

UC DAVIS

BIOLOGICAL SCIENCES

News from the College of Biological Sciences

Vol. 14 No. 3, Summer 2006

UC Davis Biological Sciences is a periodic publication of the College of Biological Sciences to inform alumni and parents of current students about the programs and activities at the College. We welcome contributions from both graduate and undergraduate alumni.

Please send us your news at <http://biosci.ucdavis.edu/alumni/postcards>.

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BURTIS TO LEAD COLLEGE OF BIOLOGICAL SCIENCES AS DEAN

Collaboration and Innovation Among Goals of New Dean

Geneticist **Ken Burtis** has been appointed dean of the College of Biological Sciences at UC Davis, after leading for nearly a year as interim dean. Burtis, a professor in the Section of Molecular and Cellular Biology, will serve a three-year term.

“Ken’s dedication to the highest quality for the college’s teaching, research and service obligations is absolute,” said UC Davis Chancellor Larry Vanderhoef. “He is exactly the right person to lead the collaborative cross-campus thinking that will enable his relatively new college -- and the entire campus -- to prosper.”

Burtis, who has been serving as interim dean of the college since Aug. 1, 2005, said he was pleased to be able to serve the university as dean.

Many of the college’s research and teaching programs extend across campus, both literally and in contacts with other schools and colleges, Burtis noted.

“I’m committed to supporting and strengthening research collaborations between college faculty and those from the other schools and colleges, through initiatives such as the Genome Center and the neuroscience campus in south Davis,” Burtis said.

Another priority is the development of innovative approaches to teaching in the biological sciences. Burtis authored a \$1.8 million grant to UC Davis from the Howard Hughes Medical Institute, which includes support for undergraduate teaching initiatives, and has twice participated in the HHMI-sponsored National Academy of Sciences’ Summer Institute on Undergraduate Education in Biology.

An Aggie Perspective

Burtis earned his bachelor’s degree in biochemistry from UC Davis in 1976 and worked for Professor Roy Doi as a research associate. He earned a doctorate in biochemistry from Stanford University Medical School in 1985 and conducted postdoctoral research in molecular genetics at Stanford, before returning to UC Davis as an assistant professor of genetics in 1988.

He has served as chair of the Genetics Graduate Group, vice chair of the Section of Molecular and Cellular Biology and associate director of the UC Davis Genome Center. Before taking up the post as interim dean of the new college, Burtis was associate dean for undergraduate academic programs in the Division of Biological Sciences. Burtis’ research involves development, sex determination and DNA repair in the *Drosophila* fly, a model organism central to the study of genetics. He was a participant in the *Drosophila* genome project.

“I’ve been a student, staff member, a member of the faculty and an administrator at this university,” Dean Burtis said, “and I think I have a broad view of the campus.”

The UC Board of Regents approved the appointment at its July 19 meeting; Burtis’ start date was July 1, 2006.

UC Davis News Service contributed to this article



Dean Ken Burtis

Roy Doi Elected To National Academy Of Science

Roy Doi, Distinguished Professor of molecular and cellular biology, was elected in 2006 to the **National Academy of Sciences**.

"It is important to really be interested in what you are doing. If you enjoy what you are doing it is not work," said Roy Doi.

That's exactly what Doi has been doing for more than 40 years, what he loves. When he first started out as a researcher he would spend seven days a week in the lab studying gene expression, particularly the role of RNA polymerase. For the past fifteen years, however, he has been studying the cellulosome, a multi-enzyme complex that degrades the cellulose found in plant cell walls. He is currently working on a project to degrade cellulose to sugars, which can then be fermented to make ethanol, a potential gasoline substitute.

Roy Doi, a UC Davis faculty member since 1965, received his PhD in bacteriology from University of Wisconsin, Madison. He is a fellow of the American Association for the Advancement of Science as well as the American Academy of Microbiology. He has been a UC Davis Distinguished Professor since 2003 and currently teaches BIS 103: Energetics and Metabolism. According to Doi, the most rewarding aspects of his career have been seeing his graduate and post-doctoral students become good researchers in their own right, in addition to learning a basic knowledge of enzymes. "I owe a lot to former teachers, students and colleagues," he said.



