

COLLEGE OF

Natural Sciences & Mathematics



SPOTLIGHT

Biology Research Study Will Help Displaced Plants Find New Homes

By law, sensitive or endangered species of plants that are removed to make way for new developments must be relocated to another location with a smaller native terrain on a one-to-one basis. Thus, if 100 plants are displaced by housing, 100 plants must be planted elsewhere.

Dr. C. Eugene Jones, chair and professor in the Department of Biological Science, and Dr. Darren Sandquist, an assistant professor in the Department of Biological Science, recently received a \$77,512.50 contract from LSA consulting for a five-year study of *Calochortus weedii* var. *weedii*, a rare lily (often called the California lily) that is found in Orange County.

Dr. Jones and Dr. Sandquist are being aided in their study by a number of graduate and undergraduate students. Dr. Jones is focusing on the plant development in the bulb stage, while Dr. Sandquist is studying the plant from the standpoint of seeds and seed germination.

“Years ago, developers did not recognize the need to work with scientists in dealing with plant mitigation. They do now,” said Jones. “With our research, we will try to identify the factors that will make the mitigation efforts a success.”

As part of the study, more than 300 bulbs have been planted in soil that approximates native habitat in an area outside the university’s Biological Science Greenhouse Complex.

“The project benefits the client and the county, and enhances the university’s academic mission of research and educating students,” Sandquist said.

“Students [assisting in the effort] get a lot of real world experience, which can lead to jobs in environmental consulting and related fields,” noted Jones.



INSIDE

Biochem student wins award for research	Department News.....2
Geology students and faculty present at conference	Research Center.....3
Commencement tickets available soon	Good to Know.....4
14th Annual MBRS Symposium	Good to Know.....5

Dean’s Office
McCarthy Hall 166
(714) 278-2638

Dean:
Dr. Kolf O. Jayaweera
kjayaweera@fullerton.edu

Associate Dean:
Dr. David Fromson
dfromson@fullerton.edu

Assistant Dean:
Rochelle Woods
McCarthy Hall 488
(714) 278-7082
rwoods@fullerton.edu

Department of Biological Science
McCarthy Hall 282
(714) 278-3614
Dr. C. Eugene Jones, Chair
cejones@fullerton.edu

Department of Chemistry & Biochemistry
McCarthy Hall 580
(714) 278-3621
Dr. Robert Belloli, Chair
rbelloli@fullerton.edu

Department of Geological Sciences
McCarthy Hall 254
(714) 278-3883
Dr. John Foster, Chair
jfoster@fullerton.edu

Department of Mathematics
McCarthy Hall 154
(714) 278-3631
Dr. James Friel, Chair
jfriel@fullerton.edu

Department of Physics
McCarthy Hall 611
(714) 278-3366
Dr. Roger Nanes, Chair
rnanes@fullerton.edu
Program in Science Education
McCarthy Hall 527
(714) 278-2307
Richard Lodyga, Director
rlodyga@fullerton.edu

Department News

Chemistry

- Dr. Katherine Kantardjieff was the keynote speaker at the Roundtable on Biomedical Engineering Materials and Applications (BEMA) on April 8th at the National Academy of Sciences in Washington, DC. BEMA is a group of high-ranking members of industry, academia, and government involved in the field of biomedical materials and applications. The purpose of the roundtable was to enable open and neutral discussion between these different stakeholder groups regarding regulatory, environmental, and political issues that may impede the development and introduction to market of useful biomedical devices. The meeting focused on two specific topics, *Biomaterials Issues in Genomics and Proteomics Technology* and *New Tools for Proteomics, Genomics, and Understanding Disease States*.
- A Troy High School research student working with Dr. Katherine Kantardjieff has won an award at the state-wide science competition. Amreeta Gill took 2nd place in the competition, earning \$1500 towards college, and a chance to go to the national competition next month as an alternate. Her work involved targeting TB genes for drug discovery, homology modeling and virtual ligand screening.
- Chanda Strom, a junior in biochemistry, was awarded a 2nd place prize of \$200.00 in the Undergraduate Division for her research presentation, *Development of a Mathematics-Only Diagnostic Test for General Chemistry*, given at the Fifteenth Science Conference of the Sigma Chapter of Graduate Women in Science on March 13th. Chanda is a member of the research group of Dr. Barbara L. Gonzalez.
- The Department of Chemistry and Biochemistry announces the publication of research by former graduate students Jeremiah Nguyen and Yan Zhou, under the supervision of Dr. Gene Hiegel. The paper will appear in the June issue of *Synthetic Communications*. The paper will be cited as:
Gene A. Hiegel, Jeremiah Nguyen, and Yan Zhou, "Preparation of Alkyl Nitrates, Nitrites, and Thiocyanates from Alcohols Utilizing Trichloroisocyanuric Acid With Triphenylphosphine," *Synth Commun.*, 34 (14), in press (2004).

