

UC SANTA CRUZ

R E V I E W

FALL 2004



Making Movies

and other stories, inside

CONTENTS

UC Santa Cruz

REVIEW

Acting Chancellor
MARTIN M. CHEMERS

Vice Chancellor, University Relations
RONALD P. SUDUIKO

Associate Vice Chancellor
Communications
ELIZABETH IRWIN

Editor
JIM BURNS

Art Director/Designer
JIM MacKENZIE

Associate Editors
MARY ANN DEWEY
JEANNE LANCE

Writers
LOUISE GILMORE DONAHUE
JENNIFER McNULTY
SCOTT RAPPAPORT
DOREEN SCHACK
TIM STEPHENS

Cover
*Photograph of Aaron Platt and
Irene Gustafson* by R. R. JONES

Office of University Relations
Carriage House
University of California
1156 High Street
Santa Cruz, CA 95064-1077

VOICE: 831.459.2501
FAX: 831.459.5795
E-MAIL: jrburns@ucsc.edu
WEB: review.ucsc.edu

*Produced by UC Santa Cruz Public Affairs.
9/04(04-046/75M)*

UC SANTA CRUZ (USPS 650940)
VOL. 42, No. 2 / SEPTEMBER 2004
UC Santa Cruz is a series of administrative
publications published in August, September,
November, and March by University
Relations at the University of California,
Santa Cruz. Periodicals postage paid at Santa
Cruz, CA 95060. Postmaster: Send address
changes to the University of California, Santa
Cruz, University Relations, 1156 High Street,
Santa Cruz, CA 95064-1077.

Features

- TEAMING UP TO SAVE
CALIFORNIA'S OAKS 8
- MAKING MOVIES 10
- BRINGING ORGANIC PRODUCE
INTO THE MAINSTREAM 14
- ON THE VERGE OF A
MEDICAL BREAKTHROUGH 16
- CHILD'S PLAY 20
- STUDYING THE EDGES 22

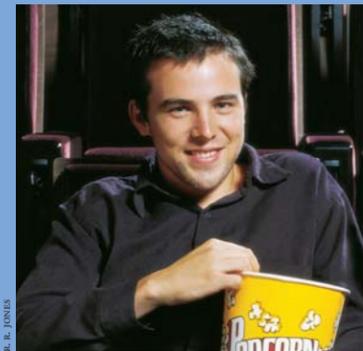
Departments

- FROM THE CHANCELLOR 1
- CAMPUS UPDATE 2
- ALUMNI NEWS 24
- ALUMNI NOTES 26



JIM MacKENZIE

Erika Zavaleta and Brian Fulfrust are using state-of-the-art GIS technology to plot the precise locations of two California varieties of oak trees—and in the process, are identifying the environmental factors that may be responsible for the trees' declining numbers. **8**



R. R. JONES

Aaron Platt's seven-minute "short," which began as a project in his UCSC film production class, was honored—and shown five times—at the 2004 Sundance Festival, the prestigious event that each year showcases the very best in independent cinema. **10**



R. R. JONES

When alumnus Drew Goodman cofounded Earthbound Farm 20 years ago, he couldn't imagine that the company would one day be producing packaged organic salad mix—a product that would be on the shelves of more than 70 percent of U.S. supermarkets. **14**



JIM MacKENZIE

Graduate student Cynthia Hays, whose research has been supported by the ARCS Foundation, is studying marine algae in order to understand a question that has confounded ecologists: What determines an organism's natural geographic range? **22**

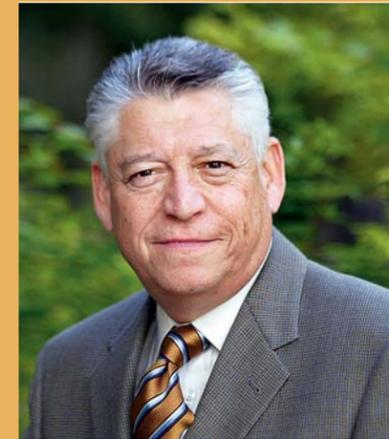
A DEFINING CHARACTERISTIC of UC Santa Cruz's faculty, students, and alumni is an intense desire—and the ability—to make a positive difference in the world. Consequently, the results of our campus's teaching, research, and public service have significant impact in a variety of fields and often drive progress in important ways.

This orientation toward meaningful achievement is exemplified in the stories you will find in this issue of *Review* magazine. You'll read about faculty research to prevent extinction of oak species and to bring new treatment for diabetes; you'll learn how our students already are contributing to social commentary through their award-winning films and are stretching boundaries to understand ecological puzzles. And, you'll meet an alumnus whose organic produce has become a household standard and another alumnus whose best-selling children's books have enchanted a generation.

These stories and others presented here represent just a few examples of achievement by members of the campus community. It was to this dynamic organization that I arrived as social sciences dean in 1995—and I was delighted and honored first to accept appointment as interim campus provost and executive

FROM THE CHANCELLOR

BY MARTIN M. CHEMERS



DANA COVINO

At the top of my list of priorities: maintaining academic excellence and highest quality in all our endeavors, building strong and productive relationships with our neighbors and research partners throughout the region, and solidifying gains from organizational planning.

vice chancellor last fall, and then, in April, to welcome the duty and honor of serving as your acting chancellor.

Since then, building on the exceptional accomplishments of former chancellor M.R.C. Greenwood and working in close partnership with Interim Campus Provost and Executive Vice Chancellor Margaret

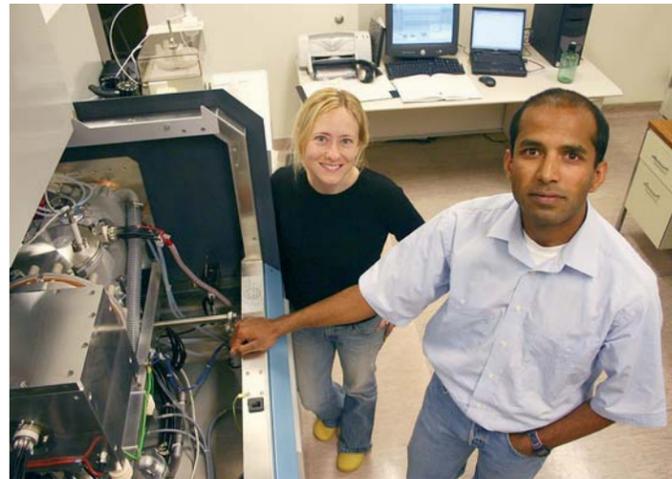
L. Delaney, faculty representatives, and others, I have strived to maintain the momentum of our progress as a leading campus. At the top of my list of priorities: maintaining academic excellence and highest quality in all our endeavors, building strong and productive relationships with our neighbors and research partners throughout the region, and solidifying gains from organizational planning.

My efforts are widely shared, both on and off campus. This past year, generous donors boosted campus progress with gifts totaling a record-setting \$32.2 million. On November 6, many campus friends will attend the Second Annual Scholarships Benefit Dinner, and students will be able to continue their education as a result of the support generated there. More than ever, as costs increase and public funding is reduced, private support is essential for our continued success.

In brief, UC Santa Cruz—your UC campus—is thriving. I invite you to enjoy this publication, and I thank you for your continued interest and support.

With best regards,

MARTIN M. CHEMERS
Acting Chancellor



Graduate student Mara Ranville and Judgeep Aggarwal, director of UCSC's W. M. Keck Isotope Laboratory, show off the lab's new ThermoFinnigan Neptune mass spectrometer.

UCSC dedicates new isotope laboratory

UC SANTA CRUZ DEDICATED the W. M. Keck Isotope Laboratory in June with a symposium on isotope analysis. The naming of the facility rec-



Acting Chancellor Martin M. Chemers and Interim Campus Provost Margaret L. Delaney unveil a plaque at the dedication of the state-of-the-art laboratory.

ognizes a \$1 million grant from the W. M. Keck Foundation that enabled the campus to buy a state-of-the-art mass spectrometer for isotope analysis of trace elements.

With the addition of this powerful new ThermoFinnigan Neptune mass spectrometer to the existing array of sophisticated spectrometry instruments at

UCSC, the campus's analytical facilities are unrivaled on the West Coast.

"Thanks to the generosity of the W. M. Keck Foundation, UC Santa Cruz's research capabilities have achieved a new level, making the campus a center of excellence in the region for trace metal analysis," said Acting Chancellor Martin M. Chemers at the dedication ceremony and symposium.

Trace metals include toxic elements such as lead and mercury, as well as biologically essential elements, such as copper and manganese, that can be toxic at high concentrations.

UCSC scientists in many different fields, from environmental toxicology to oceanography, are interested in precise measurements of trace elements. In particular, the ability to measure accurately the relative abundances of different stable isotopes of the same element in a sample is important to many researchers.

Biologist tells story of adventure, discovery in Antarctica

IN SIX TRIPS to Antarctica, biologist Terrie Williams endured brutal conditions on the coldest, driest, windiest continent on Earth in order to learn the secrets of the mysterious Weddell seals, the only wild mammals capable of surviving Antarctic winters.

In her new book, *The Hunter's Breath*, Williams interweaves two amazing stories from those expeditions: One is the story of the seals and their remarkable adaptations to life on and beneath the Antarctic sea ice, while the other is a human story of adventure and discovery in one of the most punishing environments on Earth.

The scientific question that Williams and seven fellow scientists set out to answer was a simple one: How do Weddell seals survive in the Antarctic? A professor of ecology and evolutionary biology at UCSC, Williams

was particularly interested in how the seals hunt for food beneath the ice.

The researchers used an array of high-tech equipment to gain access to the hidden life of the seals beneath the ice. A compact instrument package, including a small video camera mounted harmlessly on the backs of the seals, revealed scenes never before witnessed by humans and provided the first physiological measurements from actively hunting seals.



Terrie Williams's book, *The Hunter's Breath*, chronicles her expeditions to Antarctica to study the mysterious Weddell seals.

Keeley, Maitra speakers kick off UCSC lecture series

UCSC's "Thinking at the Edge" Lecture Series resumes this fall when Bruce Babbitt, former secretary of the interior and governor of Arizona, comes to campus. He will be the featured speaker at the first annual Fred Keeley Lecture on Environmental Policy, on October 5 at 7:30 p.m. in the Music Center Recital Hall.

Later in the month, the

Sidhartha Maitra Memorial Lecture will take place. This year's lecture will feature renowned ethnomusicologist Nazir Jairazbhoy, who has focused his research on India's classical and folk music. His lecture—on October 17 in the Recital Hall at 5:45 p.m.—will be preceded at 3 p.m. by a screening of the Satyajit Ray film *The Music Man*. Following the lecture, North Indian vocalist Purnima Chaudhuri will perform.

For updated information on these and other lectures, call (831) 459-1438.



A prestigious Knauss Fellowship in marine policy has given graduate student Kristan Blackhart the opportunity to spend a year working at National Oceanic and Atmospheric Administration (NOAA) offices outside Washington, D.C. One of Blackhart's tasks during the fellowship is coediting the sixth edition of "Our Living Oceans," a status report on the nation's living marine resources. Blackhart, right, is shown with Vice Admiral Conrad C. Lautenbacher, who is head of the National Oceanic and Atmospheric Administration. For Blackhart's story—and profiles of other current students—go to: www.ucsc.edu/students/profiles/.

Study finds Dutch drug policies don't increase marijuana use

IN THE FIRST RIGOROUS study comparing marijuana use in the Netherlands and the United States, researchers have found no evidence that decriminalization of marijuana leads to increased drug use. The results suggest that drug policies may have less impact on marijuana use than has been thought.

The findings appeared in the May issue of the *American Journal of Public Health*. Craig

Reinarman, professor of sociology at UCSC, coauthored the article, which compared the cannabis (marijuana and hashish) habits of users in Amsterdam and San Francisco to test the premise that punishment for cannabis use deters use and thereby benefits public health.

"We compared representative samples of experienced marijuana users to see whether the lawful availability of marijuana did, in fact, lead to the problems critics of the Dutch system have claimed," said Reinarman. "We found no evidence that it does."

The Netherlands effectively decriminalized marijuana use in 1976, and it is available for purchase in small quantities by adults in licensed coffee shops; in the United States, marijuana use carries stiff criminal penalties, and more than 720,000 people were arrested for marijuana offenses in 2001.



In Amsterdam, coffee shops can be licensed to sell hashish and marijuana in small quantities for personal consumption by adults.

This 'spring break' trip supports Mexican community

SPRING BREAK just isn't what it used to be. For 51 UCSC students, a trip to Mexico this past spring meant building a house one day, and repairing roofs, digging trenches, installing toilets and showers, and painting for another two days.

Instead of lounging around in a hotel, the students slept on the floor of a community center until they installed it themselves.

Despite the lack of amenities, the students said their time in Tecate, Mexico, was better than the typical spring-break trip. "I think this is more fun. This is so much more rewarding. We're making our mark on Mexico, and they're making a mark on us," said Jennifer Low, who was a first-year student at College Ten. "It's one of the best experiences I've had."

The students—mostly from College Nine and College Ten—



Students (l-r) Hamza El-Falah, Margot Brown, and Junko Nakajima build housing in Tecate, Mexico.

participated in an unusual project that was part work program and part cultural exchange. On the trip arranged by the non-profit Corazón organization, the students got to know the townspeople by working alongside future homeowners and other local residents.

News of the students' efforts caught the attention of California governor Arnold Schwarzenegger, whose Office on Service and Volunteerism featured the project on its web site and honored the students with awards in a campus ceremony in May.