Roy Doi, 2006 inductee to the National Academy of Science.

CBS National Academy of Sciences members, by year inducted:

- 2006: Roy Doi, Distinguished Professor of molecular and cellular biology.
- 2004: Edward Jones, Director of the Center for Neuroscience and Distinguished Professor of psychiatry and behavioral sciences.
- 2004: Deborah Delmer, Professor Emeritus of plant biology.
- 2001: Clark Lagarias, Professor of molecular and cellular biology.
- 1988: Eric Conn, Professor Emeritus of biochemistry.
- 1988: John Roth, Distinguished Professor of microbiology.
- 1984: Thomas Schoener, **Distinguished Professor of biology**.
- 1980: Melvin Green, Professor Emeritus of biochemistry.
- 1978: Emanuel Epstein, Professor Emeritus of botany.
- 1978: Paul Stumpf, Professor Emeritus in molecular and cellular biology.
- 1971: Peter Marler, Professor Emeritus of neurobiology, physiology and behavior.
- 1952: G. Ledyard Stebbins, Professor Emeritus of genetics (deceased).

COLLEGE OF BIOLOGICAL SCIENCES STUDENTS WIN SCHOLARSHIPS IN 2006

UNCF-Merck Undergraduate Science Research Scholarship Award

Eberechukwu Chukwueke, a junior in Biochemistry and Molecular Biology, has been awarded a 2006 **United Negro College Fund-Merck Undergraduate Science Research Scholarship Award**. The award includes an all-expense paid undergraduate research scholarship for the 2006-07 academic year and two summer internships at the Merck research facility in Rahway, New Jersey. Eberechukwu was one of only fifteen students nationwide to be awarded the highly competitive scholarship in 2006, and she is the first UC Davis student to receive this award. Congratulations to Eberechukwu Chukwueke!



Eberechukwu Chukwueke at the UNCF-MERCK award ceremony in Philadelphia

Goldwater Scholarship

Eisha Zaid and **Nicole Sadler**, both genetics majors at UC Davis, were recipients of the **2006 Goldwater Scholarship**, a \$7,500 award given to exceptional students who plan to work in research.



Left to right: Ken Burtis, Eisha Zaid, Nicole Sadler, and Jeanette Natzle.

Donald A. Strauss Scholarship

Eisha Zaid received a **Donald A. Strauss Scholarship**, a \$10,000 award given to an outstanding junior who is planning to participate in a senior-year community service project. Zaid plans to use the money to establish a program to provide diabetic supplies to patients at the student-run Shifa Clinic in Sacramento.

Alumni! Please let us know what you have been doing since graduation! Email: biosci-alumni@ucdavis.edu or go online and send us a postcard at <http://biosci.ucdavis.edu/alumni/postcards>.

TWO GRANTS SUPPORT UNDERGRADUATE BIOLOGY INSTRUCTION

\$1.8 million Hughes grant and \$1.9 million National Institutes of Health grant awarded to UC Davis

The **Howard Hughes Medical Institute** has awarded \$1.8 million over four years to the UC Davis College of Biological Sciences to support initiatives in undergraduate biology instruction.

Part of the money will help support the Biology Undergraduate Scholars Program, which provides intensive mentoring, support and research lab work opportunities for students from disadvantaged backgrounds.

"We need to think more scientifically about teaching," said Ken Burtis, principal investigator on the Hughes grant and dean of the college. He developed several of the planned teacher-strengthening programs based on concepts from a biology education workshop that he has attended the last two summers at the University of Wisconsin-Madison.

The Biological Undergraduate Scholars Program, or BUSP, helps students stay on track; some of the students may be the first in their families to attend college. Program participants take additional classes in math and chemistry, develop basic lab skills, meet regularly with mentors and one another, and are encouraged to form support networks. They also take part in seminars on professional skills and career development.

The Hughes grant will cover the costs of about 25 BUSP students. The costs for 15 to 20 others will be funded by the recent renewal of a grant from the **National Institute for General Medical Sciences Initiative for Minority Student Diversity (IMSD)**.

