

the BULLETIN Outerly Publication of the Friends of the Arboretum

Winter 2013-2014 Vol.37, No. 3 & 4



Art in the Arboretum

By Anastasia Torres-Gil

Something new is growing in the UC Santa Cruz Arboretum amidst the exotic flora and fauna -- an increasing presence of sculpture in the gardens and artists taking full advantage of the Arboretum's unusual and indigenous plants. Artists specializing in botanical prints look to the Arboretum as a treasure trove of plants not easily found elsewhere.

As an undergraduate student at UCSC, Stephanie Martin was charmed by the natives growing in the Arboretum. Her original botanical prints depict the native plants that she first viewed as a Natural History major in the 1980's. Her intricate copperplate etchings of botanicals and birds take quite some time to create since the process involves sheer labor and focused attention. She has a backlog of species of plants that she would like to sketch. *continued on page 2*

Darlingtonia californica – California pitcher plant, cobra lily is a rare, carnivorous or insectivorous pitcher plant family member, (Sarraceniaceae.) It occurs in fens and seeps on volcanic and ultramaphic (serpentine) soils in the Klamath ranges of northernmost California and southern Oregon, the southern Cascade Ranges and the northern Sierra Nevada. The modified leaves are the pitchers and use their nectaries and attractive display to attract insect prey. The insects tumble into the pitchers where slippery secretions and dagger-like trichomes (hairs) line the inside walls of the pitcher impeding attempts to escape. The pitchers have 'window panes' that rearrange the light patterns in a way that disorients insects who are trapped inside, making their journey out even less hopeful.

By Stephanie Martin

Taking Strides to Thrive

By Christine Jennifer

Big changes are being made at the Arboretum these days. Changes to enhance the main entry and first impression. Changes to attract more visitors and increase membership. Changes to staff and to the overall approach to fundraising.

"We want to enlist more community support and improve awareness of the new things we are doing to make the Arboretum sustainable. The plant collection here is above reproach. You cannot do anything but stop and appreciate that incredible collection... but to sustain it and help it thrive we really have to modernize our business practices and extend our partnerships in the community." said Julia Meunnich Cowell, President of the Board of the Friends of the Arboretum.

Though owned and administrated by UCSC, as an entity within the University, the Arboretum is charged to be mostly self-funded and ultimately self-sustaining, primarily relying on individual contributions and grants. *continued on page 7*



Photo by Barb Cordes



The Australian Rock Garden



Banksia speciosa

Twenty some odd years ago, our Director, Brett Hall, had the foresight to accept several truckloads of free soil from an upper campus parking lot development, and had it delivered to the eastern edge of the Banksia Field. The idea of the Australian Rock Garden lay dormant for a very long time, but is bit by bit becoming a reality.

We have built small (and large) sections of the Rock Garden as funding has permitted. By carving out walkways, we were able to use that soil to gain height in the planting sections. The "seating" for each large rock is

dug out by tractor. To position the rock, straps are tied, carefully choosing the top pivot point. Once lifted, it can be turned to the perfect angle. Larger rocks are actually easier to move...the little ones have to be placed by hand.

A Rock Garden allows catering to individual plant preferences. Drainage can be improved; soils can be amended differently in different places. Each rock outcrop provides different sun exposures, and protection from wind.

Peat was mixed into the soil where many darwinias have been planted. These special myrtle family plants (Myrtaceae) look very "un-myrtle like". The true flowers are hidden by showy petal-like bracts. There are several different species to the left of the central walkway. They are thriving!



Darwinia meeboldii

Lechenaultia biloba has been a finicky grower in other garden locations. It tends to have a lot of top growth, with a weak crown. Planting among rocks has been ideal. The original plant may be wind-damaged, but it has suckered from the roots, braced among the rocks. Look for their incredible blue flowers winter through spring.

Many of the coastal Australian plants really respond to having a thick layer of sand. *Adenanthos cuneatus* 'Coral Drift' has survived in other garden locations, but is growing rapidly, with unusual pinkish-purple new growth. *Grevillea nudiflora* 'Medusa' is equally happy, with flowering stems trailing across the sand.

The Australian Rock Garden is a five minute stroll from the Arboretum Office. Come see the new rock work and look forward to ongoing rockwork and plantings! Sit awhile and let the peaceful sights and sounds wash over you. Sit a while and let the peaceful sights and sounds wash over you. *- Melinda Kralj*

Editor's note: This beautiful natural setting is available to rent for weddings and other occasions as well.