Scholarship dinner coming on Nov. 6

THE INAUGURAL UCSC Scholarships Dinner took place last October, contributing more than \$500,000 in support for students.

The second annual dinner will be held on Saturday, November 6, at the University Center. Members of the UCSC community are invited to participate in

the event, which will include a silent auction, an elegant reception and dinner, and a program of student performers.

In the process, participants will be supporting scholarships and fellowships badly needed by deserving students.

At this year's event, former UCSC chancellor M.R.C. Greenwood will be honored as the 2004 recipient of the UC Santa Cruz Foundation Medal.

For more information, please call Jennifer Wood at (831) 459-2489.



The UC Santa Cruz Foundation Medal

Grant aids innovative foster youth program

AN INNOVATIVE UCSC program that supports the college aspirations of orphans, foster youth, wards of the court, and homeless or runaway youth has received \$150,000, the first installment of a three-year \$450,000 grant request, from the Stuart Foundation.

The funding is an enormous boost for the Page and Eloise Smith Scholastic Society, an alumni-driven, volunteer-based program established in 1999 that provides financial, academic, and emotional support to students before and during their years at UCSC.

"In the five short years since it was established, the Smith Society has reached out to nearly

100 young people who are on their own, helping them navigate the bureaucracy of the university and become successful students," said Francisco J. Hernandez, vice chancellor for student affairs at UCSC. "This collaboration with the Stuart Foundation will allow us to build a model program that can be replicated at other universities and colleges."

With the grant, the society will become an established university program.

The Page and Eloise Smith Scholastic Society was founded by Bill Dickinson, one of UCSC's first graduates and a veteran of the foster care system, to honor the founding provost of Cowell College and his wife. Dickinson's goal was to make higher education a realistic option for foster youth, most



Bill Dickinson (back row, fourth from left) founded the Smith Society.

of whom grow up without anyone making their education a top priority. His mission resonated with fellow UCSC alumni, faculty, and staff, who have banded together to nurture the educational aspirations of youth who live largely on their own.

"What drives me is the imagi-

native, loving, daring quality of community I had as an undergraduate at UC Santa Cruz," said Dickinson.

People who want to get involved with the Page and Eloise Smith Scholastic Society should contact Dickinson at (831) 588-5839 or wcdcamb@aol.com.

UCSC Ph.D. in music composition is UC first

UCSC WILL BE THE FIRST UC campus to offer a Doctorate of Musical Arts (D.M.A.) program in music composition. Enrollment in the program will begin in fall 2005.

Although some private institutions currently offer the composition D.M.A., the new UCSC program will distinguish itself by focusing on two sub-specialties: computer-assisted composition and world music composition. It will also be the first doctoral program established in the fine arts at UCSC, marking a significant milestone in the expansion of arts graduate programs on campus.

"The music composition D.M.A. will develop accomplished, active, and articulate composers with a broad awareness of the diverse styles, cultural influences, and technical means available to them in the 21st century," noted Margaret L. Delaney, interim campus provost.



From left, Professors David Hoy, James Clifford, Carla Freccero, Gail Hershatter, and Geoffrey Pullum, with Acting Chancellor Martin M. Chemers and former Dean of Humanities Wlad Godzich, at a University Center reception for the new Humanities Distinguished Professors program.

world, but are not known to this campus," Godzich said in his awards ceremony introduction. "So we wanted to acknowledge them and mark on campus who they are."

All of the award-winning professors said they would primarily use the funds to support graduate students in their departments. Clifford noted that because graduate programs represent the cutting edge of research, the work of graduate students is intimately related to

the work of professors.

"Graduate students are crucial to a healthy research environment," Clifford observed. "Often what grad students are doing for their doctorates is pushing the limits of our own research."

The five Distinguished Professors were selected from a group of 11 faculty nominated by departments in the Humanities Division, as well as by individual members of the division's faculty.

Alumnus selects new transcription by arts dean to open festival

THE SAN FRANCISCO-BASED choral group Chanticleer gave the premiere performance of Arts Division dean and professor of music Edward Houghton's new transcription of Johannes Ockeghem's *Missa Ecce ancilla domini* at the Ojai Music Festival in June.

UCSC alumnus Kent Nagano—the music director of the 2004 Ojai Festival—decided to open this year's event with the new transcription by Houghton because of the success of Nagano's first concert four years ago as music director of the German



LEFT: Kent Nagano, right, and Edward Houghton, backstage at the Philharmonic Hall in Berlin. RIGHT: The original manuscript of 15th-century composer Johannes Ockeghem's *Missa Ecce ancilla domini*, on display in Rome at the Vatican Library.

Symphony Orchestra. At that performance in Berlin, Nagano made the unprecedented and daring programming choice to combine works from the 15th and 20th centuries—juxtaposing Houghton's transcription of



Ockeghem's Renaissance mass *Missa Au travail suis* with Mahler's Ninth Symphony. Houghton has been researching and translating works by 15th-century composers for 25 years. A former student of

Houghton, Nagano graduated with degrees in music and sociology from UCSC in 1974. He is currently musical director of the Los Angeles Opera, the Berkeley Symphony, and the Deutsches Symphonie.

Scientists investigate impact of genetically modified plants

AS AN ENVIRONMENTAL scientist, Deborah Letourneau believes policy decisions should be based on the best information available at the time. That's why she's trying to fill an information gap with her latest research on genetically modified plants.

As insect-resistance is bred into major crops, Letourneau wonders how those crops' wild relatives might be affected if they pick up the new traits.

"There's been a lot of research on crop-to-crop movement," said Letourneau, referring to the contamination of organic corn grown adjacent to genetically modified (GM) corn. "But we don't know that much about the biology of wild crop relatives. If genes transferred, would it make them more weedy, more hardy, more invasive?"

To address these questions, Letourneau, a professor of environmental studies at UCSC, along with doctoral candidate Joy Hagen and Ingrid Parker, an associate professor of biology, have begun a three-year study to see what the consequences would be if GM genes transferred from *Brassica* plants through cross-pollination to their wild relatives.

Plants in the *Brassica*, or cole, family include many vegetable crops, such as broccoli, Brussels

sprouts, cabbage, cauliflower, and kohlrabi, as well as common weeds like wild radish and wild mustard.

A growing number of crops are being genetically modified to increase insect resistance. More than 25 percent of corn grown in the United States has been genetically engineered to contain the toxin of the *Bacillus thuringiensis* (Bt) soil bacterium, which disrupts the digestive system of a caterpillar. Transgenic cotton and potatoes also produce Bt toxin.

Little is known about the role Bt-susceptible herbivores, including caterpillars, play in regulating the health and spread of wild crop relatives. In their research project, team members are protecting wild relatives from caterpillar damage to see what could happen if modified genes moved from *Brassica* crops to their wild relatives.

The three-year project is funded by a \$335,000 grant from the U.S. Department of Agriculture.

Deborah Letourneau, surrounded by wild radish



Humanities launches new Distinguished Professors program

UCSC'S HUMANITIES Division celebrated the launch of a new program to recognize the academic achievement of its faculty at an April awards reception.

Wlad Godzich, former dean of humanities, announced the selection of Professors James Clifford (history of consciousness), Carla Freccero (literature), Gail Hershatter (history), David Hoy (philosophy), and Geoffrey Pullum (linguistics) as the first recipients of the UCSC Humanities Distinguished Professor Award. Each professor will receive an unrestricted \$5,000 per year research stipend for four consecutive years.

"Astonishingly, some of our outstanding faculty are well known to the rest of the

UCSC senate adopts Patriot Act resolution

OBJECTING TO WHAT they contend are the Patriot Act's "attacks on civil liberties," UCSC faculty voted overwhelmingly in May for a resolution that would have the campus decline to cooperate with federal agencies seeking information under the Bush administration's antiterrorism law.

History of consciousness professor Barbara Epstein said the many people who worked on the resolution believe there is "space" between the information the federal government requests about faculty, students, or campus employees under the Patriot Act and actually enforcing compliance in the courts. That is the area the UCSC resolution targets, she said.

Based in part on a draft resolution prepared by the American Civil Liberties Union, the UCSC measure joins anti-Patriot Act resolutions adopted by more than 300 U.S. cities, Epstein said.

Acting chancellor leads math, science study

RESPONDING TO A critical shortage of young people who are interested in math and science, the federal government is investing \$1.5 million at UCSC to identify the strengths of programs that encourage underrepresented minorities to pursue biomedical research careers.

Led by Acting Chancellor Martin M. Chemers, the project is funded by the National Institute of General Medical Sciences, a component of the National Institutes of Health (NIH).

The scope of need is stagger-

Department represents unique approach to biomedical discovery

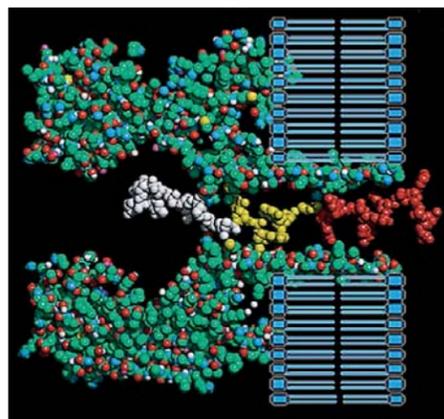
UCSH HAS ESTABLISHED a new Department of Biomolecular Engineering within the Baskin School of Engineering. The department is the new home for UCSC's renowned programs in bioinformatics, and includes faculty and researchers with interests in nanotechnology, protein engineering, and DNA microarrays (also known as "gene chips").

The department's unique interdisciplinary blend of engineering, computer science, biology, and chemistry represents a powerful new approach to biomedical discovery, said David Deamer, a professor of chemistry and biochemistry and acting chair of the new department.

"We are the only department like this in the country," Deamer said.

Biomolecular engineering refers to engineering "of, with, or for biological molecules," said faculty member Kevin Karplus.

Examples include protein engineering (the computational design of proteins to enhance or modify their functions),



Research in biomolecular engineering includes the development of the nanopore instrument for DNA analysis. This molecular model shows a DNA molecule passing through the nanopore channel.

the development of sensors that integrate biomolecules with electronic components, and new laboratory devices and analytical tools for studying gene regulation, protein expression, and other complex biological systems.



Acting Chancellor Chemers

ing: The National Science Board estimates the United States will need to prepare 1.9 million workers in the sciences over the next 10 years. In 1998, only 37 percent of undergraduate degrees in science, math, and engineering went to women, and a paltry 12

percent were awarded to underrepresented minorities. The project is part of a larger NIH initiative aimed at understanding the efficacy of educational interventions to promote entry of minority students into careers in biomedical and behavioral research.

"We need to identify what works in two areas: improving student skills and inspiring them to stay in the fields of math, science, and engineering," said Chemers, a professor of psychology. "We want to weigh the benefits of different program elements, like laboratory internships and faculty mentoring, so we can put our resources where they'll make the biggest difference."

Gifts to UCSC increase by 42 percent

UCSH RAISED A RECORD \$32.2 million from private donors in 2003–04, an increase of 42 percent over the total raised the year before.

"This record level of support for UC Santa Cruz could not have come at a more critical time," said Acting Chancellor Martin M. Chemers. "It will be invaluable in building on-campus achievements in cutting-edge research and undergraduate teaching."

The largest single contribution was a \$17.5 million grant from the Gordon and Betty Moore Foundation toward the construction of the world's most powerful telescope, the Thirty-Meter Telescope.

The largest gift ever for scholarships in UCSC's Baskin School of Engineering was made in memory of software engineer and alumna Amy Snader. The estate of Barbara Snader, Amy Snader's mother, donated \$1 million to the Amy Beth Snader Memorial Scholarship Fund for women studying engineering.

The New Teacher Center drew grants from the William and Flora Hewlett and Stupski Family Foundations; and PISCO, a long-term research project involving the study and monitoring of coastal ecosystems, continued to receive funding from the David and Lucile Packard Foundation.

Individual donors also continued to provide crucial support. The Telephone Outreach Program raised a record \$1.16 million from alumni and parents of students, and UCSC Foundation trustees contributed \$467,874. Alumni celebrating reunions raised more than \$245,000 to support the colleges and campus programs, and the Alumni Association Scholarship Fund raised \$109,130.

Isotope analysis shows exposure to depleted uranium in Gulf War vets

U.S. VETERANS who were exposed to depleted uranium during the 1991 Gulf War have continued to excrete the potentially harmful chemical in their urine for years after their exposure, according to a study published in the journal *Health Physics*.

The study indicates that soldiers may absorb depleted uranium particles through inhalation, ingestion, or wound contamination, said Roberto Gwiazda, an environmental toxicologist at UCSC and lead author of the study, published last January.

Fine particles of depleted uranium are created when munitions made with the material strike a target. The study did not address the health effects of exposure to depleted uranium, a subject of ongoing debate, but focused on a technique for detecting past exposure.

Gwiazda and Donald Smith, professor of environmental toxicology, developed a sensitive analytical technique to detect depleted uranium in urine samples. By measuring the relative abundances of different isotopes of uranium in the urine samples, the researchers were able to distinguish between natural and depleted uranium.

"This is the only unambiguous way to determine past exposure and uptake of depleted uranium," Gwiazda said.

The analysis of samples from Gulf War veterans was performed in collaboration with the Baltimore Veterans Affairs Depleted Uranium Follow-up

Program, which is assessing, treating, and monitoring veterans who may have been exposed to depleted uranium during the war.