With the rest of the Hughes grant, Burtis plans to fund some new ideas to boost biology instruction. Among other things, the college will organize a seminar series on mentoring undergraduates and, with the Department of Physics, set up a cross-campus effort to work on the lower-division physics curriculum for biology majors.

In addition, newly hired professors will receive funding to spend on any activity that improves their instructional skills, e.g., participation in teaching workshops or use of new instructional technologies.

Burtis also plans to send more

faculty members to the Hughes-backed National Academy of Sciences Summer Institute on Undergraduate Education in Biology at the University of Wisconsin-Madison, and to arrange for campus visits by scientists renowned for research and teaching.

The Hughes grant to UC Davis was one of 50 totaling \$86.4 million awarded by the institute June 1 to support undergraduate science education.

The General Medical Sciences IMSD grant for \$1.9 million, secured by Barbara Horwitz, covers graduate and undergraduate students through March 31, 2010. Horwitz is a professor of neurobiology, physiology and behavior in the College of Biological Sciences, and is vice provost for academic personnel for the campus.

In addition to supporting the BUSP, the IMSD grant will cover the costs of about 10 graduate students in groups with biomedical orientations, such as genetics, physiology, cell and developmental biology and nutrition. Students in the program meet as a group with Horwitz and give regular seminar presentations.

The program gives the graduate groups the flexibility to take on students who have high potential but may not have high test scores.

"We want these kids to be successful," Horwitz said. "The advantage is that it allows us to bring students in and they do incredibly well."

UC Davis News Service contributed to this article

Breaking News

In July 2006, **Dr. Ronald J. Baskin**, Professor Emeritus of molecular and cellular biology, and his wife, Lydia, created an endowment of \$25,000 to establish a prize recognizing excellence in undergraduate research.

The **Ronald and Lydia Baskin Research Award** will recognize one graduating senior each year for outstanding original research in the biological sciences. Students from all four undergraduate colleges are eligible for this award, which includes a \$1,000 cash prize and a medal to be presented at graduation.

FROM THE DEAN

Teaching and research: together, the twin pillars of a great research university. Perhaps it is inevitable that the fundamental insights into the mechanisms of life that emanate from our research labs receive most of the headlines and public attention, but the faculty of this college also take great pride in the quality of their teaching, and in the opportunities it provides to share the excitement of research with the next generation of scientists, helping prepare them for careers in the rapidly evolving discipline of biology.

Recently, the National Academy of Sciences and the Howard Hughes Medical Institute (HHMI) have challenged the science education community to think "scientifically" about their teaching; that is, to critically challenge assumptions about how knowledge is best transmitted in the classroom, to try new methods, and to critically assess results as with any other experiment. In our fast-paced web-driven digital culture, it is not at all clear that the traditional lecture format is always the best approach. We are fortunate to have been recently awarded a four year grant from the HHMI that includes support for efforts to engage in innovative new methods of teaching. I look forward to sharing with you in future issues of this newsletter reports on curricular innovations by college faculty as they uphold our proud tradition of excellence in the teaching of biology.



Kenneth P. Burtis

Arrivals

Bethany Daniels has joined the College of Biological Sciences as communications & marketing officer. She brings 15 years of experience in marketing and advertising for the entertainment and telecommunications industries. Bethany received a bachelor's degree from UC Davis in economics.

Departures

Dr. Gina Holland, academic coordinator and associate director for the CBS Educational Enrichment and Outreach



Programs (EEOP) since 1995, and director of the Biology Undergraduate Scholars Program (BUSP) since 1998, has left to pursue a tenure-track faculty position at Sacramento City College. In her new

job, Gina will be teaching primarily microbiology. **Dr. Marisa Ramos** will be stepping into Gina's role this summer.

After 12 years of service and leadership in the Graduate Group Complex (GGC), **Dawne Shell** has transferred her talent to the Office of Graduate Studies.

Among Shell's proudest accomplishments has been the success of Recruitment Weekend, which Shell started in conjunction with **Professor Paul FitzGerald** in 1994. To Shell, "it was like planning 17 weddings all at once," but to the students, it is a pivotal event in the decision to enroll at UC Davis.