Art in the Arboretum (cont'd - p. 1)



A Place of Opening by Heidi Cramer

Martin says during her artistic process, she spends so much time studying plants that the plants' personalities emerge in her work. As an artist, Martin manipulates the plants, curling a vine this way or placing a leaf that way. Martin appreciates that as an undergraduate student, she loved the teaching of art and science, and when sketching, she is able to view the plants through yet another lens.

Recent UCSC graduate Heidi Cramer describes her work as "inspired by the concept of art, as conscience of culture. "Using recycled materials to represent the process of change, Cramer aims to represent the idea of intangible transformation, such as epiphany and enlightenment with her sculptures. As explained on her website, her goal as an artist is to encourage participants to manifest the moment of transformation within themselves. See more of Heidi's art on www.heidicramer.com

The Bulletin of the Friends of the Arboretum

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Science Council Update from Newly Appointed Chairwoman Linda Anderson

The Science Council was formed last year and is off and running. Our goal is to strengthen and expand the relationship between the Arboretum and UCSC faculty and students to facilitate research and educational opportunities. For years, discussions have focused on the need to publicize faculty and student plant and plant/animalrelated research in displays within the garden. Bruce Lyon and Jean Langenheim are making it a reality. The duo will be working with several faculty members to create science vignettes of their research as prototypes for an ongoing display of plant-related research. In addition, the Arboretum is in the process of creating a Science Page for their web site. This will list the lecture series, highlight plant-related research projects, provide links to websites of interest, and for more bureaucratic expediency, have interactive forms for visitation and research applications. The Council was unanimous; the Arboretum needs to get the word out on all it is already doing to facilitate plant-related research and public education. As an example, Brett Hall, Arboretum Director, has overseen a successful internship program through the Environmental Studies Program

for about 20 years. Students learn basic horticultural skills and then create a project of their own design - a critical step for developing research skills.

Bottom line, plants are critical to our existence, without them there would not be higher life forms. The Arboretum is a place where as you walk the garden, you can step back in time, you can witness both evolution and co-evolution, you can explore plant strategies



Linda Anderson and Arctostaphylos glutinosa "Green Glute"

for water conservation, you can observe pollinators and seed dispersers ...all in an afternoon's stroll. - *Linda Anderson*



Jessica Fiske Bailey

In October this year Jessica Fiske Bailey was assigned responsibility for overseeing the UC Santa Cruz Arboretum. Her new title, Assistant Vice Provost of Strategic Programs and the Arboretum, reflects that one-third of her time is dedicated to helping manage

and grow support for the unit. Prior to October, Bailey served as Secretary on the Board of the Friends of the Arboretum, including as Board Secretary.

"I'm very excited to be working with such dedicated volunteers and staff. I feel that it is so easy to talk proudly of the work we do here. There's such a rich history and so many amazing programs and people," said Bailey.

Before she joined with UCSC, Bailey was the Executive Director of the Foundation of the State Bar, Manager of the Secretariat of the California Judicial Council, Development Officer with the Point Reyes Bird Observatory, and a consultant with courts and nonprofits in California on strategic planning, governance, and business operations. She graduated from UCLA with a degree in political science and a Master's in Public Administration from USC.

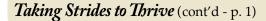
Along with improving the linkages between the University and the Arboretum, Bailey communicates her hope to promote the Arboretum more in the community. "I think we need to publicize the great work that is being done to encourage more attendance and engagement with the Arboretum and also modernize...so that we are a model for arboretums connected with a research university. This is a perfect site for student and faculty research. It's a place where students and members of the public can learn how to propagate and care for drought tolerant plants – and ultimately learn how to be better stewards and protectors of the environment."



Arctostaphylos silvicola

Volunteer Training and Orientation Classes

Classes will be held on Tuesdays beginning on January 7th through February 11th from 9:30-12 noon and meet in the Arboretum Horticulture Building. The classes are open to everyone and provide an introduction to the Arboretum, who we are and what we do. Arboretum staff and volunteers present slide shows and walking tours through the various gardens and collections. The classes provide participants with an introduction to horticulture, gardening, plant conservation, propagation and basic botany. Wear comfortable shoes and dress for the weather. For more information phone 831 427-2998 or email arboretum@ucsc.edu.