The researchers applied their technique to three different groups of Gulf War veterans. The first group of soldiers had shrapnel in their bodies as a result of "friendly fire" incidents in which their tanks or armored vehicles were hit by munitions containing depleted uranium. The second group consisted of soldiers who did not have shrapnel in them but were involved in the friendly fire incidents, either because they were in the vehicles that were hit or because they participated in recovery operations. The third



These munitions are made with depleted uranium.

group, for reference, consisted of soldiers who participated in the war but not in combat operations.

As expected, the soldiers with embedded shrapnel had high concentrations of depleted uranium in their urine.

A more striking finding was the presence of depleted uranium in the urine of a significant number of soldiers in the second group, without embedded shrapnel but with potential exposure through inhalation, ingestion, or wound contamination.

In Memoriam



Harry Beevers, one of the leading plant physiologists of the 20th century and a

professor emeritus of biology at UCSC, died in April at his home in Carmel, California. He was 80.

Harry Beevers joined the UCSC faculty in 1969 as a professor of biology after 19 years at Purdue University. Beevers made major contributions to the understanding of plant metabolism and plant cell biology. He and his coworkers worked out important pathways of plant metabolism and showed the locations of key enzymes for the conversion of fats to carbohydrates in fatty seed tissues. His discovery of the glyoxysome, a small structure or organelle within some plant cells, led others to discover similar organelles called leaf peroxisomes and stimulated further understanding of the role of peroxisomes in animals.

Beevers was also appreciated as a mentor to young biologists and a brilliant lecturer who could electrify an audience with his eloquence and wit. Many of his students and postdoctoral fellows went on to become leaders in the field.

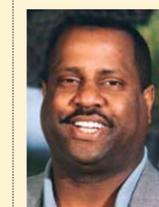
Contributions in memory of Harry Beevers may be made to the UCSC Arboretum, 1156 High St., Santa Cruz, CA 95064.

Laurence Veysey, a social historian and professor emeritus at UCSC, died in February. He was 71.

Veysey came to UCSC in 1966 and was a fellow

of Stevenson College; he retired in 1987.

Veysey's work focused on the history of education and examination of communal life. He was the author of *The Emergence of the American University* (1965) and *The Communal Experience: Anarchist and Mystical Counter-Cultures in America* (1973), which was nominated for a National Book Award.



Eric Thomas, a UCSC Foundation trustee and alumnus, died in June of a heart

attack at his home in Sacramento. He was 43.

A 1984 Oakes College graduate in economics, Thomas was deputy executive director of the California State Treasurer's Office. He had been a member since 1997 of the governing board of the UCSC Alumni Association and served as president from 2002 to 2003.

Thomas also helped organize UCSC's first African American Alumni Reunion and cofounded Black Escargot for African American alumni.

A student scholarship fund has been established at UCSC in his memory; contributions may be made to the UCSC Foundation and sent to University Relations, 1156 High Street, Santa Cruz, CA 95064. A fund on his children's behalf has also been established; donations may be directed to the Eric Thomas Memorial Fund, in care of the Golden 1 Credit Union, 1109 L St., Sacramento, CA 95814.

Teaming up to save California's oaks

UCSC researchers use GIS technology to investigate declining populations



SLEEPY HOLLOW, OIL ON CANVAS, KATHLEEN LIPINSKI, B.A., ART, COLLEGE FIVE (PORTER COLLEGE), 1977

*Don't it always seem to go
That you don't know what you've got
Till it's gone
They paved paradise
And put up a parking lot.*

Lyrics from "Big Yellow Taxi"
by Joni Mitchell

FOR THREE DECADES, the Endangered Species Act has helped conservationists fight for environmental protections. But ecologists now recognize that waiting to intervene until a species is endangered can be "too little, too late."

"Long before species go extinct, populations can decline to the point where they're

not performing ecologically," says UCSC conservation biologist Erika Zavaleta. "We lose a species functionally long before we lose it absolutely."

In a new trend, ecologists have begun documenting the plight of plants and animals as soon as they show signs of vulnerability. By heeding the early warning signs, ecologists hope to identify the sources of stress and inform policy makers about intervention and protection options.

Among the plants that are dwindling in number are two gems of the California landscape: the blue oak and the valley oak. These majestic trees, found only in the Central Valley and the foothills of the Coast Range and the Sierra Nevada, are not succumbing to the epidemic of Sudden Oak Death that is

ravaging tanoaks, coast live oaks, and black oaks. Rather, something appears to be inhibiting their regeneration. Zavaleta is determined to find out what's causing the problem and how big a threat it poses.

"Almost all the trees we see today are 100 or more years old, and the concern is that as they die off, there won't be youngsters to replace them," says Zavaleta, an assistant professor of environmental studies and a rising star in conservation circles. "We know the conversion of oak woodlands to vineyards, croplands, and subdivisions is hurting them. If we lose them here, we're not going to have them anywhere else."

Blue and valley oaks serve an "incredibly important" ecological role, says Zavaleta. Their acorns are a major food source for

birds, mammals, and insects, and they transform grasslands into the more biologically diverse California savannah, creating patches of shade, structure, and cooler temperature that provide habitat for many species.

The cultural value of oaks is evident in paintings, photography, and literature, and in the names of communities from Oakland to Oak Grove.

searcher Kris Hulvey, Zavaleta discovered a treasure of information had been gathered about the two species of oaks. "I was amazed how much literature was out there," Zavaleta recalls. "There were about 100 different experiments looking at the regeneration of blue and valley oaks, and more than 30 surveys over the past 30 years."

With so much historical data, Zavaleta knew it would be foolish to launch yet another experiment without first compiling the existing results into a comprehensive profile of oaks in California. She turned to Brian Fulfro, coordinator of UCSC's Geographic Information Systems (GIS) Laboratory, to collaborate with her on the project.

GIS software produces eye-catching maps, but it is also a powerful analytical tool, says Fulfro. "A lot of people think you push a button and get a map, but it's the opposite of that," says Fulfro, who teaches classes on the environmental applications of GIS technology. "GIS is a problem-solving and decision-making tool. Making a map is only one of the things you can do with it."

GIS enhances data analysis the way word processing facilitates the writing process. Fulfro and Hulvey created multiple databases, plotting the presence of oak trees on maps and creating overlays for key variables like temperature, precipitation, elevation, longitude and latitude, and seedlings-per-adult. With all the information in one place, Zavaleta was able to analyze tree populations relative to different environmental variables.

Preliminary patterns showed some regeneration in almost 80 percent of blue oak sites studied but less than 50 percent of valley oak sites.



JIM MACHENZIE

Conservation biologist Erika Zavaleta and Geographic Information Systems specialist Brian Fulfro

"These trees are not rare on the landscape yet," says Zavaleta, who received a prestigious David H. Smith Conservation Research Fellowship in 2001 from the Nature Conservancy that helped fund her oak research. "It's nice to do something at this early stage."

Working with graduate student re-

"That confirms there really is a statewide problem for the valley oak," says Zavaleta. The status of blue oaks will remain unclear until researchers learn more about the extent of regeneration taking place. "It might be enough, depending on the site, but if there's only one seedling per 300 adult trees, they'd definitely be in trouble," she says.

Poring over maps, Zavaleta was able to document that valley oaks statewide are more likely to regenerate on reserves than on land that is used more intensively. She also saw many sites with seedlings of about 12 inches in height that had no teenage trees, suggesting that the challenge for oaks isn't just germinating and surviving the first year or two, but making it into their 20s.

Zavaleta's next task is to enrich the database with details about specific reserves. She wants to map roads and development, north- and south-facing slopes, and land ownership classifications. Then she'll look at the maps again, searching for commonalities.

Despite the time-consuming nature of GIS analysis, a growing number of social scientists are embracing the technology, which can also be used to illuminate networks and relationships that don't have geographic links, like U.S. nonprofits dedicated to children's health, or the flow of corporate money to politicians. For Zavaleta, who enjoys bridging the gap between academia and policy, Fulfro's maps will be the centerpiece of her outreach to conservation advocates and policy makers.

"I see science as part of a continuum of what I do as a person and a citizen," says Zavaleta. "I want to take our research findings and communicate them to conservation groups and government agencies that manage the land. That's my goal. Some scientists see getting published in journals as the end of their work. I'm too impatient to stop there. I want to get that information into the public arena where it can do some good."

—JENNIFER McNULTY

Making Movies

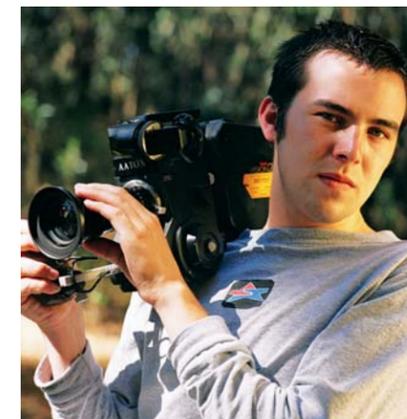


One film student's journey from Santa Cruz to Sundance

by Scott Rappaport

More than 3,300 people submitted their original short films to this year's Sundance Festival—the prestigious annual celebration of independent cinema founded by actor Robert Redford in 1981.

After a rigorous screening process, the final cut for the 2004 festival included only 86 films, 53 of which were made by American filmmakers. Two of the accepted films were created by students at UC Santa Cruz.



2004 Sundance Film Festival

One of those students was Aaron Platt, whose 7-minute film *The Cold Ones* screened five times in January at Sundance, universally regarded as the premier showcase for American independent films. But Platt's Sundance success wasn't limited to his own film; he also shot the footage for fellow student Cam Archer's 10-minute short, *Bobbycrush*. Their films were made as projects in UC Santa Cruz assistant professor Irene Gustafson's film production class.

Like Sundance, UCSC's Film and Digital Media Department is deeply committed to nurturing original, innovative filmmakers, helping them to develop and adapt

Facing page: Aaron Platt and film professor Irene Gustafson

their creative vision in the rapidly changing world of film production.

"In many ways the films are representative of what we try to engender in our classes," notes Gustafson. "They are structurally and narratively inventive and illustrate young and talented filmmakers finding their 'voice.'"

A graduate in June 2003 with a bachelor's degree in film and digital media, Platt describes UCSC as a place where film students receive valuable exposure to a widely diverse range of film styles and genres. He says this approach provides a remarkable amount of creative freedom, at the same time offering students a thorough and rigorous critical background in theory and production.

"The professors basically lay out this palette of what's out there,

"If there's one word that summarizes UCSC's Film and Digital Media Department, it's 'competitive.' But it's a great atmosphere for students who are really driven to make films." —Aaron Platt

but they never push you in any one direction," observes Platt. "They just open the doors for you."

"If there's one word that summarizes the Film and Digital Media Department on campus, it's 'competitive,'" he adds. "But it's a great atmosphere for students who are really driven to make films. It makes you work harder, and you know you have to keep yourself organized or you're not going to make it."

Platt's *The Cold Ones* is a partly autobiographical look at two pre-teen siblings who are confronted with abandonment by their mother

and the death of their father. A powerful and surreal tale of family dysfunction, the film was included in the experimental Sundance category “Shorts on the Frontier.”

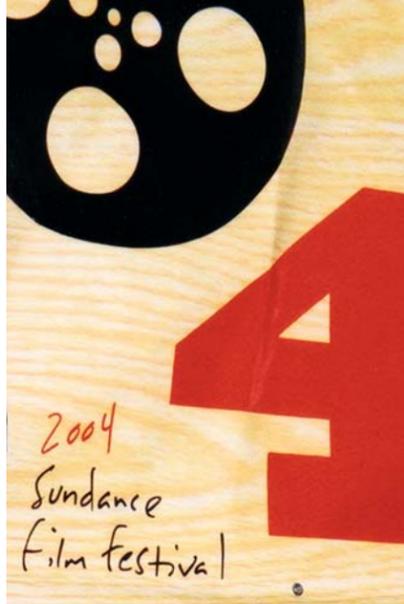
Since his film screened at Sundance, Platt was awarded \$500 and named “most promising filmmaker” at the Ann Arbor Film Festival in Michigan. He has also been offered various projects—including a music video he recently shot in Los Angeles, and the opportunity to film an interactive installation for a summer art fair in Switzerland.

“Sundance definitely opens doors,” says Platt. “Now, instead of worrying about sending your film out to 50 different festivals, 50 film festivals

are coming to you saying they want to see your movie.”

The route to Sundance acceptance, however, was anything but easy for Platt. After having his previous film rejected by programmers in 2001, he worked as a volunteer for the next two Sundance Festivals, meeting countless other filmmakers and absorbing the scene as he continued to make films and study at UCSC. He also learned how to cope with the time-consuming maze of logistics that goes hand-in-hand with making an independent film.

“You often spend a whole



day just to get a few seconds of footage,” Platt notes. “For example, in *The Cold Ones*, you only see a train for about 10 seconds, but I spent hours chasing trains and finding schedules just to film and record them. When you’re making an indie film with a

two-man crew, you can’t just call up and arrange to have a train come.”

Although Platt now has a day job to support his film endeavors, he continues to devote endless hours to making movies. The competition is brutal, and achieving success in the film business is never guaranteed, but receiving that call from Sundance definitely improves the odds.

“When you get a call like that,” Platt says, “it’s telling you that all you’ve gone through—the dollars invested, the phone conversations, the scheduling, all the headaches that go with making a film—it shows you it’s all worth it, that it’s paying off.”

‘Thumbs up’ to another UCSC—Sundance connection

Mean Creek, a new feature film written and directed by UCSC alumnus Jacob Estes, opened nationwide as the *Review* was going to press in August.

An official selection of both the Sundance and Cannes Film Festivals, the movie tells a chilling story about a group of teenagers who set off on a boat trip down a river that soon evolves into a harrowing journey into the wilderness. An allegorical tale, the film probes the moral dilemmas teens face in the anxiety-ridden 21st century.