Amber Carrere is the new manager of the GGC and coordinates the Exercise Science and Molecular, Cellular and Integrative Physiology programs. **Angelina Kuo** is the new coordinator for the Cell and Developmental Biology and Biochemistry and Molecular Biology programs.

Jan Kingsbury has become the new development officer for UC Davis Graduate Studies where she is building a fundraising program for the campus-wide office. She served as the Director of Communications & Marketing for the College of Biological Sciences--and editor of this newsletter--since January 2005.

"Seeing the formation of the College of Biological Sciences up close, and playing a small part in supporting the transition, was one of the most exciting aspects of my work," said Kingsbury. "As an alumna of UC Davis, I feel honored to have had the opportunity to be part of the College in this historic time."

John Crowe Retires

Over 50 alumni from the Crowe Lab gathered for a symposium at the Bodega Marine Lab March 10-12, 2006 to mark **John Crowe's** retirement after 35 years on the faculty at UC Davis. Sabbatical visitors, post docs, graduate students, and technicians came from North America, Wales, France, Holland, Iran, Bulgaria, Germany, Hungary, Sweden, Israel, Brazil, Colombia, India, China, and South Korea to participate.

John and Lois Crowe are having a grand time since retirement, and highlights of the last nine months include traveling to Peru, joining a safari in Tanzania, and taking a cruise on the Danube for the Mozart festivities.



John and Lois Crowe gather with 50+ alumni to celebrate retirement!

In Memoriam: C. Ralph Stocking & Ernest M. Gifford

Born in 1913, **C. Ralph Stocking** received his bachelor's degree in plant nutrition in 1937, a master's degree (1939) and a doctorate in plant physiology in 1943, all from UC Berkeley.

He joined the Davis campus in 1940 as an associate in botany. From 1943 to 1945 he carried out wartime work as a control and research chemist with the Puccinelli Packing Company, Turlock, Calif., returning to UC Davis in 1945 as an associate in the Experiment Station, then assistant professor of botany in 1946.

Stocking served as acting chair of the departments of Botany and Agricultural Botany, 1966-67, and chair of the Department of Botany in 1967, 1968-70 and 1971-73. He retired in 1980.

The family requests that memorial donations be made to hospice programs, or to the Elsie J. Stocking Fellowship fund. Checks should be made payable to UC Regents, One Shields Avenue, Davis, CA 95616, designating the fund.

Tom Rost Retires

Former **Executive Associate Dean, Section Chair, and Professor of plant biology, Tom Rost**, retired this summer. Rost started at UC

Davis in 1972 and has contributed to the campus teaching, service and research programs for over 34 years.



He was awarded the UC Davis Academic Senate Distinguished Teaching Award in 1997.

Among his contributions, Rost is acknowledged for his role in planning and developing the Sciences Laboratory Building, and for his lead role in reconstituting the Division of Biological Sciences into a College. Tom's lab will remain open for a year or so while he completes research projects on Pierce's Disease. He plans to remain active as an editor of the "Annals of Botany" and an international officer of Gamma Sigma Delta, the Honor Society of Agriculture. His email address is trrost@ucdavis.edu, and he looks forward to hearing from past students.

Ernest Gifford was born in 1920 and studied at UC Berkeley, receiving his bachelor's degree in botany in 1942. He was awarded a Ph.D. in 1949 from UC Berkeley. He joined UC Davis -- then the Davis campus of the UC College of Agriculture -- as an associate in botany in the same year. He served as chair of the Department of Botany from 1963 to 1968, and again from 1973 to 1978. In 1986, he was awarded the Academic Senate's Distinguished Teaching Award.

The Gifford family encourages friends and colleagues to remember him by visiting the cycad garden in front of Storer Hall on the UC Davis campus. The garden was planted and dedicated to him in September 2005. Donations in memoriam may be made to the UC Davis Foundation, One Shields Avenue, Davis, CA 95616, designating the Arboretum Endowment or Botanical Conservatory Endowment funds.