UCSC pays for the water and electrical bill, and provides some fundraising, technical and administrative support. Notably, in the last 2 ½ years, the university has contributed \$600,000 to the Arboretum as part of a three year matching challenge grant. There are just six months left before the challenge winds down, which means through June 2014 all new donations to the Arboretum from new donors or increased gifts from existing donors will be matched at a 2 to 1 level by UCSC – up to \$300,000.

With 135 acres of botanical gardens to manage and maintain, numerous education, and conservation programs, and a skeletal, though ambitious staff of seven plus the necessary help of committed volunteers, the Arboretum makes ends meet with a trimmed down \$800,000 operating budget. However, in order to survive and ultimately reach the goal of thrive – the Arboretum needs to tap into some long-term funding sources and fatten up financially.

"My fondest hope for the future of the Arboretum is that, with the personal and financial support of our community, it is able to fulfill its enormous potential and become even more widely known for its collections, facilities, and educational services. There is so much that can be done with the Arboretum's botanic assets if only there was a larger financial endowment to make it possible," said Alison Galloway, Ph.D., Campus Provost and Executive Vice Chancellor.

In the meantime, between now and a hoped-for endowment, the Arboretum is taking some proactive steps to improve cash flow - by investing in the hiring of a Development Associate to manage fundraising, charging for educational presentations and the upcoming Ray Collett Rare and Extraordinary Plant Lecture Series, working with a new wedding consultant to help put the Arb on the map as a wedding and event venue, and making advancements in welcoming and directing visitors.

Additionally, this past October 2013, UCSC advanced Jessica Fiske Bailey into

her position as Assistant Vice Provost of Strategic Programs and the Arboretum - meaning that 30% of her job is now devoted to Arboretum business with the intent of helping the organization modernize and increase funding. Vicki Garside is the volunteer overseeing the Arboretum's burgeoning Meet and Greet program to welcome visitors and collect entry fees at the gate. A seemingly simple effort, but one that requires a significant amount of manpower to have someone at the entry from 9 to 5 seven days a week during the Arboretum's operating hours, open seven days a week every day of the year except Thanksgiving and Christmas. With such a limited operating budget it has taken some time and much creative organization to enlist and train the needed support, a combination of hired work study students and volunteers. "We're hoping now that having people at the gate will help bring in an enormous amount of money and encourage membership," said Garside.

Mary Ann Wieland, also a volunteer, remembers her first visit to the Arboretum about 25 years ago when she first moved to Santa Cruz - so many of the plant collections seemed relatively new. Since retiring as a medical social worker, Wieland reacquainted herself with the Arboretum, and subsequently became a volunteer. "And now, oh my goodness, the Arboretum has grown up! It's a hidden jewel, it's a secret place in Santa Cruz that not a lot of people know about. It's the most wonderful, peaceful place to be. It's a place to heal. It's a place to relax."

People often describe the Arboretum as a place they discovered, a place of wonder – a hidden jewel. Yet part of improving funding to the gardens involves an emphasis on outreach and increased presence in the community. This is a subtle shift, one driven by a growing need for funding and support. "Until I joined the board, I didn't realize what a local treasure the Arboretum is. Now I'm on a mission to spread the word to the community and bring this jewel to light," said Anastasia Torres-Gil. Efforts are being made to publicize the



Photo by Barb Cordes

benefits of joining the Arboretum as a member and support the organization financially. Baseline membership starts at the \$45 California Poppy for the annual dues and goes up to the \$2,500 Life level. Membership benefits include such perks as year round admission, (some packages include admission for additional guests), discounts at Norrie's gift store and partnering botanical gardens and nurseries, and invitations to special events and guest speakers. "It would be wonderful to have really strong community support as demonstrated by strong membership. Our members are who we communicate readily with about our classes, our special speakers, our blooms, our rare and endangered species, our research. We encourage people to join so they can be involved and in the know about this great community resource," said Jessica Fiske Bailey.

Brett Hall, Arboretum Director, shared his ideal for the future, "to continue to grow the Arboretum as a thriving islandlike ecosystem of naturalistic gardens composed of marvelous collections that contribute to conservation efforts, enrich the botanical and animal wildlife and humanity."

Please support your local Arboretum and help it be sustainable and thrive for years to come. Become a member, make a tax deductible donation.

