants to test. Since host range (specificity) often crosses species boundaries, it is important to understand the taxonomic relationships within the Lygodium genus. For this reason they are preparing to perform some sequencing work on the species collected by Dr. Pemberton. It is hoped this will elucidate these relationships.

Dr. Rei Rasmussen, Oregon Graduate Institute in Beaverton, Oregon, visited the Garden again to collect emissions from several oak species for his study on terpene release by oaks.

Ms. Caroline Stromberg, dissertation student at UC Berkeley, Department of Integrative Biology, continues to receive dozens of specimens and associated herbarium vouchers for development of a phytolith reference collection.

Dr. Jean-Michel Guillon, Laboratoire Ecologie, Systématique et Evolution, Université Paris Sud, France, received dried stems of several species of Equisetum (horsetails) for his study of sex determination and genetic variation in the genus. He plans to carry out DNA studies in this genus.

Dr. Alan Smith and Dr. Brent Mishler, UC Berkeley, members of the Garden’s Faculty Advisory Committee, will be using materials from the Garden [including the fern Ophioglossum (adder’s tongue)] in “a comprehensive synthesis of the phylogenetic relationships of the major groups of green plants, using morphological, developmental, and ultrastructural characters as well as DNA sequence data”. The “Green Plant Phylogeny” project is described in detail in the web site http://ucjeps.berkeley.edu/bryolab/greenplantpage.html. They will be sequencing whole genomes (chloroplast, mitochondrial) of selected exemplars, including about ten pteridophytes (ferns).

Mr. Neil Hausmann, dissertation student at UC Berkeley, Department of Integrative Biology in the lab of Prof. Wayne P. Sousa, will be using research greenhouse space this summer for his study.

Ms. Romey Haberle, dissertation student at the University of Texas at Austin, received seeds of Githopsis specularioides (common bluecup) for her molecular and morphological research in North American members of the family Campanulaceae (bellflower family)

Ms. Tracey Slotta, dissertation student in the Biology Department, Virginia Tech, received leaves of several species of Malacothamnus (bush mallow) for her doctoral research. Her project is to develop a molecular phylogeny of the Malacothamnus alliance in the Malvaceae (mallow) family.
Farewell to Nancy Swearengen

Whether it has been organizing the docent training program, a program lecture, a volunteer recognition event, summer camps, a plant sale, writing the UC BEE, or leading a Garden tour: Plants of the Bible, a Press Tour, or Biology 1B, (“and don’t even get me started on adaptation!”) Nancy Swearengen has done it all with gusto and good humor while working here at the Garden for the last twelve years as Volunteer Coordinator.

“Know your stuff” is what Nancy has exhorted the trainee docents to do as they attend the UCBG 16 week docent training program. As Nancy has taught and organized the visiting guest speaker experts then you can bet that the trainees all really did “know their stuff” by the time the course concluded. Nancy’s ability to get just the perfect lecturer to talk on a topic is legendary.

Nancy says that her greatest delight while working at the Garden has been getting to know all of the other volunteers too, as well as the docents. Nancy has no hesitation in explaining why she finds working with the volunteers so interesting, “because they have such diverse talents and backgrounds but are united by their common interest in plants!” “Most of all,” she says, “it’s just so much fun working with such a wonderful group of people!”

Nancy is not leaving so much as changing hats again. She plans to continue her relationship with the Garden by volunteering once more as a docent. Nancy not only really knows the material, she just loves to give tours and gets a giant kick out of seeing people’s faces light up when they “click” with delight at understanding the information she is giving them about the plants. Thanks Nancy, from everyone here at the Garden for all of your hard work, and thanks too, from all of those who experienced that “click of understanding” and left the Garden ever so much the richer for having taken a class, or a tour, here with you!

—Janet Williams

We first came to know Nancy when she was (we thought) new to the Garden, after she finished her docent training. It wasn’t until later that we learned she knew our hill intimately, having grown up on Panoramic Way—just across the canyon—where it was easy to come over to UCBG for a quick visit at any time. Once Nancy became a docent she plunged into life at the Garden with all her energy and enthusiasm. She soon became docent chair and was the first to gather past chairs into an advisory committee to help plan and improve docent education and activities. Later, Nancy became a member of the Board of the Friends with the responsibility of helping promote volunteering. Eventually this work became a staff position where, among other duties, she has administered training classes for new docents. Even so, she has not given up leading a tour or two herself! Over the years Nancy has proven to be skilled at helping each volunteer find her/his niche here in the Garden, and with a few words and a smile she has made us feel welcome and needed.

—Elly Bade & Nancy Markell
Every year in May or June our volunteer groups get together to celebrate the successes of the academic year, elect new officers and recognize those who have achieved various service milestones. This year, the Volunteer Propagators and Garden Shop Associates hosted a gorgeous luncheon for Garden Staff, and honored these members of their groups:

Five years of service: Elaine Chernoff, Helene Conant, Dawn Keremitsis, Milt Morrison, Peggy Smuckler, Carol Thompson, Ruth Ungar and Edith Yu.

Ten years of service: Willy Adam and Jack Dolhinow.

The Docents, at a separate event, honored the following:

Five years of service: Alan Berling, Robert Coombs, Louise Dutton, Susan Gilmour, Doris Grasser, Susan Hall, Robin Johnson, Ann Machin, Emily McKibben, Mary Mentzel, Melanie Mentzel, Jane Sandstrom, John Tolonen, and Elizabeth Woodbury.

Ten Years of service: Carol Foster, LaVerne Leach, Alison Mills, Frank Orme and Byron Schatz.

Fifteen years of service: Thelma Russell, Leonard Skinner, Tomiye Sumner, Jan Vargo and Florence Yaffe.

Twenty years of service: Ramona Davis, Bob Lichtenstein and Sarah Ripley

With twenty-five years of service Elly Bade is an example of the sort of stellar volunteer every organization would love to have! In addition to working as a Docent, and along the way being a co-inventor of our popular Grocery Store Botany program that is presented in classrooms from Berkeley to San Ramon, Elly propagated trees and shrubs in the early days of the Volunteer Propagator program. During the 1980’s, she organized ten very successful Garden symposia. She has been the book buyer for the Garden Shop since 1990, and reviews books for this Newsletter. In fact, there is very little that Elly has not done around the Garden, and we, of course, are much the richer for her many contributions.
TWILIGHT TOURS
Plan to tour the Garden with a different staff member every Wednesday afternoon, beginning July 11 at 5:30 p.m., through August. You’ll get to see the Garden in an entirely new way: through the eyes of our experts in horticulture. Topics include Magnificent Monocots, Medicinal Plants of Mexico and Central America, Off the Beaten Path and much more. Call us for a complete list of dates and topics.
Free with Garden admission.

FALL PLANT SALE
Sunday, September 30, 10 a.m.–2 p.m.
Don’t miss this opportunity to stock up on exciting new plants to put in your Garden now!

MEDITERRANEAN GARDENS IN FRANCE & ITALY
Sean O’Hara, Chair of the Northern California Branch of the Mediterranean Garden Society, presents a slide-lecture of some fabulous gardens and landscapes in France and Italy that perfectly illustrate what we mean when we talk about Mediterranean gardening. We guarantee you’ll be inspired!
Saturday, September 23, 1 p.m.
Free with Garden admission.

SICK PLANT CLINIC
UC plant pathologist Dr. Robert Raabe and his team of experts will diagnose what ails your plants.
First Saturday of Each Month, 9:00 a.m. – Noon

To register for any program or event*, call 510-643-2755. *Reservations are NOT required for the Sick Plant Clinic.