UC Davis News Service contributed to this article

Flies in Space May Help Astronauts

Fruit flies from UC Davis joined the crew of the space shuttle Discovery on its latest mission on July 4. The flies are part of an experiment on the immune system being conducted by **Deborah Kimbrell, associate research geneticist in the Section of Molecular and Cellular Biology.**

Kimbrell studies genes that control immune responses, and how they are influenced by gravity. Although flies have a much simpler immune system than humans, the genetic switches involved are very similar, she said. The insects can even develop blood cell tumors comparable to leukemia. The spaceflight experiment is an extension of the ground-based research done by Kimbrell's laboratory on the effects of increased gravity.

"This is a great opportunity to learn about spaceflight and the immune response," Kimbrell said.

The space shuttle carried 10 small containers of *Drosophila melanogaster* flies, which the crew fed once during the 12-day mission. The flies take about 10 days to develop into adults, so by the time the shuttle landed they had raised at least one more generation in space.

Over the next year, Kimbrell and her collaborators at NASA Ames Research Center, the University of Central Florida, UC Davis' Chronic Acceleration Research Unit, Rice



University and the University of Nevada-Las Vegas will study how the space-raised flies responded to infection with fungus and bacteria, and other aspects of their immune system.

"When our funding started in 2004, the experiments were here on earth, so all that could be studied were the effects of hyper-gravity on fruit flies. This experiment is going in the opposite direction, focusing on negative gravity. We have had interesting results when you increase gravity, and we will see what happens conversely," Kimbrell said to CNN during a recent interview.

The shuttle also carried a small amount of the fungus into orbit to see if it becomes more harmful to the flies as a result of spaceflight. The fungus, which is approved as an organic pesticide, is not harmful to humans.

UC Davis News Service contributed to this article

UC Davis Ecology & Evolutionary Biology Graduate Programs Rated #1 by U.S. News & World Report

According to U.S. News and World Report, UC Davis is home to the best ecology and evolutionary biology graduate programs in the nation. UC Davis rose six places since the last time the report was issued, four years ago, to oust UC Berkeley and Harvard University from the top spots.

"The number one ranking nationwide of UC Davis in graduate training in ecology and evolution is a very important accomplishment for our campus," said Peter Wainwright, evolution and ecology professor and former chair of the Population Biology Graduate Group.

The magazine evaluates reports from deans, program directors, senior

faculty and other academic experts to decide upon the graduate program rankings. At UC Davis, ecology and evolutionary biology is represented mainly by two graduate groups: ecology and population biology. However, entomology, geology, genetics and animal behavior are also linked to this category, according to Wainwright.

"I think the ranking reflects the extraordinary quality of research that exists at Davis in ecology and evolutionary biology, and the dedication that our faculty have toward designing creative and rigorous graduate programs that are attractive to the best students," said Wainwright.

Kari Fish contributed to this article

Professor **Charles Gasser**, Molecular and Cellular Biology, received the **2006 Academic Senate Undergraduate Teaching Award.**

Gasser is a strong believer in training students to meet the "challenges of the future." One student



described him as an "excellent lecturer with an amazing ability to convey even complex concepts effectively." Gasser was among the first faculty to get students to solve real problems online using genomics and informatics tools. In 2004-05, he led an in-depth review of course and lab content while serving as the chair of his department's curriculum committee.

Professor **Susan L. Keen**, Evolution and Ecology, is the recipient of the



2006 Academic Federation Award for Excellence in Teaching.

Keen earned her doctorate in biology at

UC Davis in 1991 and, in the process, received a Graduate Student Teaching Award. Today, as a lecturer in evolution and biology, she continues to draw praise for "her passion, infectious enthusiasm, dedication, creativity, organization, encyclopedic knowledge, lucid and thought-provoking explanations, and inspiring researchers' understanding of animal diversity and evolution." She is director of Introductory Biology (BIS 1B), teaching innumerable sections. One student wrote: "Keen has a gift for anticipating what students may not understand."

Patrice Koehl, Associate Professor at the UC Davis Genome Center, was awarded the prestigious **2006 Alfred P. Sloan Research Fellowship.** The Sloan Foundation will award Professor Koehl \$45,000 for his research over the next two years.

The foundation made awards to 116 researchers this year from 55 universities in the U.S. and Canada.

HIGHEST CAMPUS AWARDS EARNED BY BIOLOGICAL SCIENCES STUDENTS

The achievements of seven biological science students were noted through awards given at the June 2006 commencement ceremony.