Estes began writing scripts and making films at UC Santa Cruz more than a decade ago, graduating in 1994 with a bachelor’s degree in media studies.



Film critic Roger Ebert, with alumnus Jacob Estes

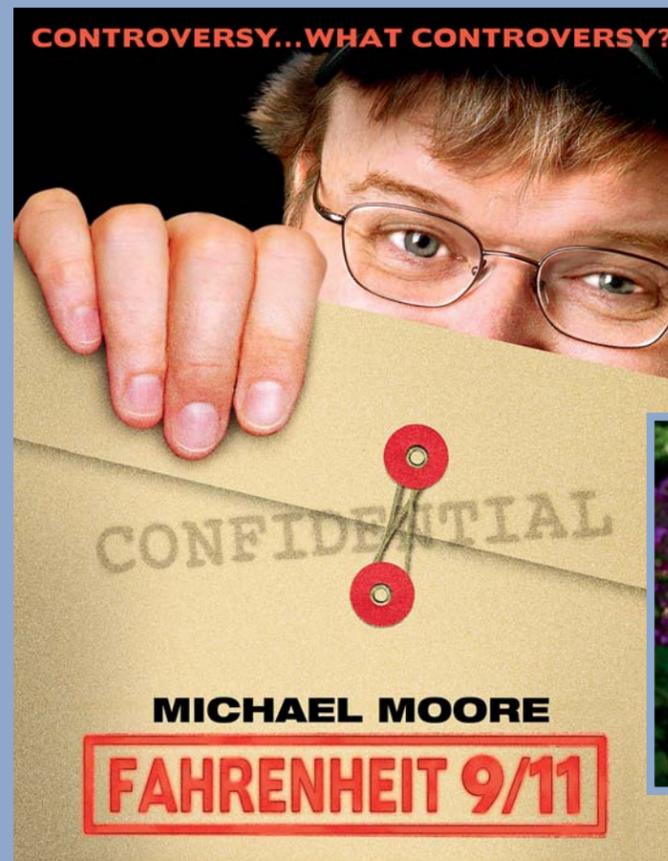
He went on to earn his master’s degree in film directing at the American Film Institute (AFI) where he wrote and

directed several short films.

While at AFI, Estes’s script for *Mean Creek* won the Nicholl Fellowship in Screenwriting, an international search for new talent administered by the Academy of Motion Picture Arts and Sciences. He also met the film’s eventual producers there, who turned out to be the chair of the directing program at the AFI’s Center for Advanced Film and Television Studies and two of Estes’s fellow classmates.

After receiving critical acclaim at the Sundance Festival, Estes’s debut feature was picked up for distribution in North America, the U.K., and Australia by Paramount Classics.

—SCOTT RAPPAPORT



Fahrenheit 9/11 intern Dan Hancox

How a UCSC film student helped Michael Moore make film history

EVERY WEEKDAY MORNING during the winter of 2004, Dan Hancox took the subway from an apartment in Brooklyn, past the Statue of Liberty, to a small office in the heart of Manhattan. A 21-year-old film student at UC Santa Cruz, Hancox was commuting to his temporary job as an intern for Michael Moore’s latest film, *Fahrenheit 9/11*.

One of only five interns in Moore’s New York production office, Hancox spent his time conducting research for the film, an unprecedented documentary of post-9/11 America and the Bush administration that broke box office records when it opened nationwide in June. The film had previously

won the top honor at the 2004 Cannes Film Festival for Moore, who received the 2002 Academy Award for best documentary with *Bowling for Columbine*.

Housed in close quarters with the film’s editors, Hancox had a front-row seat to the making of the first blockbuster election-year documentary in the 90-year history of the American feature film. Surrounded by storyboards of the entire film, he verified background information, assisted editors with various technical projects, was privy to stunning, previously unseen footage from Afghanistan and Iraq, and generally soaked up the mechanics

of putting the film together.

One of Hancox’s responsibilities was to screen tapes of Fox, CNN, and other major TV networks, searching for news footage that Moore could use in the film.

“I looked at quite a bit of tape,” Hancox recalls. “They would have different assignments for me each day. One morning they would say: ‘we’re

had recently met one of the producers of Moore’s *Bowling for Columbine*. Ortiz advises Hancox in the Page and Eloise Smith Scholastic Society, a campus organization created to provide financial and mentoring support for UCSC students who are orphans, foster youths, or wards of the court. Hancox was born in Korea and adopted by a family in Michigan, before moving to Santa Cruz to attend UCSC.

An aspiring filmmaker now in his senior year at UCSC, Hancox says that the internship has opened his eyes to the documentary art form—a facet of filmmaking that he had received little exposure to in the past.

“The main reason I took this internship

was that I had no work experience with documentary or independent films,” says Hancox. “I was under the impression that those types of films were from a different world—that they were less interesting and rarely watched. But I think Michael Moore has done a remarkable job of bringing the political independent film into the mainstream. He’s demonstrated that you can make a very entertaining movie that still makes you think about important political issues.”

Hancox was pleased to see that some of the clips he had personally tracked down were woven into Moore’s final footage. He also had the opportunity to meet and talk with the director himself during his first week on the job. “I had this image of Michael Moore before I got there—that he would be super-slick and running more of a Hollywood-type production. But instead, I found him to be very nice, relaxed, and down-to-earth.”

Hancox’s internship was arranged by community studies professor Paul Ortiz, who

looking for clips about U.S. troops in Iraq not getting enough funds to supply everyone with Kevlar flak jackets.’ The next morning they would ask me to look for a specific story about a government warning to watch out for model airplanes because they could be used in terrorist attacks.”

Hancox added that working on Moore’s film has also inspired him to reconsider the content of his own films. “The internship has motivated me to become a more responsible filmmaker—not just someone who makes films only for their entertainment value. It was an extraordinary experience.”

—SCOTT RAPPAPORT

Bringing organic produce into the mainstream

The next time you tear open a plastic bag and pour a fresh green salad in a bowl, give a nod to Drew Goodman, the man who made salad mix a household staple.

Goodman and his wife, Myra, didn't know they would contribute to a culinary revolution when they cofounded Earthbound Farm in 1984, planning to grow organic raspberries and greens for local restaurants.

Today, Earthbound Farm's signature organic salad mix is available in more than 70 percent of supermarkets in the United States. With annual sales expected to top \$300 million in 2004, Earthbound Farm is the largest organic produce brand in North America.

The Goodmans have come a long way from their roots on a two-acre parcel in Carmel Valley.

"We were going to spend a year living on a farm and then get on with our lives and careers," recalls Drew, who earned a bachelor's degree in environmental studies from UC Santa Cruz in 1983.

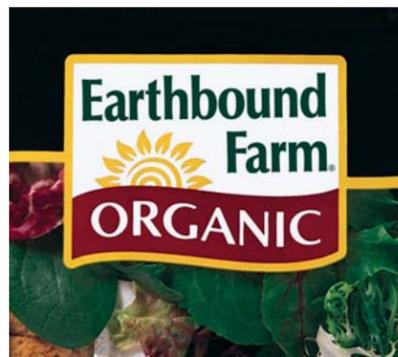
But customers quickly developed a taste for the Goodmans' mixed baby greens, and they loved the convenience of buying pre-washed salads in resealable

bags, an innovation the couple came up with when a sale fell through and they were faced with a field of lettuce that was going to go bad.

Demand for the salad mix outpaced supply, prompting the Goodmans to team up with large-scale, Salinas Valley-based farmers whose winter operations in Arizona and Mexico enabled Earthbound Farm to satisfy consumer demand. Today, Earthbound Farm produce is grown on more than 15,000 certified organic acres. Higher volumes dictated the development of new ways to harvest, clean, bag, and ship delicate baby greens, putting Earthbound Farm at the forefront of organic farming, processing, and packaging.

"It wasn't until a few years ago that we realized it wasn't going to slow down. It's like we've been sprinting nonstop to keep up with it," says Drew. "People say 'That's a good problem to have,' and I say, 'Easy for you to say!' It's not like we planned to have a business on this scale. It just evolved, and we grew along with it."

Drew and Myra Goodman grew up a block apart in Manhattan and attended the same high school, but they reconnected at a Grateful Dead concert during their college years in California. Myra was at UC Berkeley, and Drew was enrolled at UCSC, where he appreciated the freedom to try new things. "You can't be afraid to fail, and that was the nice thing about UCSC," recalls Drew. "You learn by experimenting and succeeding and failing. Education is about being taught how to think,



rather than how to do something." It's a lesson the couple hope to convey to their son and daughter.

The Goodmans share a strong commitment to growing organically, avoiding chemical pesticides and using compost to enrich the soil. Drew, who worked in the field every day until the mid-1990s, now devotes most of his energy to

running the company's business affairs, splitting time between the company's headquarters in San Juan Bautista and offices in Carmel. But he still enjoys spending time on a tractor at home, in the two-acre backyard garden where they first began growing produce. The success of Earthbound Farm has opened the door to organic food at big-name retailers like Costco, Wal-Mart, Safeway, and Albertsons.

"Costco was an interesting progression, actually," says Drew. The big-box retailer initially shied away from the organic label, afraid it would "send the wrong message." But times have changed. Now customers embrace organic products, which Earthbound Farm is able to offer at a price similar to conventionally grown greens. "Now, if they substitute conventional, they get a lot of comments from customers and requests for organic," says Drew.

Earthbound Farm now markets more than 100 organic products, from salads to a cornucopia of fruits and vegetables, including carrots, potatoes, apples, tomatoes, and grapes. The Goodmans hope to build on their relationships with farmers and



Drew and Myra Goodman at Earthbound Farm's Carmel Valley operation

major retailers to expand their distribution and make organic food as available as conventional fruits and vegetables, at an affordable price. If a high-quality organic option is available and the price is competitive, many shoppers will choose organic, says Drew.

"We really feel like people should have the option available to them, regardless of location and income level," says Drew. "And that means getting organic into mainstream stores where people shop. Most people are not going to go to another store

to buy organic produce."

Growing food organically costs more, but the Goodmans are able to offer a competitively priced product by pursuing economies of scale in farming, harvesting, transportation, and distribution. They're constantly expanding their farmland, facilities, and partnerships with farmers, enabling them to broaden the range of products they offer.

"We've learned enough about farming to know we're not set up to be the best carrot grower or the best citrus grow-

er," says Drew. "But we distribute products under our brand to all these retailers who do business with us because we have the volume, variety, and quality they need. What's important for the retail industry is being able to rely on their suppliers year-round."

In addition to giving people more choices when they buy their food, the Goodmans take pride in seeing conventional farmers adopt organic techniques simply because they work so well. "Our success shows that organic farming is

Drew Goodman

Cofounder,
Earthbound Farm

*B.A., Environmental
Studies, 1983*

viable on a large scale," says Drew. "We've proven that it's possible to produce top-quality produce without relying on chemical pesticides. We're helping to protect the planet for future generations. That's a very satisfying accomplishment."

—JENNIFER McNULTY

On the verge of a medical breakthrough

An innovative UC Santa Cruz research project brings new hope to the treatment of diabetes

By Tim Stephens



JIM MACKENZIE

DIABETES is a chronic disease that affects the body's ability to produce or respond to insulin, the hormone that allows glucose ("blood sugar") to enter the body's cells and be stored or used for energy. Many diabetics require insulin injections, and all must carefully monitor and manage their blood glucose levels. For millions of diabetics this means drawing blood several times a day, usually from finger pricks.

While insulin pumps offer a less painful alternative to daily insulin injections, drawing blood remains the only reliable means of monitoring glucose levels. Unfortunately, glucose levels can fluctuate dramatically throughout the day, making it difficult to know when to draw blood for testing. In addition, many diabetics don't test their blood glucose levels as often as recommended because of the pain and inconvenience of the procedure.

But research that originated in Bakthan Singaram's laboratory at UC Santa Cruz offers a promising route toward a long-sought goal—a continuous glucose monitor to replace the finger pricks that are a part of daily life for so many diabetics. In addition to helping diabetics manage their blood glucose levels, the glucose sensor could also be used to monitor glucose levels in hospitalized patients.

Dozens of other research groups, many of them large and well funded, have been working for more than a decade on various approaches to the glucose monitor challenge. In fact, Singaram, a professor of chemistry and biochemistry, says that if he had known more about the competition, he wouldn't have even tried to tackle the problem.

But progress made by these other

groups has been limited, and Singaram's lab, six years into its work, now finds itself at the forefront of this exciting area of medical research.