Math

- The Department of Mathematics will be hosting several Colloquium talks throughout the spring semester. This month's talk will be:

Thursday, April 29, 2:00 pm: Dr. William Murray (Cal State Long Beach) – *title to be announced*
- Michael Vodhanel, a second year applied-math graduate student under the supervision of Dr. Charles H. Lee, won the 2nd place award in the student research poster competition at the Mathematical Association of American Meeting organized by the Southern California-Nevada Section at the University of San Diego March 6, 2004. The title of his talk was *Fast and Tractable Algorithms for the Principal Orthogonal Decomposition and its Applications*.

Geology

- Dr. David Bowman has been shaking things up in earthquake analysis. He recently had a grant funded by the Southern California Earthquake Center. The title of the grant is *Analysis and Integration of the Earthquake Stress Cycle Evolution and Pattern Informatics Techniques* and is being conducted jointly with Dr. K Tiampo of the University of Western Ontario. Also, on March 2nd, Dr. Bowman was asked to speak to the California Earthquake Prediction Evaluation Council (CPEPEC) about the validity of the current "Earthquake Prediction" by Vladimir Keilis-Borok of UCLA. This prediction has recently been featured in news media. Dr. Bowman spoke about long-term variations in the earthquake rate and discussed the probability of an earthquake based on his models.



Fall Registration Advising

All NSM students must meet with an advisor prior to registering for summer or fall classes. Each department has different dates and procedures for meeting the advisement requirement. Don't wait until the last minute, get your advising completed early! The dates for each department are listed below:

Mathematics April 19 - April 30 ? **Chemistry/Biochemistry** April 19 - May 7

Geology April 19 - April 30 ? **Biology** April 6 - May 14 ? **Physics** During April and May



Research Center

Annual Meeting of the Seismological Society of America

The Annual Meeting of the Seismological Society of America will take place April 14-16, 2004. Dr. David Bowman will be a co-author on a series of talks with students and colleagues. They are:

- *Slip Partitioning Along the San Andreas Fault and the Regional Stress Field in Southern California* by D. Bowman and G. King
- *Long-Range and Long-Term Fault Interactions in Southern California* by J. F. Dolan, D. Bowman, and C. Sammis
- *A Comparison of the ETAS and Stress Accumulation Models for Accelerating Moment Release: Which Works Better, ETAS or SAM?* by A. Mignan, G. King, and D. Bowman

Julia Clark, a senior geology major, will be presenting a talk on forecasting earthquakes. This talk will be a summary of her senior thesis. Co-authoring the presentation is Nancy Ikeda, a graduate student in geology.

- *Forecasting Earthquakes in Southern California Using the Stress Accumulation Method* by J. Clark, N. Ikeda, and D. Bowman

Kristin Weaver-Bowman, a part-time faculty in the Geology Department, is also a co-author of a talk to be presented at the meeting.

- *Earthquakes and Triggered Slip Events on the Lenwood Fault at Fry Mountain Playa: Is the Northern Lenwood Due for a Shake-Up?* by F. Khatib, M. LeBeon, T. Rockwell, S. Lindvall, A Cadena, D. Verdugo, C. Rubin, and K. Weaver-Bowman.



ASI elections for President and Vice-President are 8:00 a.m. April 21 - 8:00 p.m. April 22!

The candidates will be giving speeches in the Quad on April 14 12:00 - 1:00 p.m., and bios and platforms will be featured in the Daily Titan the week before elections.

The candidate profiles can be viewed later this month at the voting website :

<http://vote.fullerton.edu>

Students can vote at the voting website above.

Please vote for Board of Directors positions in the ASI board elections!