Yoel Stuart, a graduate in evolution and ecology, was recognized for his outstanding achievements with two awards at the spring commencement ceremony: the 2006 **University Medal** and the **Undergraduate Student of the Year Award**. Yoel was an outstanding



Yoel Eli Stuart wins University Medal and the CBS Undergraduate Student of the Year Award.

student with a nearly perfect grade point average of 3.989, earning 16 A+ grades. He has served as a research assistant in the Grosberg Lab, a peer advisor for Evolution and Ecology, president of the men's crew team, and a member of the Bonner Leaders Program.

Sarah Albritton, a graduate in cell biology, was honored with the 2006 **Herbert A. Young Award**. In addition to maintaining a perfect 4.00 grade point average, Sarah was inducted into the Phi Beta Kappa Honor Society in 2006. She has been involved in research for nearly two years and she helped establish a community service club, "Community Connecting Care," that provided bag lunches for the homeless community in San Francisco. She participated on an intramural soccer team, served as a teaching assistant and a tutor in cell biology.

Chi Viet was awarded the **College of Agricultural and Environmental Sciences College Medal**. Chi received a bachelor of science in biological sciences, and her excellence is reflected by her perfect 4.0 grade point average, her memberships in honor societies, and her dedication to



Chi Viet, recipient of the College of Agricultural and Environmental Sciences College Medal.

public service. She was the 2005-2006 president of the Prytanean Women's Honor Society and a member of Phi Kappa Phi, Phi Beta Kappa, and Phi Sigma. Outside of academics, **Chi Viet** volunteered her time as a lab tutor, a test instructor for Kaplan and a fundraiser organizer for Colleges Against Cancer. Chi has already begun a successful career in research in Dr. Frederic Chedin's lab, and gave an innovative presentation on DNA Methylation at the 2006 Annual Undergraduate Research Conference. Chi will be attending UCSF Dental School in fall 2006.

Samia Abdul Ghaffar, who received a degree in biochemistry and molecular biology, was awarded the **Charles E. Hess Community Service Award**. Samia was an outstanding student, as reflected by her nearly perfect grade point average of 3.865. Her extensive resume of community service includes volunteering at the Clovis Community Hospital, at the California Cancer Center in Fresno, and at the Shifa Clinic in Sacramento. She served as vice president of the UC Davis chapter of the Foundation for International Medical Relief for Children. Samia will be attending medical school at UC Irvine in fall 2006.



Kirstin Marie Woody selected for Mary Jeanne Gilhooly Award.

The **Mary Jeanne Gilhooly Award** recipient was **Kirstin Marie Woody**, who received a bachelor of arts and science degree in classical civilizations and neurobiology, physiology and behavior. Kirstin served on the Yolo County Relay for Life committee in support of the American Cancer Society. She has volunteered at Clinica Tepati, a community clinic run by the UC Davis Medical Center. Kirstin is a member of Phi Beta Kappa. She plans to pursue a Masters in Public Health.

Elizabeth Huerta Ortiz was awarded the **Howard Walton Clark Prize in Plant Breeding and Soil Building**. She graduated with a bachelor of science in plant biology. Elizabeth presents an extensive resume as an undergraduate researcher. She worked in the lab of Dr. Judy Jernstedt, on an ecology project studying floral pathogens, the results of which were presented at the 2006 Undergraduate Research Conference. She also participated in an ethno botany project in Costa Rica where she presented her work at the 2006 UC Davis Tropical Biodiversity Symposium.

About the Undergraduate Awards

The **University Medal** is the highest university award given to a student completing undergraduate work.

The **Undergraduate Student of the Year Award** is given to acknowledge outstanding achievement by a graduating senior in the College of Biological Sciences. The award is based on three criteria: academic excellence, research activity, and involvement in service to the campus or community.

The **Herbert A. Young Award** is given for outstanding academic achievement to a graduating senior in the College of Letters and Science.

The **College of Agricultural and Environmental Sciences (CA&ES) College Medal** is an award given for academic excellence to a graduating senior of the CA&ES.

The **Mary Jeanne Gilhooly Award** honors the graduating woman believed to be the most outstanding in the areas of leadership, scholarship, integrity, and service to the campus community.