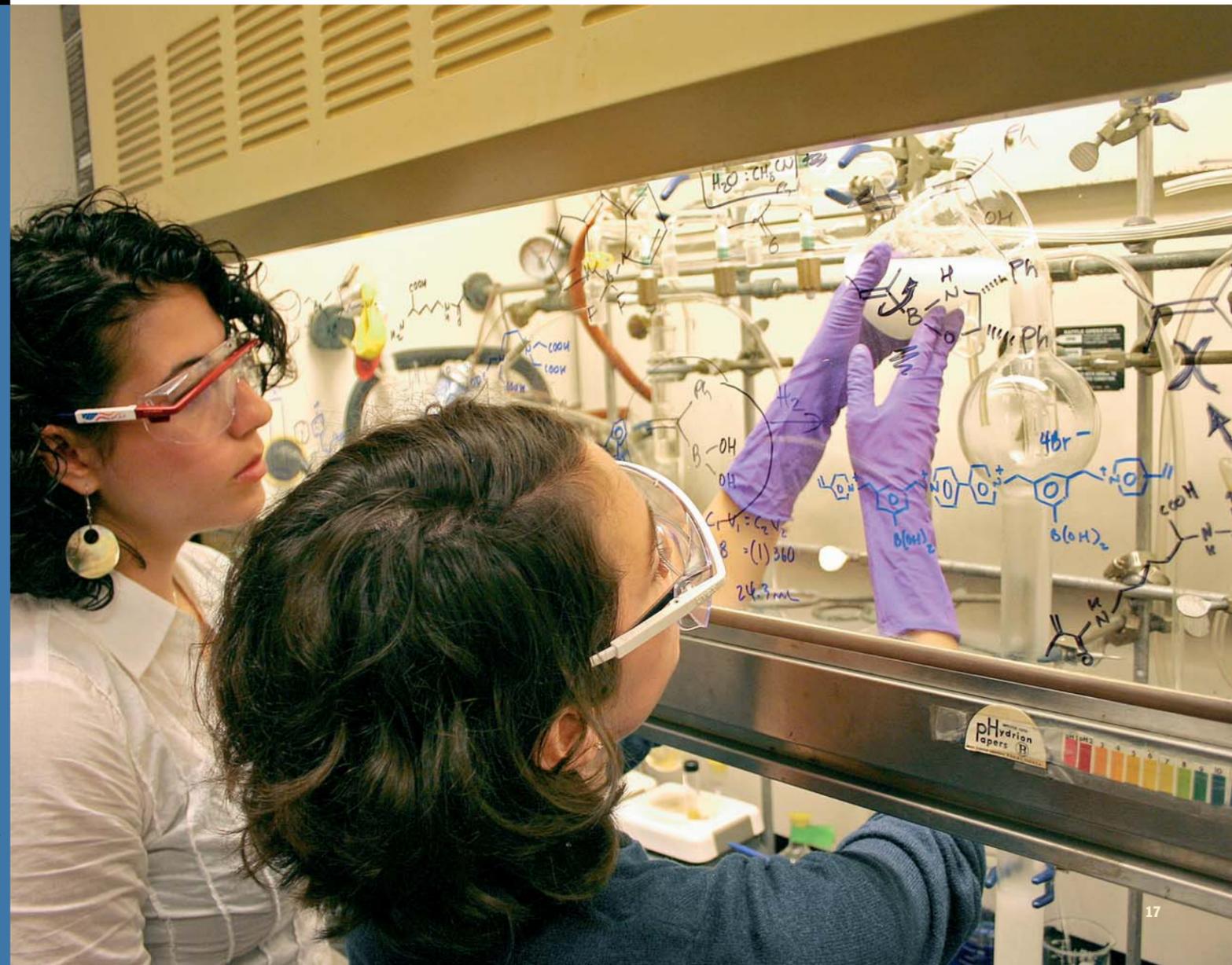
Singaram's sensor produces an optical signal—a fluorescent green glow—that changes intensity in a chemical response to fluctuations in the concentration of glucose. The challenge now is to incorporate the sensor into a device that diabetics can have implanted under their skin. The device would include a transmitter to relay glucose readings to an external monitor.

"We have tested the sensor under conditions that are as close as possible to the physiological conditions under which a continuous glucose monitor would have to operate," Singaram says. "There may be another five or six years of development ahead before we have a viable device for continuous glucose monitoring, but we are very excited about the prospects for this technology."

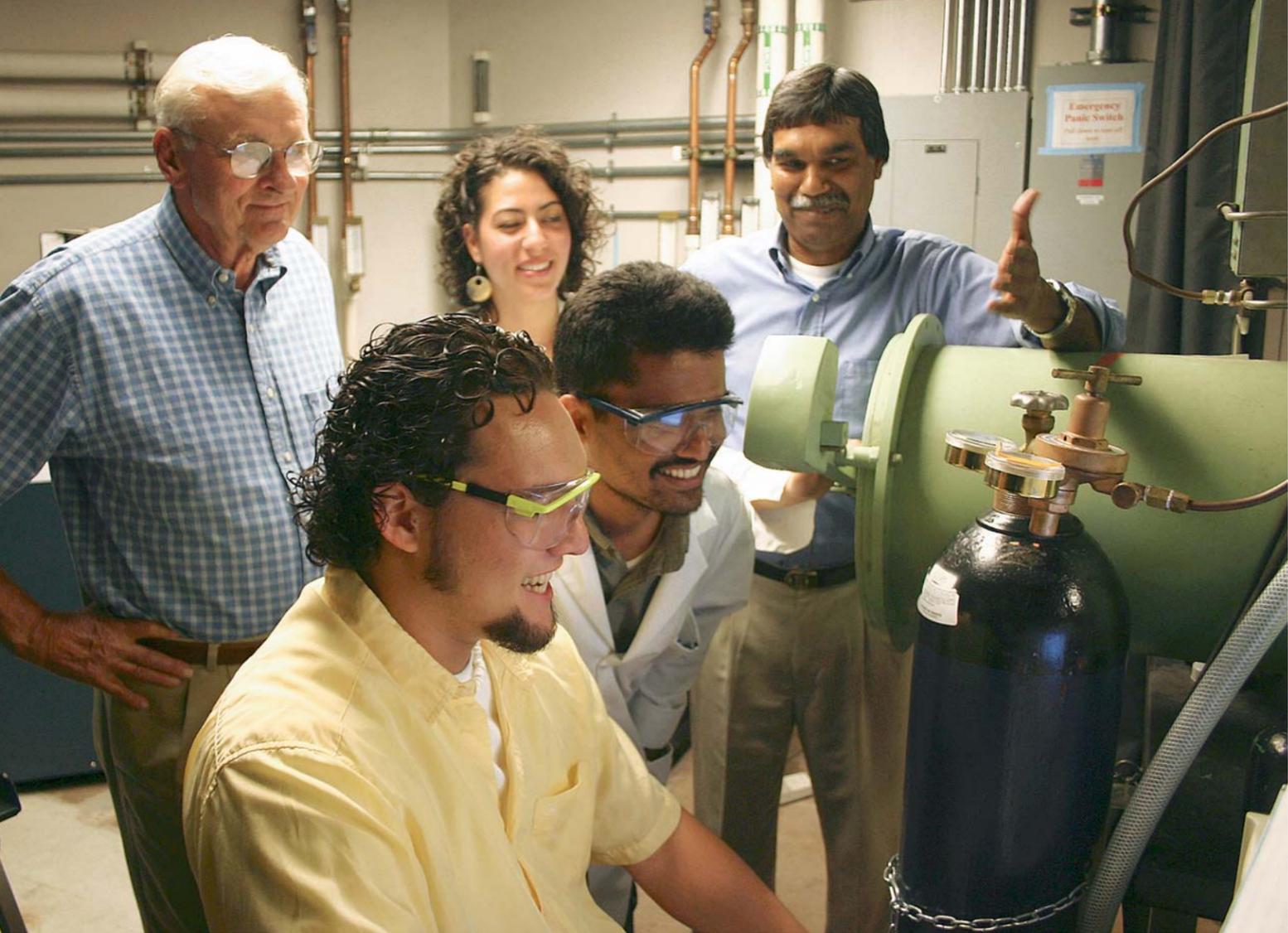
Four UCSC graduate students have now earned Ph.D. degrees while working with Singaram on the glucose sensor project.

Singaram seems amazed by the

Left: Some samples of the highly fluorescent dyes used by the Singaram group for glucose-sensor research. **Below:** Graduate student Soya Gamsey (right) and undergraduate Nichol Baxter purify a dye using column chromatography.



JIM MACKENZIE



Watching graduate student Zach Sharrett and postdoctoral researcher Praveen Thoniyot (l-r, foreground) carry out glucose-sensing experiments on a spectrofluorimeter are (back row, l-r) Rich Wessling, Nichol Baxter, and Bakthan Singaram

serendipitous combination of people, talents, and relationships that came together to advance his lab's sensor project. The initial impetus for the group's work came from Paul Levin, founder of Palco Labs, a Santa Cruz-based company that makes products for diabetics. Levin, a longtime supporter of the campus whose wife, Anne, is a trustee of the UCSC Foundation, mentioned his interest in developing a glucose sensor to the dean of physical and biological sciences, David Kliger. A professor of chemistry and biochemistry, Kliger knew Singaram had the expertise needed to tackle such a project.

"When Dave Kliger stopped by my office to talk about glucose sensors, I immediately thought of a paper I had just read that morning that suggested a way to

approach the problem," Singaram says.

After further discussions, Palco Labs began funding Singaram's lab to work on the sensor project. "It was the easiest funding I ever got. We didn't even have to submit a written proposal," he says.

Singaram's work on the glucose sensor has benefited greatly from the contributions of visiting scientist Rich Wessling, a renowned polymer chemist who retired from Dow Chemical Company in the 1990s. After moving to Santa Cruz County, Wessling was itching to get back into the laboratory. He knew Singaram through mutual friends at Dow and has been working in his lab since 1996.

The glucose sensor project offered a perfect opportunity to combine Wessling's expertise in polymer chemistry with

Singaram's knowledge of organic chemistry. While Singaram developed the combination of chemicals needed to produce an optical signal in response to glucose, Wessling figured out a way to immobilize the chemical complex in a "thin-film hydrogel," a biocompatible polymer similar to that used in soft contact lenses.

The result is the first system of its kind, providing optical sensing of glucose concentrations with durable and biocompatible materials. It works well under physiological conditions, the response time is very fast, and the compounds are stable and don't degrade over time.

"This could be the biggest thing I've ever done," Wessling says.

Palco Labs funded the first two years of research on the sensor. That initial sup-

port was crucial, says Wessling, carrying the project through the early stages when the researchers were struggling to figure out how to make the system work.

After that, the UCSC team got another lucky break. A few doors down the hallway from Singaram's office in the Thimann Laboratories building is the office of Todd Wipke, a professor of chemistry and biochemistry who has also served as the campus liaison to the UC Office of Technology Transfer. Wipke saw the potential of Singaram's research and wanted to keep the project going. He also knew about UC programs that support collaborative projects with industry, and he had firsthand experience in starting a company to develop products based on his own research.

So Wipke founded a new company, GluMetrics LLC, using his contacts to put together a group of investors and a management team. GluMetrics is now developing a line of products based on the optical glucose sensor, and Singaram's research on the sensor is being funded by UC's Discovery Grant program in collaboration with GluMetrics.

"It is a great example of successful technology transfer from the university to a company that can commercialize this," Wipke says.

The first marketable product likely to come out of this venture is a catheter device, called GluCath, for monitoring blood glucose levels in hospitalized patients.

Glucose levels must be regularly monitored in patients in intensive care units and others being fed intravenously with glucose drips. Research has shown that tight control of blood glucose levels can significantly reduce mortality of ICU patients, but the only way to do this currently is by taking frequent blood samples for analysis, which is painful for the patient and expensive for the hospital.

"The GluCath catheter is inserted into a blood vessel and gives a continuous reading, and it can sound an alarm if the glucose level goes too high or too low. GluCath should reduce pain, reduce

"We have tested the sensor under conditions that are as close as possible to the physiological conditions under which a continuous glucose monitor would have to operate."

—Bakthan Singaram

"That's not to say that something won't pop up tomorrow from another company," Wipke says. "Millions of dollars have been poured into this problem. A lot of people are working hard on it, and the potential benefits are enormous, so it's highly competitive. But we're definitely in the running."

One of the biggest challenges for an implantable device is the body's tendency to encapsulate any foreign substance. Encapsulation could affect the ability of glucose to reach the sensor. If this problem can be overcome, however, an implantable glucose monitor would provide the crucial "missing link" in the development of an artificial pancreas.

In concept, at least, an artificial pancreas is simply a continuous glucose monitor connected to an insulin pump that is programmed to deliver appropriate doses of insulin to maintain healthy blood glucose levels.

"That is the holy grail that many people have been pursuing," Singaram says. "It won't cure diabetes, but it would make management of the disease a lot easier."

costs, and reduce deaths," Wipke says.

An implantable glucose monitor for diabetics is the next product in the pipeline. While other companies have used different technologies to develop glucose monitors, there is currently nothing on the market that is effective enough to replace the standard blood tests.

The Glucose Research Team: (l-r) Bakthan Singaram, Lacie Hirayama, Rich Wessling, Soya Gamsey, Dave Cordes, Nichol Baxter, Zach Sharrett, Luba Pasumansky, Chris Watts, Aaron Miller, and Praveen Thoniyot.



Child's Play

History grad Mark Teague has found his niche in the rarefied world of children's book writing and illustration



MARK TEAGUE, best-selling children's author and illustrator of more than 40 books, including the now-classic *How Do Dinosaurs Say Good Night?*, is a doodler who credits his success to "dumb luck."

But his fans know better.

Take the premise of his recent—and favorite—book, *Dear Mrs. LaRue: Letters from Obedience School*, about a wire-haired terrier named Ike whose pranks prompt his owner to temporarily banish him to a "canine academy."

In daily correspondence, Ike pleads with his owner for release: "You say I should be patient and accept that I'll be here through the term. Are you aware that the term lasts TWO MONTHS? Do you know how long that is in dog years?"

Ike's expressive language is matched by Teague's irresistible illustrations, featuring lush, full-color renderings of daily life at what looks more like a doggie spa than a kennel, where white-jacketed waiters serve gourmet meals to pups seated at tables adorned with fresh flowers and white linens. These images are juxtaposed with grim, black-and-white depictions of how Ike is experiencing his confinement. (On the book jacket, Ike warns readers not to be fooled by the cheery color pictures and to pay attention instead to the noir-esque portrayals of his suffering.)