Through June 2014 your donor dollar is stretched - all new donations or increased donations will be matched by UCSC.

from the director



Brett Hall

Super Charged Typhoons, Biodiversity Conservation, Education and Highlights

A recent visitor asked me about the primary focus of the Arboretum and whether I felt our programs are relevant and address the effects of climate change. He was curious whether we

consider ourselves a research facility or an education and outreach unit. He sparked me to think in many directions and then super Typhoon Haiyan (Yolanda) touched down on earth causing immense human suffering and tragedy. Imagining the ferocity of nearly 200 mph sustained winds and many of the other examples of extreme weather we are experiencing around the globe is a pretty overwhelming backdrop to ponder one's relevance. Amidst all of this intensity I asked myself, are we relevant? Do we make a difference? Can we do more? My answer, Yes, of course!

The drivers of global warming and climate change are becoming larger and more complex by the day. Extreme weather events are now the norm. Energy consumption, renewable energy, and greenhouse gas emissions are huge factors in our potential recovery. So is biodiversity conservation, which is essential to life for food, shelter, oxygen, and carbon sequestration. Preserving ecosystems is critical to sustaining evolutionary processes and plant conservation is at the core of all things. This is especially where the Arboretum is relevant.

While we must lower our energy consumption and contribute by using and creating renewable resources, the Arboretum has an additional important responsibility...inspiring stewardship of the world's biodiversity... We accomplish this in many ways:

"Part of Conservation is Growing"

Growing, displaying and sharing gardens of rare and extraordinary collections give people the opportunity to interact with them. Our collections are linked to wild populations and conservation programs for rare species and plant communities. Our rare conifer collections include many species on the brink of extinction and it could become necessary to safeguard many in conservation groves. We share propagules with an active conifer conservation consortium and promote their propagation and dispersal. Similarly our central coast maritime chaparral collections and banksia gardens, for example, have their wild origins and enable teaching and research to take place. While the banksias offer nectar for birds and



Botanist Neil Krammer observing rare maritime chaparral, *Arctostaphylos ohloneana*, *A. crustacea* ssp *crinita* and *A. glutinosa*, *A. andersonii*, *A. sensitiva*, and a mysterious small population of *A. silvicola* in the immediate surroundings. Headwaters, Scott Creek, Santa Cruz Mountains

coastal chaparral horticulture and it may become desirable or necessary to reestablish and safeguard populations in other conservation gardens.

The theme, part of conservation is growing is deeply rooted in the Arboretum experience going back to the earliest Arboretum col-

lections when Ray Collett and his students assembled rare treasures from nearby wild places and from remote areas of the globe. When our friend and honored horticulturalist, author and plant

conservationist of Australia, Rodger Elliot, first visited California in the early 70s with his green tee shirt on displaying the words, 'part of conservation is growing', we found our anchor. This phrase explains us as well as any string of words I can imagine. They announce restoration ecology, horticultural conservation, rare species propagation, habitat gardening to attract native



Dawn Patrol. Mountain Lion spotted at the Arboretum by graduate student Yiwei Wang's motion detection camera.

bees, hummingbirds, and golden crown sparrows. The Arboretum excels in growing plants! Our gardens create forage and shelter for rabbits, woodrats and squirrels which attract bobcats, coyotes and foxes, among other creatures that visit often and without paying admission, to hunt and eat. A place where frogs, newts and salamanders coexist and owls and other raptors fly above in abundance sharing and competing for the available resources within the Arboretum island-like ecosystem.

Local botanist Jim West describes the Arboretum as the United Nations (UN) of the plant world, a place where evolution and the world's floras are "shrunk" into an understandable scale and format, for study and exploration. We provide an outdoor laboratory, and as Todd Newberry's article in this issue suggests, a classroom without walls. Since the beginning of the Arboretum, our charge has been to assemble plant resources for research and education, which exist for

young children involved in nature awareness all the way through to UC graduate students and professors conducting research on plant taxonomy, behavioral ecology, and physiological adaptations.

We are also a place for peace and tranquility, a place for enrichment through selfguided journeying and



Kevin Cullen, Andrew Hammerstein, Kaylee Walker - Upper Arboretum Dream Team

through our many and varied educational programs. Most important of all, we are a place to marvel at nature's brilliance.