The **Charles E. Hess Award** is given in recognition for involvement and time volunteered in public and community service activities to one outstanding male and female student in the CA&ES

The **Howard Walton Clark Prize** is awarded to a senior student in the College of Agricultural and Environmental Sciences whose high scholastic achievement and talent for independent research in plant breeding leads to new or improved crops, or for the use of appropriate tools, or for soil building that leads to improved soil quality.

ALUMNA PROFILE

SHIRLEY COTTER TUCKER ('56)

Knowledge Has No Boundaries By Jan Kingsbury

Working in her lab at Louisiana State University, **Shirley Tucker** was stirred from her concentration on plant vasculature and development to face a question involving pollen. As a doctoral student at UC Davis, Tucker had not taken a single class on pollen and never imagined it would find its way into her research.

She worked quickly to catch up.

"You never know what you'll need to know in the future," said Tucker, in her characteristically soft and contemplative voice, speaking by phone from her home in Santa Barbara. Her work on pollen was published in *Apicultural Research* in 1973.

Reaching beyond formal boundaries is one of Tucker's hallmarks. Trained and practiced in structural botany and anatomy, Tucker acquired such expertise in plant structure and plant systematics through her professional career that she eventually presided over the Botanical Society of America and later the American Society of Plant Taxonomists, which honored her and one of her students, Andrew Douglas, with the coveted Cooley Award in 1991. She was given the prestigious Merit Award by the Botanical Society in 1989.

"Learning about plant systematics proved to be enormously valuable," said Tucker. "There is a great deal of interest one can find in earlier research and in other fields."

Overcoming Career Hurdles

Tucker completed her Ph.D. in Botany at UC Davis in 1956, working most closely with **Ernest Gifford** and **Katherine Esau**. She met her future husband, entomologist Kenneth Tucker, in a class taught by **Ledyard Stebbins**. Ken's older brother, **John Tucker**, was a junior faculty member in the Department of Botany and Shirley recalls how instrumental he was in shaping her thinking about the science.

"UC Davis faculty expect a great deal from their students, giving students high goals so that they constantly work to meet expectations," said Tucker. "The Department of Botany was very well-rounded, so I got a broad background that served me well."



Shirley Tucker at the Ernest Gifford Cycad Garden reception, December 2005

Shirley and Ken were married and moved to Minnesota, Shirley's home state, when Ken was hired by the University of Minnesota. Shirley was working as a post-doctoral researcher in the Botany Department of the University of Minnesota when she landed one of the first National Science Foundation (NSF) grants available in 1957. NSF funding for her research has been nearly continuous through her career and even post-retirement, with her last NSF grant ending in 2001.

Then in 1961, when Ken got a job in Illinois, Shirley went to work as a research associate at Northwestern University in Evanston. The couple returned to UC Davis in 1963 when Ken was offered a postdoctoral position here.

"In those days, wives followed their husband's jobs," Shirley noted. "It's just what we did."

For a career-minded researcher like Shirley, however, finding a job for herself was not always easy—even when carrying an NSF grant with her. Antinepotism rules prevented Shirley from pursuing a tenure-track faculty position at UC Davis, so for the next three years she worked as a research associate and taught only one term. But when Ken landed a new job with the USDA in 1966, the academic universe suddenly opened to Shirley.

They moved to Baton Rouge, Louisiana, and Shirley became an assistant professor at Louisiana State University in 1968. During her 27-year tenure, she conducted research, taught and served a term as department chair, before retiring in 1995 with the distinguished title, Boyd Professor Emerita.

Tucker received the highest professional rank awarded by LSU in 1982. Faculty who are designated as Boyd Professors have attained both national

and international distinction for outstanding teaching, research or other creative achievement. Fewer than a dozen active professors hold the title at a time.

Adding to the honor, Tucker was only the second woman to be named a Boyd Professor since its founding in 1953. And she was the only woman to hold the title through her entire tenure to retirement in 1995.

"The Boyd Professorship gave me regular contact with top faculty from across the university. It was a wonderful honor," said Tucker.