"I was telling two different stories, and I had to make sure any kid could see a strong visual difference between what's in Ike's imagination and what's

really going on," said Teague. The technique worked, and the illustrations resonate with readers of all ages.

Teague, 41, finds inspiration for his books in daily life. *Dear Mrs. LaRue* started out as a book of mournful letters written from summer camp by a homesick child.

"But the story really wasn't going anywhere until I started writing it from the dog's perspective," said Teague, who incorporated the antics of two beloved real-life dogs in the character of Ike. A sequel, *Detective LaRue*, has just been published.

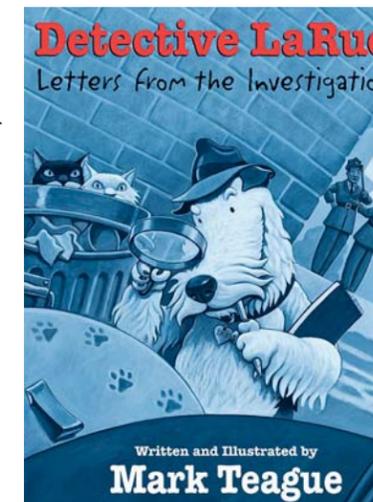
Teague has enjoyed steady success in the field of children's publishing since moving to New York shortly after graduating from UC Santa Cruz with a degree in history in 1985.

"I took courses with professors I liked, people like John Dizikes, Peter Kenez, and Gary Miles, more than by subject," said Teague, who grew up in San Diego. "I don't regret it. I read history all the time. Having that time to learn interesting things is really valuable."

Teague wrote and illustrated his first children's book, *The Trouble with the Johnsons*, while designing window displays for Barnes & Noble in New York City. "One of the editors who worked upstairs, where they had to wear suits, used to come downstairs to the art department and hang out, because we got to play loud music and have a good time," recalled Teague. "He saw what I was working on

and liked the book. That's how I got my foot in the door. This is all dumb luck."

That first book, published in 1989 about a homesick boy who returns home to find that (friendly) dinosaurs have moved in, earned Teague a spot in *Publishers Weekly*, where he was named one of 11 prominent new authors. It was the first of many hits, including *Pigsty*, about a kid whose room is so messy that pigs actually move in; *Baby Tamer*, inspired by the birth of his first daughter, Lily;



Teague's latest book, the sequel to *Dear Mrs. LaRue: Letters from Obedience School*

and *The Secret Shortcut*, about two boys who are always late for school. In addition to Teague's solo ventures, his art adorns the books of many other acclaimed children's authors, including Audrey Wood, Cynthia Rylant, and Jane Yolen.

The books with Yolen, *How Do Dinosaurs Say Good Night?* and *How Do Dinosaurs Get Well Soon?*, published in 2000 and 2002 by Scholastic Press, both became fixtures on the *New York Times* Best-seller List and

brought Teague even greater recognition. (It was Teague's idea to feature dinosaur children with human parents and to showcase different kinds of dinosaurs in these delightful tales of tantrums, bedtime stalling, sniffles, and fevers.)

"Overall, illustration is easier than writing," said Teague, who uses acrylic gouache to create his fantasy worlds. "It's kind of meditative. With writing, I really have to concentrate. But it's very rewarding to me when a story comes together well."

Teague's studio is a converted room in the 19th-century Victorian home overlooking the Hudson River that he shares with his family in Coxsackie, New York. His daughters, Lily, 9, and Ava, 4, sometimes join him, drawing at his side while he works.

He gets a lot of fan mail, including a request from a 10-year-old Cleveland boy to illustrate a story. "He wrote to me two years ago and asked me to illustrate it," said Teague. "He's got his own publication. I subscribe, actually. But he's been talking with other writers since then. I don't know if he's going to be a writer, but he'll probably rule the world."

Teague has helped promote childhood literacy with the U.S. Department of Education's Read*Write*Now program, and he occasionally visits schools to read books to children or attends a book signing. But for the most part, this hero of children's literature leads a quiet life. "I guess this is what you do with a history degree," he quipped.

—JENNIFER McNULTY

Studying the Edges

ARCS scholar's research takes on a fundamental issue in ecology



JIM MACKENZIE

ARCS scholar Cynthia Hays with the object of her research: *Silvetia compressa*.

WHY DOESN'T THAT WILDFLOWER GROW a little further north or a bit higher up on the mountain? How far will those "killer bees" spread? What will happen at the southern edges of northern forests if the climate keeps getting warmer? Questions like these have long challenged ecologists trying to understand the factors that determine the natural geographic ranges of organisms.

Cynthia Hays, a graduate student in ecology and evolutionary biology at UC Santa Cruz, is tackling this problem with a detailed investigation of a type of marine algae common along the California coast. *Silvetia compressa*, commonly known as rockweed, grows attached to rocks in the middle of the intertidal zone, where its tough olive-green fronds are alternately submerged beneath the waves and exposed to the air.

Hays is interested in the upper and lower limits of rockweed's distribution within the intertidal zone. She has found, for example, that rockweed plants growing near the edges of its range show genetic adaptations to local conditions, such as prolonged exposure at the upper edge or prolonged submersion at the lower edge. This raises a fundamental question for Hays: What keeps the algae from adapting to more extreme conditions just beyond the edges? Her preliminary findings suggest that one important factor is the flow of "wimpy" genes coming from the masses of algae living comfortably in the middle.

"There has been a lot of theoretical work using mathematical models to show that gene flow can inhibit local adaptation under certain conditions. But no one knows how significant this phenomenon is in natural systems," Hays says.

Her project involves extensive fieldwork as well as long hours in the laboratory. Hays is studying the genetic makeup of rockweed populations across the full geographic range of the species and has traveled up and down the coast, from Baja to northern California, collecting samples for molecular analysis back in the laboratory. She has also conducted a variety of field experiments at sites in different habitats along the coast.

"Her dissertation research is a huge body of work," says Ingrid Parker, associate professor of ecology and evolutionary biology.

Parker, a terrestrial plant ecologist, is co-advising Hays along with marine ecologist Peter Raimondi. She says Hays is conducting cutting-edge research on one of the classic, fundamental questions in ecology—and building a national reputation for herself in the process. Now in her final year of graduate work, Hays has earned the recognition and support of the ARCS Foundation, an unusual organization devoted to rewarding exceptional students like her.

ARCS—Achievement Rewards for College Scientists—was established by a small group of women in Los Angeles in 1958 to provide scholarships for students in science, engineering, and medicine. The foundation is still run by women who volunteer their time for fundraising, so that all of the money they raise goes directly to scholarships. Since 1976, the foundation's Northern California Chapter has given over \$1 million in scholarships to UCSC students. Hays is one of seven UCSC graduate students who each won \$10,000 scholarships from the ARCS Foundation this year alone.

"The ARCS Foundation is one of the very rare sources of unrestricted funds for graduate students, and it has provided incredible support over the years for the training of scientists and engineers," says David Kliger, dean of physical and biological sciences.

This kind of support is especially critical now, as graduate programs throughout California feel the repercussions of the state's budget problems "Our mission is probably more important than it has ever been since our founding," says Linda Millard, then-president of the Northern California Chapter of the ARCS Foundation.

For Hays, the ARCS scholarship means she will have more time for her research during this critical final year of graduate school.

"It makes a big difference," Hays says. "This will free me up to focus more on my research, so it's really wonderful to have the extra support."

—TIM STEPHENS



Recording data at Pigeon Point

JIM MACKENZIE

Supporting grad students

Campaign will fund vital fellowships

OFTEN STRUGGLING to meet the competing demands of course work, teaching, and research, graduate students are the unheralded workhorses of research universities. While UCSC has a growing number of master's and Ph.D. programs and the campus has made it a priority to enroll more graduate students, supporting those students is a serious challenge at a time of lean state budgets.

Compounding the problem is another reality: The vital role of graduate students in helping the university fulfill its mission in the state is not widely appreciated, says Bruce Schumm, professor of physics and chair of the Graduate Council of the UCSC Academic Senate.

These postbaccalaureate students represent the next generation of highly trained professionals in their fields, and in the course of their graduate training they conduct much of the day-to-day research activities on campus, provide crucial support to the faculty as teaching assistants, and contribute to the intellectual vitality of the campus community. Through their contributions to both teaching and research, they are an enormously beneficial resource for the state of California.

"Graduate students provide intellectual capital for the state and support the development of technologies and policies that benefit the state by improving the economic climate and the way we live our lives," Schumm says. "If we cannot remain competitive in our ability to recruit graduate students, the implications go beyond the university. It's a potential threat to the economic and cultural vitality of California."

Increases in graduate student fees and tuition are effectively reducing the pool of funds available to support graduate students and cutting into the ability of departments to make competitive offers to prospective students. The campus is responding by making student support a major focus of fundraising efforts. A two-year campaign will be announced formally on November 6 at the Second Annual Scholarships Benefit Dinner (see page 3), which last year raised more than \$500,000 to benefit students. The new campaign's broad goals will include support for both undergraduate scholarships and graduate fellowships, says Ronald P. Suduiko, vice chancellor for University Relations at UCSC.

In most cases, fees and tuition for students in doctoral programs are paid either internally, by their departments, or by external grants and fellowships. This makes it even more difficult for UCSC to enroll out-of-state and foreign students, who face the biggest increases in tuition and fees. But according to Schumm, it is shortsighted to make it more difficult for these students to attend graduate school in California.

"We need to recruit nationally and internationally to bring the best and the brightest to California," he says. "It is important for people to understand what an asset these students are for the university and for the state." —TIM STEPHENS

Alumni Association Councilors, 2004–05

Cowell

ADILAH BARNES '72, *Vice President for External Affairs*
GREGORY CANILLAS '90
KAREN RHODES '77
ALLISON TOM '93

Stevenson

DAVID BRICK '69
AMY EVERITT '92
SANDOR NAGYSZALANCZY '77,
Vice President for Administration
JOAN FITTING SCOTT '69,
Vice President for Internal Affairs

Crown

JERRY RUIZ '77
RICK SIMPSON '73
STACEY VREEKEN '83

Merrill

KEN DOCTOR '71, *President*
PATRICK R. A. FORD '93
DOMINADOR SIABABA '75, *Executive Vice President*

Porter

MARY DOYLE '74
JOHN GUTIERREZ '73
ROB SAWYER '72, *Vice President for Finance*

Kresge

PAUL D. SEEMAN '76
SHARIF TRAYLOR '85

Oakes

FILOMENA TRINDADE '85
PATRICK WALKER '84

College Eight

SUSAN BRUTSCHY '80
AARON COLE '91

Ex Officio

MARTIN M. CHEMERS, *Acting Chancellor*
CAROLYN CHRISTOPHERSON,
Executive Director
ALISON GALLOWAY, *Chair, Academic Senate*
JESSICA PIERCE, *Chair, Student Union Assembly*
KAI POMMERENKE, *President, Graduate Student Association*

College support fund launched by graduates

A NEW ALUMNI-LED INITIATIVE, the Alumni Colleges Fund, seeks to enhance one of UCSC's most distinctive features: its colleges.

"Whether we were discussing classes or the swirling political issues of the time, the friendships forged at Merrill are some of the strongest that we have today, 35 years later," said Ken Doctor (Merrill '71), president of the UCSC Alumni Association. "Proximity helped students find one another and make informal connections with faculty. Socially and intellectually, the colleges added something unique that is not available to undergraduates in most university settings throughout the U.S."

With leadership from Doctor and UCSC Foundation president Ken Feingold (Cowell '71), this spring the Alumni Association established the Alumni Colleges Fund to provide annual and endowment funds to college provosts. The monies will support visiting faculty, artists, and other distinguished speakers; special events, lectures, and College Night programs; service learning and community outreach projects;



Addressing more than 300 alumni at the 2004 Banana Slug Spring Fair All-Alumni Luncheon, UCSC Foundation president Ken Feingold (at podium) and Alumni Association president Ken Doctor, both '71 grads, announced the launch of the Alumni Colleges Fund. At this past year's five- through 35-year reunions, generous alumni donated \$80,000 to their colleges.

and other initiatives. "These resources will make a big difference," said Doctor. "Even \$500 here and there can enable a project to go forward that would otherwise be impossible."

Feingold still remembers a College Night when the renowned primatologist Jane Goodall spoke at Stevenson College. More than 30 years later, activist Jesse Jackson's visit to College Nine made a lasting impression on alumna Nidhi Chanani (College Nine '02).

Though separated by three decades, these two grads' memories suggest the lasting impact of college-based programs.

Today, only four of every ten dollars needed for UC's operation come from public funds, down from almost seven 40 years ago. The state has never allocated increased funds to the Santa Cruz

campus for its unique college structure. Over the past four years the campus has experienced a reduction of approximately 17 percent in state funding. The cuts have affected every area on campus; the colleges are no exception.

All alumni are invited to make a gift to the Alumni Colleges Fund. Graduates from the classes of '00, '95, '90, '85, '80, '75, and '70 are welcome to make a gift honoring their reunions, which will take place April 15–17. Donations to the fund will be directed to the college of the donor's choice. Alumni may also "purchase" a tile for each donation of \$1,000. Each six-inch square tile, engraved with the donor's name, college, and year, will be installed and permanently displayed at the donor's college.

"Administrators have reaffirmed the value of colleges, even in the context of budget cuts," Doctor said. "As alumni, we want to help that renewal and support the outstanding college-based educational experience that connects the campus's founding with the 21st century."



At Banana Slug Spring Fair 2004, Alumni Association president Ken Doctor (left) presented Acting Chancellor Martin M. Chemers with a ceremonial check showing the total amount of reunion giving from alumni.