Highlights

insects and are a

major educational

wow factor for visitors where teach-

ers can explain the fascinating stories

tion and adapta-

tion, fire ecology

and plant animal

coastal chaparral

efforts could help

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threatened. We are

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relations;

safeguard

populations

World Conifer Area. The upper Arboretum where our rare conifers are featured has been receiving considerable attention by our hard working student interns lately. Soon the campus tree crew will be pruning canopy trees to improve light and create additional planting areas.

Entrance Kiosk. Thanks to the incredible creative generosity and skill of our friend David Cole, who is a licensed building contractor, the entrance "Docent Shed" that Dean McHenry built with his friends back in the late 70s is being transformed into an entrance welcoming kiosk. We have tremendous gratitude for David and his supportive network of students, especially Kevin Cole and Sam Schiedt, who have worked tirelessly to breathe new life back into this the ole Docent Shed.

Norries Patio. On your next visit you might notice that Norrie's patio is under enhancement with new limestone boulders and soon, the addition of a nice patio, improved sales benches, and other amenities. The adjacent paths in the South African Garden are being rearranged to blend more aesthetically and promote smoother circulation. This activity is funded through a generous gift from an anonymous donor and the Ray Collett Trust.

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calendar of events

Winter 2013 – 2014

january

TOUR OF THE ARBORETUM

Saturday, January 4 Meet at Norrie's at 11:00 am 1st Saturday of every month, free with admission.

VOLUNTEER TRAINING CLASSES

Everyone Welcome Tuesday Jan 7 – Feb. 11, six Tuesdays, 9:30 am – noon.

COMMUNITY DAY

Tuesday, January 7 1st Tuesday of every month. Free admission.

CALIFORNIA NATIVE PLANT SOCIETY MEETING *Monday January 15, 7:30 pm*

ISLAND CONSERVATION— REFLECTIONS FROM THE FIELD

Ray Collett Extraordinary Plants Lecture Series Wednesday, January 15 Potluck 6 pm, talk at 7 pm UCSC students - free Arboretum members \$5, Non-members \$10

Tommy Hall, Field Manager with *Island Conservation*, will present a program on preventing extinctions by removing invasive species from islands.

BOARD MEETING

Wednesday January 22, 5 pm

FOCUS ON FYNBOS

Ray Collett Extraordinary Plants Lecture Series Thursday, January 23 Potluck 6 pm, talk at 7 pm UCSC students - free Arboretum members \$5, Non-members \$10

Martin Grantham, Greenhouse Manager, SFSU Biology Department. He specializes in plants from Mexico and Central America, New World cloud forest floras, and the flora of South Africa's Western Cape, which he has explored yearly since 2000.

He will talk on South African Fynbos vegetation and how to grow South African plants.

"A BRIEF HISTORY OF CLARKIA: WHAT A LITTLE ANNUAL FLOWER CAN TELL US ABOUT BIG EVOLUTIONARY PATTERNS"

Wednesday, January 29 Ray Collett Extraordinary Plants Lecture Series Potluck 6 pm, talk at 7 pm UCSC students - free Arboretum members \$5, Non-members \$10

Tim Miller, PhD Candidate, Ecology and Evolutionary Biology, UCSC (Kathleen Kay's plant evolution and speciation lab).

february

TOUR OF THE ARBORETUM

Saturday, February 1 Meet at Norrie's at 11:00 am

1st Saturday of every month, free with admission.

COMMUNITY DAY

Tuesday February 4 1st Tuesday of every month. Free admission.

GLOBAL CHANGE INTERACTIONS IN CALIFORNIA'S HYPERDIVERSE SERPENTINE GRASSLANDS

Ray Collett Extraordinary Plants Lecture Series Tuesday, February 11 Potluck 6 pm, talk at 7 pm UCSC students - free Arboretum members \$5, Non-members \$10

Erika Zavaleta, Pepper-Giberson Professor of Environmental Studies, UCSC

"We pursue research to enhance the stewardship, understanding and appreciation of wild ecosystems."

EXPERIENTIAL LEARNING AND THE IMPORTANCE OF ENGAGING WITH NATURE

Ray Collett Extraordinary Plants Lecture Series Thursday, February 20 Potluck 6 pm, talk at 7 pm UCSC students - free Arboretum members \$5, Non-members \$10

Gage Dayton is Director of the reserves managed by UCSC, including Big Creek, Año Nuevo, and Fort Ord. He has extensive knowledge and experience with reptiles and amphibians having received his PhD studying them in southern Texas and northern Mexico.