Other honors received by Tucker include the Outstanding Alumni Achievement Award, the highest honor bestowed by the College of Biological Sciences at the University of Minnesota (1999), where Tucker earned her bachelor's and master's degrees in botany. And earlier this year she was inducted into LSU's Hall of Distinction in recognition of her service to the university and the College of Basic Sciences. A third honor came to her at the hundredth anniversary meeting of the Botanical Society of America (BSA), held at Chico, CA this summer. She received the BSA Centennial award, to honor her exemplary service in the plant sciences.

Giving Back

Though officially retired, Tucker retains an active schedule, working as a Research Botanist at the Santa Barbara Botanical Garden and as an adjunct professor at UC Santa Barbara. She recently completed a collaborative project to revise the "Catalogue of Lichens of California," reporting on more than 1,400 taxa. The catalogue is published in the online journal, *Constancea*. Tucker has authored more than 130 papers and co-edited two books throughout her career. Thirty papers have been published during her retirement.

"Research is still fun," she said. "I can't do everything I used to do, but I have no difficulty finding interesting things to do."

One of her projects is to contribute to lichen collections at LSU, UC Davis and elsewhere. Her UC Davis collection is maintained by the UC Davis Center for Plant Diversity, housed in the Sciences Laboratory Building.

"Gifts to universities are high in my goals," said Tucker. "At UC Davis, I am interested in supporting the role of botany in the research and curriculum, so collections are very important. I am very grateful to UC Davis for the training I received."

UPCOMING EVENTS

COLLEGE OF BIOLOGICAL SCIENCES

UNDERGRADUATE MAJORS

Biochemistry and Molecular Biology
Biological Sciences
Cell Biology
Evolution, Ecology and Biodiversity
Exercise Biology
Genetics
Microbiology
Neurobiology, Physiology, and Behavior
Plant Biology

GRADUATE PROGRAMS

Animal Behavior
Biochemistry and Molecular Biology
Biophysics
Cell and Developmental Biology
Exercise Science
Genetics
Neuroscience
Physiology
Plant Biology
Population Biology

SECTIONS

Evolution and Ecology
Microbiology
Molecular and Cellular Biology
Neurobiology, Physiology, and Behavior
Plant Biology

UNIVERSITYWIDE AND CAMPUSWIDE PROGRAMS

UC Davis Biotechnology Program
Center for Animal Behavior
Center for Genetics and Development
Center for Neuroscience
Center for Population Biology
Genome Center
UC BREP

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STORER LECTURESHIP IN THE LIFE SCIENCES

Dr. Ilkka Hanski, University of Helsinki,
Finland.

Thursday October 5, 2006, 4:10 p.m.

“Spatial Population Biology”

Lecture is in 2205 Haring Hall

For the most current listing of CBS events, visit the Web site at <http://biosci.ucdavis.edu/seminars/>

EMERITUS PROFESSOR CONN GIVES GIFT TO BOTANICAL CONSERVATORY



Left to right: Ken Burtis, Ernesto Sandoval, Eric Conn, and Tim Metcalf standing by gardens in front of the Life Sciences Laboratory Building.

Eric Conn, Professor Emeritus of biochemistry, generously contributed a gift of \$20,000 to the UC Davis Botanical Conservatory Endowment in March. This gift will help to provide long-term support to the more than 3,000 plant species mainly from the tropical, sub-tropical and desert regions growing at the Botanical Conservatory and several planting beds around the life sciences buildings. The Conservatory endowment fund provides a way to upgrade displays,

improve plant health, hire student docents for interactive tours and school programs, and pursue new initiatives in teaching and public outreach. Dr. Conn was also a benefactor of the Life Sciences Laboratory Building, which houses the Eric Conn Molecular and Cellular Biology Laboratory on the third floor.

“The Botanical Conservatory Endowment symbolizes the love people have for living things,” says Director Tim Metcalf “and a growing endowment enables an increased integration of live plants into the instruction and outreach activity of the College.”

Founded in 1959, the Botanical Conservatory serves the university and public communities as an educational facility, research resource and genetic-diversity preserve. To contribute to the Botanical Conservatory Endowment, contact Kathy Barrientes-Sachs at 530-754-9253 or ksbarrientes@ucdavis.edu.

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