Calling all grads: Celebrate UCSC's 40th at your alumni reunion

RECONNECT WITH TREASURED friends and faculty at Banana Slug Spring Fair campus reunion weekend, April 15–17. The 2004 event broke all previous records for alumni involvement (2,420 attendees), faculty attendance (over 100), and number of reunions, receptions, lectures, and other events (42). Generous alumni celebrating reunions gave \$245,000 to the campus, including a \$45,000 challenge donation from three alumni that matched fellow grads' contributions to the colleges dollar for dollar.

At BSSF 2005, all graduates and friends can celebrate UCSC's 40th anniversary at the All-Alumni Reunion Luncheon. The classes of '00, '95, '90, '85, '80, '75, and '70 will receive special recognition as they celebrate their five- through 35-year reunions.

Reunion invitations will be sent only via e-mail. Make sure the Alumni Association has your current e-mail address. You can



Walking to the Banana Slug Spring Fair 2004 Oakes College reception is founding Oakes maintenance supervisor Lowell Burton (left), recently retired after 35 years at the college, with J. Herman Blake, founding Oakes provost, who taught at UCSC from 1966 to 1984.

update it online at alumni.ucsc.edu, send e-mail to alumni@ucsc.edu, or call the Alumni Association toll free at (800) 933-SLUG.

UCSC benefits—and so do you—when you join the Alumni Association

SUPPORT YOUR ALMA MATER while taking advantage of great benefits for yourself by joining the UCSC Alumni Association.

Through the association, graduates give back to the campus. Last year, the association gave out \$73,000 in scholarships, generally based on financial need (see photo, right). Thirty percent of each member's annual dues support special projects and activities at the colleges; the association disbursed \$40,000 for these purposes last year alone.

Membership offers exclusive benefits for you, including a free affinity e-mail account (yourname@ucscalumni.com), free

borrowing privileges at all UC campus libraries, invitations to special events, the *Banana Slug Bulletin* alumni newsletter, and more. You also get substantial savings and discounts on such services as the campus OPERS recreational facilities (including the Olympic-size pool and fitness center), the Career Center, UCSC Extension, Bay Tree Bookstore online purchases, Shakespeare Santa Cruz, Seymour Marine Discovery Center membership, the Kaplan Educational Center (offering grad school test preparation), the San Jose Repertory Theater, and others.

Joining is easy, convenient, and affordable. Annual dues are \$35, and life memberships are \$450. Join online at alumni.ucsc.edu or call the Alumni Association at (800) 933-SLUG.

SAVE THESE 2005 DATES:

- ▶ **Alumni Association Awards Luncheon**, February 5 at the University Center
- ▶ **UC Day** (legislative advocacy for higher education), January or February in Sacramento
- ▶ **Banana Slug Spring Fair**, April 15–17: Reunions for the classes of '00, '95, '90, '85, '80, '75, and '70; celebrations of UCSC's 40th anniversary; receptions, panel discussions, and more
- ▶ **Alumni Vintners Wine Tasting**, July 30 at the UCSC Baskin Visual Arts Center

alumni.ucsc.edu

Your e-mail address can save time, money, trees

THE UCSC Online Community has e-mail addresses for roughly 16,000 alumni, or about 25 percent of the alumni population. If your e-mail address isn't yet in the Online Community, now's the time to add it to ensure that old friends can find you—and that you'll hear about events for "banana slugs."

Environmental considerations as well as budget cuts have led the campus to use e-mail for invitations and news. Future UCSC reunion

invitations, for example, will only be sent by e-mail.

Alumni Association chapters in Los Angeles, the San Francisco Bay Area, and Boston have used e-mail exclusively to invite locals to happy hours, lectures, and other gatherings. Events with low budgets or short lead times can succeed as never before with the use of e-mail.

Sharing your e-mail address with friends and the campus is easy. Go to the Alumni Association's Online Community (alumni.ucsc.edu), e-mail it to alumni@ucsc.edu, or call the Alumni Association toll free at (800) 933-SLUG.



2003–04 Alumni Association scholarship recipients

BACK ROW, L–R: *Mary Close, Steven Alvarez, Eric Hafen*;
MIDDLE ROW: *David Louagie, Talia Stoessel, Jason Haynes, Ernesto Maldonado, Richard Adams*; FRONT ROW: *Prarthna Naidu, Alison Cail, Marisa Infante*

Cowell College

'69 **Richard SHAFFER** is attending Roswell Museum and Art Center in Roswell, N.M., on a residency grant as a senior artist in 2005–06.

'70 **Sandra KATZMAN** coauthored a monograph about North Korea and Japan, soon to be published in Japanese; now she is writing about learning Japanese.

'71 **Father James GRAHAM** presented his reconstruction and analysis of the "Byzantine Christian service of making brothers" at the ninth annual conference of the National Association of Catholic Diocesan Lesbian and Gay Ministries in September 2003.

'73 **Bruce FEINGOLD** is a clinical psychologist with a private practice in Walnut Creek, Calif.; a collection of his haiku was published this year by Red Moon Press; he lives in Berkeley with his wife, Madeline, also a psychologist, and his two teenage children.

'76 The fourth edition of **Richard LEITER's** book, *National Survey of State Laws*, won the 2003 Joseph L. Andrews Bibliographical Award, the oldest award given by the American Association of Law Libraries; Leiter has been the director of the law library and professor at the University of Nebraska College of Law since 2000. **Steve LIPKE** is an art instructor at Mendocino College.

'78 **James O'CALLAHAN** was chosen recently as one of southern California's super lawyers by *Los Angeles* magazine and *Law & Politics* magazine.

'79 **Pete PARKINSON** is the director of the Sonoma County Permit and Resource Management Department; he and his wife, **Cecilia UDALL Parkinson** (Cowell '89), live in Santa Rosa.

'80 **Mark PADILLA** has been named provost and vice chancellor for academic and student affairs at the University of North Carolina at Asheville; prior to this appointment, he had held the position of vice chancellor for academic affairs since coming to the campus in 2002.

'85 **Elizabeth BURKE** earned an M.F.A. in painting at Boston University and then for five years had her own business as a freelance

editor and book designer; she found this work too lonely and went on to pursue a career in psychology, earning a master's in social work in 2003. **Janet GROSSMAN** is the author of *Looking at Greek and Roman Stone Sculpture* (J. Paul Getty Museum Publications, 2003) and is coeditor, with J. Podany and M. True, of *History of Restoration of Ancient Stone Sculptures* (Getty Trust Publications, 2003).

'87 **Lucia Lynne SMALL** teamed up with director/producer Maureen Foley (*Home Before Dark*) to produce her second feature film *American Wake* (www.americanwakefilm.com), which had its

world premiere at the Democratic National Convention July 28; all proceeds of the screening went to the Democratic Party.

'90 **Albert CHANG** works for the American Academy of Pediatrics as a preventive medicine educator and is a general pediatrician in Orange County; he received an award at the 2004 Injury Prevention Summit for his work in childhood injury prevention and for training the pediatric residents at UC Irvine and the Children's Hospital of Orange County. He appears regularly on a weekly PBS parenting program called *Help Me Grow*.

'96 **Bruce ROCKWELL** is living in San Francisco and working as a music educator and composer (www.brucerockwell.com) and as the director of the San Francisco Song Festival (www.sfsongfestival.org); he was planning to marry his girlfriend in an outdoor ceremony in the Carneros region of Napa County in summer 2004.

'00 **Gayle (Coleen) SCOTT** earned an M.F.A. in costume design from Boston University in May 2004 and won a prestigious Kahn Award, which is given to one design student annually.

'01 **Jane ROSENTHAL** splits her time between being an instructor at the University of Pennsylvania and an evaluator for K–12 ESL and bilingual programs for the School District of Philadelphia.

Stevenson College

'69 **Susan TRIMINGHAM** is an artist and teaches art to adolescents in juvenile hall and to elementary schoolchildren through residencies with the Cultural Council of Santa Cruz County SPECTRA art program; recently, she has become a mentor for the Bay Area California

Arts Project's workshops and institutes.

'71 **Jonathan KIRSCH**, a book columnist for the *Los Angeles Times* and an attorney specializing in publishing law, is the author of *God Against the Gods: The History of the War Between Monotheism and Polytheism* (Viking), his 10th book; his national book tour included an event at the Capitola Book Café.

'72 **Karen LINDVALL-Larson** has been the Latin American studies librarian at UC San Diego since 1975.

'77 **Peter KOSENKO** works for a software company, where he programs and does technical editing; in the last year, he has been writing guitar pieces and playing them at the UnUrban Coffee House in Santa Monica.

'78 **Karl BROWN** performed on his cousin Rusty Anderson's debut solo album, titled *Undressing Underwater*; he also built a web site documenting his former band, Automatic Pilot, with many mp3s at www.automaticpilot.org. **Dirk VANDER ENDE**, under the pen name of Dirk Gerrit, has published an aviation crime thriller titled *String of Justice*; after serving 12 years in the U.S. Navy, Dirk is now a pilot for a commercial airline and

lives in northern Kentucky.

'83 **Sue BERG Lim** is the mother of two-year-old twin boys and has recently received approval to share her job as senior environmental chemist at East Bay Municipal Utility District in Oakland.

'84 **Shari ANDERSON Allison** was one of the more than one million people who participated in the March for Women's Lives in Washington, D.C., on April 25; she is vice president of the Mesilla Valley, N.M., chapter of the National Organization for Women and president of the Tonalí Legal Alliance of Women in Las Cruces, N.M. Shari recently had a significant victory in the United States Court of Appeals for the Tenth Circuit, *United States v. Lucio-Lucio*, 347 F.3d 1202 (10th Cir. 2003).

'86 **Stacy HANDELMAN Stark** and her husband, Brian Stark, have a happy six-month-old baby, Sam; Stacy teaches kindergarten in Seattle.

'87 **Katrina BLEDSOE** finished a doctorate in psychology in 2002 and is now an assistant professor at the College of New Jersey in Ewing. After finishing a Ph.D. in oceanography at Scripps in 2000 and a post-doc in Amsterdam, **P. Graham MORTYN** is an assistant professor at Fresno State University with a two-year-old daughter; he's planning to take a research position in Spain at the Universitat Autònoma de Barcelona.

'89 **Stephanie FISHKIN Dark** and her husband, **John DARK** (Stevenson '89), live in Walnut Creek, Calif., with their two children, ages two and a half and five; John is the marketing manager for Globalstar Satellite Telephones, and Stephanie is taking a leave of absence from working full-time to raise the children, volunteer, and do part-time consulting in health research.

Martha LONGSHORE recently published her fifth novel, *Dark of the Moon*, under the pseudonym of Tess Pendergrass; the novel is a romantic mystery set in northern California.

'90 **Trisha KYNER** married fellow sculptor David Friedheim in May; for the past three years they have been making collaborative sculpture with groups of adults and children under the name Grendel's Mother.

In June they built a memorial sculpture with staff and clients of SkillQuest, a day-support program operated by the Department of Mental Retardation of the City of Virginia Beach. Trisha also exhibited her ceramic sculpture during the summer at Grounds for Sculpture in Hamilton, N.J.

'94 **Susan MINTZ** married Peter Schmitz in July 2003; she received an M.A. from Washington University in St. Louis in 1997 and is now pursuing an M.S. at Portland State University.

'99 **Meredith OBENDORFER** is in the M.B.A. program at San Jose State University while working full-time as a market research analyst for Seagate Technology in Scotts Valley.

'00 **Judith BANDERMANN Randle** received her M.A. in sociology at San Jose State University in 2003 and is now working toward a Ph.D. in jurisprudence and social policy at UC Berkeley.

'01 **Colleen FLYNN** earned her law degree from Southwestern University School of Law in Los Angeles in May.

Crown College

'74 **Richard HOGAN** is the author of *The Failure of Planning: Permitting Sprawl in San Diego Suburbs 1970–1999* (Ohio State University Press, 2003); he is an associate professor of sociology and American studies at Purdue University.

'77 **Christopher FLICK** is working as a sound editor in Los Angeles; in February he received the 2004 Motion Picture Sound Editors' Golden Reel Award as supervising foley editor on *Master and Commander: The Far Side of the World*; his screen credits can be found on the web at IMDb.com.

'84 **Erika FERGUSON Sueker** has founded a progressive nonprofit elementary school as a community learning center for Golden, Colo.; her two children and 14 others attended the first year.

'86 **Jennifer BUNDY** is busy these days singing at church, guiding her sons through scouting adventures, and working as a first-grade teacher and beginning teacher-support provider, as well as being the assistant track coach for the district high school in Yuma, Ariz. She celebrated her 40th birthday in December 2003, is running three times a week, and planned to compete in some 10K races this past summer.

'90 **Jason MIDDLEBROOK** is an artist and has shown his work throughout the U.S. and Europe; he and his wife, **Kate NEEDHAM** (Porter '90), had a baby girl in July 2003; they live in New York. **Eric STEFFENSEN** is practicing as an oral and maxillofacial surgeon in Napa, Calif.

'92 **Celeste DeWALD** has been hired as the executive director of the California Museum Association; previously, she was the education director at the Steinbeck Center in Salinas.

'93 **Jennifer WALTERS** was awarded an Emmy as producer of the Best Daytime News Show for one of the ABC7 *Morning News* shows on KGO-TV, San Francisco.

'96 **Caroline DINGLE** has been awarded a Gates Scholarship to study for a Ph.D. in zoology at the University of Cambridge, England, beginning this fall; the scholarships are funded by the Bill and Melinda Gates Foundation to educate leaders from around the world who will address inequities in global health and learning.