Commencement

Commencement for the College of Natural Sciences and Mathematics will be on Saturday, May 29, 2004. The University Commencement Ceremony will be held at 8 a.m. The NSM exercises will be held immediately following the University Ceremony at the lawn west of the Engineering Building.

GradFest will be held April 13-15, from 10 a.m. to 9 p.m. in the tent in front of the Titan Shops. This is the ideal opportunity to order announcements, purchase a class ring, purchase a cap and gown, pick up your commencement 2004 tickets, arrange photography appointments, and pick up additional information on commencement

Ticket Distribution will be held April 16 thru May 9. *These will be the only two weeks during which tickets are available for graduates.* Tickets will be available at the following times and locations:

April 16, 8 a.m. - 8 p.m.	The Information Desk @ the TSU
April 16, 8 a.m. - 5 p.m.	Titan Card Center (Library 1st Flr.)
April 17, 8:30 a.m. - 4:30 p.m.	The Information Desk @ the TSU
April 17, 10:00 a.m. - 5:00 p.m.	Titan Card Center (Library 1st Flr.)
April 18, 12:30 p.m. - 9:00 p.m.	The Information Desk @ the TSU
April 18, 12:00 p.m. - 7:00 p.m.	Titan Card Center (Library 1st Flr.)
May 3-6, 8 a.m. - 9 p.m.	The Information Desk @ the TSU
May 3-6, 8 a.m. - 9 p.m.	Titan Card Center (Library 1st Flr.)
May 7, 8 a.m. - 8 p.m.	The Information Desk @ the TSU
May 7, 8 a.m. - 5 p.m.	Titan Card Center (Library 1st Flr.)
May 8, 8:30 a.m. - 4:30 p.m.	The Information Desk @ the TSU
May 8, 10:00 a.m. - 5:00 p.m.	Titan card Center (Library 1st Flr.)
May 9, 12:30 p.m. - 9:00 p.m.	The Information Desk @ the TSU
May 9, 12:00 p.m. - 7:00 p.m.	Titan Card Center (Library 1st Flr.)



ESSAY CONTEST

Open to all CSUF students

Essay may be on any topic discussing both social and individual ethical concepts related to the field of biotechnology.

Prize: \$100 ? Name engraved in a perennial plaque ? Certificate signed by the Department Chair of Biology ? Invitation to the 2005 Natural Science and Mathematics Banquet

Biotechnology is an extremely progressive field which encompasses a variety of biological topics that influence our daily lives. From vaccines to genetically-modified organisms, biotechnology is indeed an innovative field; but where does that leave our concepts of acceptable ethical research and application? How well do you understand topics in biotechnology, such as cloning? And how do topics such as these challenge ethical precepts?

Deadline: June 4, 2004

Sponsored by the Science, Ethics, and Society Discussion Group,
and supported by the CSUF Department of Biological Science

Website (contest guidelines and information): <http://www.freewebs.com/scienceethicssociety/>

Email: ScienceEthicsSociety@hotmail.com



★ GOOD TO KNOW ★

14th Annual M B R S Symposium

Friday April 23, 2004
12:45 - 5:00 p.m.
TSU Pavilion A

With keynote address by
Margie Borra
University of Wisconsin, Madison

The symposium will feature student research supported by MSD, MARC, McNair, and Bridges research programs. Featured speakers include students graduating from these programs.

This event is sponsored by the Department of Chemistry and Biochemistry.



NSM AWARDS BANQUET

The 21st annual NSM Awards Banquet will be held on Friday, May 14, 2004 at the Brea Embassy Suites. This banquet is a special dinner to recognize students graduating with honors, and for the departments to recognize their scholarship and award winners.

Tickets will be on sale from April 26th to May 10th. The cost is \$22.00. Tickets can be purchased in MH 166.



The spring semester tutoring schedule has changed!

Cid will no longer be tutoring physics, biology, and chemistry on Monday and Wednesday, 10-11 a.m., or on Friday, 11-12 noon. He will continue to be available all other regularly scheduled times.



Angels Help Support the Math Club

The Math Club is sponsoring a fundraiser trip to the Angels v. Oakland game April 16, 2004.

Tickets are \$15.00 for lower level (3rd baseline) seats.

Contact the Math club at mathclub@fullerton.edu or 714-278-4551