BOARD MEETING

February 26, 5 pm

march

HUMMINGBIRD DAYS

Saturday and Sunday, March 1 and 2, 10 am – 4 pm

Children's craft activities, guided and self-guided tours, plants for sale that attract hummingbirds, and educational programs. See website or our Facebook sites for details as the event date approaches. Admission will be the same as regular admission, \$5 adults, \$2 for 6-17 years old

TOUR OF THE ARBORETUM *Saturday, March* 1

1st Saturday of every month, free with admission. Several tours during the day as part of Hummingbird Days

COMMUNITY DAY *Tuesday, March 4*

1st Tuesday of every month. Free admission.

CASCADING EFFECTS OF NA-TIVE POLLINATOR LOSS ON CALI-FORNIA WILDFLOWER COMMUNI-TIES

Ray Collett Extraordinary Plants Lecture Series Tuesday, March 5 Potluck 6 pm, talk at 7 pm UCSC students - free Arboretum members \$5, Non-members \$10

Angelita Ashbacher, PhD candidate in Evolution, Ecology and Behavior, in Laurel Fox's lab.

CALIFORNIA NATIVE PLANT SOCIETY AND ARBORETUM- JOINT MEETING

March 10, potluck 6:30 and talk 7:30. Free to all

CONIFERS OVER SPACE AND TIME: INSIGHTS INTO PLANT AND WATER RELATIONS BY JARMILA PITTER-MANN, DEPT. OF ECOLOGY AND EVOLUTIONARY BIOLOGY AT UCSC Ray Collett Extraordinary Plants Lecture Series Thursday, March 20, Potluck 6 pm, talk at 7 pm UCSC students – free, Members \$5, Non-members \$10

BOARD MEETING

Wednesday, March 26 at 5 pm



Photo by John B. Caddell

april highlights

CALIFORNIA NATURALIST PROGRAM

Thursday evenings and weekend field trips schedule and applications are available February 1st on the Arboretum website. The application deadline is Saturday, March 1.

THE AUSTRALIAN GARDEN, CRANBOURNE, AUSTRALIA

Ray Collett Extraordinary Plants Lecture Series Wednesday, April 2, Potluck 6 pm, talk at 7 pm UCSC students – free,

Arboretum Members \$5, Non-members \$10 **Rodger Elliot**, author, conservationist, educator, renowned authority on the cultivation of Australian Plants around the world. He will be sharing the experience of developing the extraordinary Australian garden in the Mornington Peninsula Victoria in Cranbourne Botanic Garden.

ARBORETUM SPRING PLANT SALE (AND CALIFORNIA NATIVE PLANT SOCIETY SALE)

Saturday, April 12, 10 am - 12 pm, Members of either organization Noon-4 pm everyone welcome

A Letter from Todd

Even on a campus as rustic as UCSC, the Arboretum feels like a special place – the big place's big garden. Dean McHenry and Kenneth Thimann anticipated as much in UCSC's first years, and five decades have borne out their prescience. Fifty years! I have strolled the Arboretum since it was pastureland and its Moore Creek pond was a cattle wallow, and yet even now almost every visit rewards me with new lessons, especially ones about how to pose questions and seek answers about the natural history of plants and animals – and best of all, these are lessons taught by the creatures themselves. In the Arboretum I spend a lot of time just trying to pose questions that other creatures – for me, mostly the birds there – might answer. Questions, I mean, that go beyond merely "what is it?" (And even that question starts us toward interpreting traits.) These are questions whose answers come only slowly, at a pace the Arboretum encourages.

So I spend lots of time in the Arboretum, because my teachers nowadays live there, densely and diversely. Posing questions is a tough skill to learn. Answers often turn out to be merely ones of convenience, as, sometimes unwittingly, we change the questions we began with. "Go, read the book" can work mischief this way. And when we do think we have answered our question, we do well to pause. I learned this lesson when, back on my newly confident graduate student days, I would tell the kind but redoubtable C. B. van Niel what I had "found out". He would puff on his pipe, hesitate, and reply, "hmm . . . and how do you know?" As we try to make "natural history sense" of them in the Arboretum, its creatures ask us that daunting follow-up question, too.