'98 **Julie DURANT** is living in the Sacramento area and recently purchased her first home.

'01 **Erik WASHBURN** is a medical student at UC Davis; he and **Jessica HOWELL** (Merrill '01), a Ph.D. candidate in English literature at UC Davis, are planning to get married.

'02 **Lisa Marie REIFKE** is working as an intern for the Nature Conservancy in Naples, Fla., where she is involved in the conservancy's education program. **Heather SIUDZINSKI's** boyfriend of four years proposed to her at the top of the Eiffel Tower on January 18; they are planning their wedding for this October.

Merrill College

'77 **Barbara QUICK's** fourth book, *Even More/Todavía Mas*, a bilingual picture book for children and their mothers, illustrated by Liz McGrath, has been published recently by Raven Tree Press; she's working on another book, *The Commitment Dialogues*, with Matthew McKay, which will be published by McGraw-Hill in February.

'79 **Jill FEHLMAN** works for San Diego Kaiser Permanente as a patient educator; she also collects antiques and has many fond memories of her days at UCSC.

'80 **Zona GRAY-Blair** teaches students with severe disabilities; she has received a grant to create a garden to develop authentic friendship between students with and without disabilities, which is also the topic of her master's project.

'85 **David KORDUNER** and his wife, Joan Krimston, welcomed Noah Ilan in August 2003; Noah joins brothers Zach (8) and Ben (5) in the Future Slugs Club. David continues to work in labor relations for Touchstone Television and ABC.

'90 **Eric PESIK** is an adjunct professor of law at Monterey College of Law and a corporate lawyer with Seagate Technology in Scotts Valley.

'96 **Emilie CATE** is a counselor at the Sonoma State University Counseling Center; she planned to complete her M.A. in counseling in May and begin doctoral studies in counseling psychology at the University of Oregon this fall. Friends may send e-mail to emcate@hotmail.com.

'00 **Christopher ALLEN** currently has an office job and is a private tutor while working toward his teaching credential in high school English. **Melissa BARTHELEMY** is attending law school in San Francisco and misses the beauty and social activist environment at UCSC.

'01 **Joseph SOLORIO** is working on a master's degree in counselor education at San Jose State University. '02 Coast Guard Ensign **Michael NORRIS** earned a position on the Commodore's List in January in recognition of flight and academic excellence as a student aviator during naval flight training.

Porter College

'74 **Robert KUBEY** is the director of the Center for Media Studies at Rutgers University and recently had his book, *Creating Television: Conversations with the People Behind 50 Years of American Television*, published by Lawrence Erlbaum Associates. In the book, Kubeby mentions the influence that three UCSC psychology professors—Michael Kahn, Pavel Machotka, and Frank Barron—had on him in the early 1970s.

'76 **Michael McLAUGHLIN** is completing his second novel, "Gang of One"; he has written three books of poetry and was recently appointed 2004 Poet Laureate of San Luis Obispo, Calif., where he lives with his partner of four years and his 13-

year-old trumpet-playing son.

'77 **Thomas POSTER** is acting (his agent is Howard Talent West) and working on the water as captain of a trawler.

'81 **Tracey SCHUSTER** is head of Special Collections and Visual Resources Reference at the Getty Research Institute in Los Angeles; she and her husband, Chris, were married in January and share their West Los Angeles home with their beautiful purebred Ragdoll kitten, Theo. '82 **Sarah ALLISON** lives in Santa Rosa with her husband and daughter; she is an occupational therapist and director of rehabilitation with the geriatric population.

'84 **Kristina JONES Carey** lives in Terra Linda, Calif., and is a writer, gardener, and mother of a five-year-old. **Angela BOCAGE Gilden** has a solo practice in asylum law in Manhattan; she has teenage kids, is a member of the Association of Pet Dog Trainers, and writes about marriage equality and the law for the ACLU and marriageequalityny.org with her partner, Helen Richardson. She celebrated her Bat Mitzvah in 2002 and welcomes e-mail from old friends, especially fellow *Leviathan* alums, at pups2cats3@hotmail.com.

'88 **Susan FLEISHER-Parker** writes literature for a Santa Cruz company; she is married and has a baby daughter born in 2003.

'92 **Susannah COPI** and **Jim DAVIS** (Porter '91) were planning to be married in June; Susannah recently finished a documentary, titled *Rue des Juifs*, and Jim is in features publicity at Disney.

'98 **Leslie HOLEMAN** has been accepted to the UC Davis School of Veterinary Medicine. **Adrienne MILLER** received a B.S. in 1999 from UC Berkeley and an M.S. in 2001 from the University of Washington, both in civil and environmental engineering, after which she was a guest researcher for a year at the Swedish Royal Institute of Technology; now she lives in Berkeley and works with Native American water rights.

'01 **Joseph DePAGE** writes that he "spent last Saturday listening to old Dean Martin records and drinking dry martinis." **MacKenzie SANTIAGO** is living in Santa Cruz, paying his student loans, and breaking his back as a tow-truck driver; he writes that he has no time to surf or skate and is still looking for a girlfriend in Santa Cruz.

We'd like to hear from you

► Use the card in the middle of the magazine to send us your class note

► or send e-mail to dewey@ucsc.edu

► or submit a note via the web at alumni.ucsc.edu (go to Class Notes)

'02 **Roland POSADAS** is working as a senior editor/production director for 360 Media Group, which produces a series of automotive lifestyle DVDs; he is also in charge of developing a new men's-interest DVD series along the lines of "Maxim meets MTV."

Kresge College

'75 **Bobbi HOOVER** facilitates a twice-monthly support group for women whose breast cancer has metastasized for the Bay Area Breast Cancer Support Network; she has been doing this emotionally difficult work for over four years.

'76 **Les FRIED** and his wife, **Riki RUDOLPH Fried** (Cowell '80), have landed in Ramat Beit Shemesh, Israel, where they are raising Yoey (14), Elisheva (12), Avrami (10), and Avigayil (8); Sara (20) is a junior at UCSD; they can be reached at rfried@shemesh.co.il.

'87 **Elisa LYNCH** is the global warming campaign director at Bluewater Network, where she cowrote and championed the California law to require reduced greenhouse gas pollution from passenger vehicles; she was planning to get married in March.

'96 **Jennifer BERNSTEIN-Lewis** has a wonderful husband and a daughter, Rebecca, and she works for Guide Dogs for the Blind (www.guidedogs.com), managing several programs for the volunteer department; one of her memories of Kresge has been published in a book called *It's a Chick Thing*, edited by Ame Beanland; friends may reach her at jblewis@guidedogs.com.

'97 **Giorgia CUSCINO Diomedes** was married in May 2003 and was expecting her first child in May; she has a master's in special education and is teaching in a high school in Los Angeles.

'99 **Julie KUSHNER Marovich** earned an M.A. in communication studies at California State University, Chico, in 2001; she and her husband, Eric Marovich, were expecting their first child in June.

'00 After receiving her M.F.A. in poetry from the University of Iowa in 2003, **Genevieve KAPLAN** is teaching English at Truckee Meadows Community College in Reno, Nev.

Oakes College

'90 **Ralph PORRAS** has been appointed assistant superintendent of Santa Cruz City Schools; prior to this appointment he was principal of Santa Cruz High School.

'95 **Achelle ACEDERA Lara** was married in September 2003 and is living in southern California, where she works as a contract manager at Long Beach Memorial Medical Center.

'96 **Dawn THORNTON** graduated from medical school in June and is beginning her residency in internal medicine in Philadelphia.

'03 **Ashleigh LYMAN** is working on a research vessel assessing coral reef health in the main Hawaiian island chain. **Quessa ROBINSON** is the volunteer coordinator at 826 Valencia, a nonprofit writing center offering free services to children ages 8 to 18 in San Francisco. **Dennis SOLIS** is an editorial assistant with Freedom Press in Topanga, Calif., and a freelance writer.

College Eight

'77 **Eric NEE** was recently named editor of *Stanford Lawyer* magazine.

'80 **Marney STROUD** retired in 2001 after 32 years as a special education teacher in Monterey County; she divides her time between her Rancho de la Maestra in Calaveras County, Calif., and caretaking at Refugio de las Tortugas, along with serving as a planning commissioner in the City of Del Rey Oaks, Calif.

'81 **Lisa GARBER** delivered a paper at the April conference of the American Popular Culture Association based on her doctoral dissertation, titled "Women Who Ride: The Psyche of the Female Motorcyclist."

'84 After years spent as a field research assistant tracking wildlife from whales to weasels, **Leslie OSBORN** now lives in the Colorado Rocky Mountains and works in an Antarctic program.

'86 **Karen DeBRAAL** earned a master's degree in traditional Chinese medicine from Five Branches Institute in Santa Cruz in 1997; she moved to New Mexico last year, where she is working in a no-kill animal shelter.

'90 **Charly RAY** still lives on the Sioux River in northern Wisconsin with his wife, Julie Buckles; their family has grown to include nine sled

dogs and toddler Caroline Sadie Ray; Charly is general manager of the Living Forest Cooperative, working for sustainable forestry.

'91 **Stacy REISCHMAN** is chair of the Department of Theatre and Dance at the University of Southern Mississippi and writes she is still dancing. **Dennis SULLIVAN** is living in New York City and working as director of business and legal affairs for a television production company; he planned to be married this past summer.

'93 **David FEDERICO** is serving as a private consultant to *Fortune* 500 companies in security and data management; he is married with one child.

'95 **Melissa BOES** is living in San Francisco and working at Genentech; she founded and is serving as president of the San Francisco Chapter of the Association for Women in Science, www.sfwais.com.

'96 *The Journey*, a film directed, coproduced, written, photographed, and edited by **Edwin AVANESS**, received the Milan International Film Festival Audience Award in November 2002; the film is a love story that takes place in Armenia in the early '90s—a period of tumultuous events in that nation's history.

'99 After five years as a biomedical researcher at UC San Francisco, **Manuel BRAVO** is back in school working toward a doctoral degree in pharmacy at UCSF. **Jonathan SMITH** has been an EMT/beach lifeguard for the City of Santa Cruz for the last four years; he was planning to begin paramedic school in Los Angeles in August.

'03 **Rebecca HAMMAKER** is a graduate student in math at Texas A&M University.

Graduate Studies

'87 **Diane RAYOR** (Ph.D., literature) is a full professor and chair of the Department of Classics at Grand Valley State University in Michigan; her fourth book, *The Homeric Hymns: A Translation, with Introduction and Notes*, was published by UC Press in February.

'92 **Richard BEHL** (Ph.D. Earth Sciences) was one of three professors at California State University, Long Beach, chosen to receive a 2003–04 Distinguished Faculty Teaching Award; an associate professor of geological sciences, Behl is involved in research on global climate change

and on marine sedimentary rocks. **Edward DIMENDBERG** (Ph.D., history of consciousness) is the author of a new book, *Film Noir and the Spaces of Modernity* (Harvard University Press, 2004), which looks at the noir films of the '40s and '50s in tandem with historical developments in architecture, city planning, and modern communication systems; he teaches film and video studies, German studies, and architecture at the University of Michigan.

'94 **Heather MIETZ Egli** (certificate, education) is on the board of a Santa Cruz animal-advocacy nonprofit and very involved with several animal groups; she serves on the Staff Advisory Board at UCSC and is cochair of the campus's Women at Work Retreat.

'95 **Beth HUFNAGEL** (Ph.D., astronomy and astrophysics) has been promoted to associate professor in the Astronomy Department at Anne Arundel Community College in Maryland.

'00 **Helmut LANGERBEIN** (Ph.D., history) is an associate professor of history at the University of Texas at Brownsville; he is the author of *Hitler's Death Squads: The Logic of Mass Murder*, published by Texas A&M University Press in 2003.

'02 **David SHORTER** (Ph.D., history of consciousness) is a Mellon Postdoctoral Fellow at Wesleyan University and has been hired as an assistant professor of folklore at Indiana University in Bloomington.

In Memoriam

Steven ALLISON (Kresge '76), a programmer analyst with Communications and Technology Services at UCSC, died of cancer in June; he was 55.

Eric DAUB (Stevenson '91), a physician, died in April; he is survived by his wife, **Elizabeth DEAN Daub** (Stevenson '89), and two children.

Eve DUNN Gorn (Stevenson '82), a dedicated family physician, wife, and mother of two, died of cancer at her home in Half Moon Bay in March; she was 43.

Lynette LINDEN (Merrill '72), who earned an M.S. and a Ph.D. in electrical engineering at MIT and was an active participant in UCSC alumni events, died of natural causes in April after a long battle with schizophrenia.

Daniel PECK (Oakes '78) died from metastatic cancer in December.



Your Source for Books by Alumni and Faculty

We feature a large selection of books from our prestigious faculty and noted alumni, including the titles shown below.

Please see the story about Mark Teague on page 20.

slugstore.ucsc.edu
SHOP ONLINE



Serving the UC Santa Cruz campus community since 1965 831.459.4544



Celebrate your class reunion and UCSC's 40th Anniversary!

JOIN YOUR CLASSMATES FOR Banana Slug Spring Fair on Saturday, April 16, 2005.

CELEBRATE REUNIONS FOR 1970, 1975, 1980, 1985, 1990, 1995, 2000

Details will be sent only by e-mail—Give us your current e-mail address online or at the phone number below.

GIVE TO UCSC! Your scholarship donation will make a difference for deserving students.

Please see giveto.ucsc.edu

Visit us @ alumni.ucsc.edu



1156 High St., Santa Cruz, CA 95064, alumni.ucsc.edu (800) 933.SLUG