Niko Tinbergen used to speak of "watching and wondering" or its counterpart in listening quietly. Just mustering the patience to do this can feel like hard work: just being silent and still – letting the habitat recover from the shock of our arrival, not hanging up on Nature when she puts us on hold. As great gardens do, the Arboretum provides the atmosphere for this vital patience. This tranquillity masks the Arboretum's robust seasonal changes, the arrivals and departures of migratory birds and insects, the sequential blossoming of flora. And all the while, now after fifty years, those of us who have adopted the Arboretum as "our patch" have witnessed its steady growth and transformation from the pasture it once was, so many decades ago.



Todd Newberry with students. photo by Keith A. Wandry

Since I am writing about my personal attachment to the Arboretum, I will not get into the research that goes on there. But, as a example of it, Bruce Lyon's research on wintering sparrows has been of signal importance in deciphering the dynamics of social interactions in songbirds. Beyond his work, suffice to say that time and again I come across little flags and other such signs that mark researchers' study sites.

I like to think of the Arboretum as UCSC's "College-X", whose theme is Nature itself and whose faculty, as I said, comprises plants and animals wonderfully gathered together and nurtured, and whose staff is the personification of generosity. We guides merely "nudge and point," sharing what we have learned there, including new skills. To me, that give-and-take is what is higher about higher education. Our occasional walks are our way of saying thank you for the ceaseless work that keeps this extraordinary place going.

Quiet treasures like the Arboretum – resources that are "just there" – are no less treasures, for all their subtlety. They merit not just our praise but our earnest support. We should honor them. - Todd Newberry, Professor Emeritus, Biology

THE ARBORETUM IS STRONGLY ROOTED

SUPPORT THE EDUCATIONAL, HORTICULTURAL, CONSERVATION AND RESEARCH GOALS OF THE ARBORETUM!

Yes, I want to give a donation, a gift membership, or renew my Arboretum Associates Membership!

New Member Renewal Gift Membership* Donation Only (no benefits)		
Check (payable to <u>UCSC Foundation</u>) Check	eck No	Membership Levels
Cash I Please bill my [] Visa [] MasterCard	[] Discover [] American Express	\$45 Calif. Poppy \$65 Salvia
Card No	Exp. Date	□ \$\$100-\$249
Cardholder's Signature		Kauri Circle
*Gift from (Name, Complete Address):		\$\$250-\$499 Erica Circle
Mombor Nome (true usuas for Calvis or shows)	Phone Number	\$\$500-\$999 Banksia Circle
Member Name (two names for Salvia or above)	i none number	\$\$1000 or + Protea Circle
Street Address	E-mail (for occasional reminders)	\$2500 Life
	Yes, E-Membership*	
City, State, Zip	*E-Membership helps the Arboretum save money by sending the Bulletin to your e-mail address.	Donation <u>\$</u> Donation - without benefits

The UC Santa Cruz Arboretum is a living museum *inspiring* stewardship of the world's biodiversity through research, education, and the CONServation of rare, endangered, and extraordinary plants.

Moving? Please let us know the address of your next garden... Thanks

nursery discount program

Arboretum Associates can enjoy 10% discounts on plants (and sometimes on related merchandise) at the following nurseries:

Drought Resistant Nursery 850 Park Ave., Monterey, CA 93940 • (831) 375-2120

Garden Company (plants only) 2218 Mission St., Santa Cruz, CA 95060 • (831) 429-8424

Gold Rush Nursery 3625 N. Main Street, Soquel, CA 95073 • (831) 465-0314

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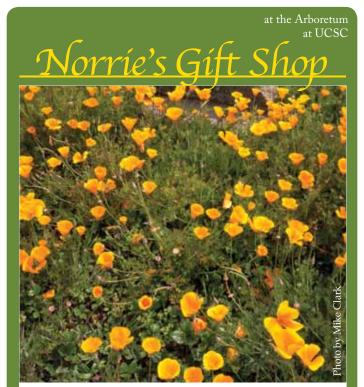
The Arboretum is open daily from 9AM-5PM. Norrie's Gift Shop & Nursery is open daily 10AM-4PM The Jean & Bill Lane Library is open Wed-Sun 12PM-3PM. Visit the Arboretum's website at: arboretum.ucsc.edu For information, or if you have any disability-related needs, call (831) 427-2998 or fax us at (831) 427-1524.

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