

EnviroNews

Newsletter of Santa Clara University Environmental Studies Institute
Volume XXVII Spring 2008

Todos Bien!

By Tracey Mangin, Ann Thomas & Jessica Reimer

The warm Baja sun beat on our bare backs and arms as we paddled through the Sea of Cortez. Ten days. One Island. 16 students. And Three amazing professors.

During the winter quarter of 2008 we took two courses from the Environmental Studies Institute: Environmental Writing (Baja) and the Natural History of Baja.

Throughout these ten weeks we prepared for our trip to La Isla Espiritu Santo. We studied plant, bird and marine species, geological history, previous literature of the region of Baja, and of course, the hand-slap game (a local game the guides had been undefeated in until our arrival).

One of the major projects we completed for the Natural History of Baja course was a guide for tourists traveling to the region. Each group contributed a subchapter on various topics, including conservation, sustainable development, and flora and fauna. For our Environmental Writing class we kept a journal throughout the quarter reflecting on our readings and experiences on the island.



Once we arrived on the island we were able to apply the knowledge we learned; we found our “amigos,” (the flora and fauna that each of us researched prior to going down), and we were able to experience all that we read about. In addition, we shared different stories and poems after eating amazing meals on the beach. During the day we spent most of the time kayaking and hiking around the island, taking advantage of the knowledge base of the local guides, professors and each other.

One particularly memorable adventure was snorkeling with the sea lions off the island of Isla Partida.

Our experience was made even more meaningful by the relationships we made throughout the expedition. Although we knew each other from class, we were able to bond in an especially unique way; everyday we worked together by splitting up into team in order to complete our daily tasks.

Also, we supported one another when hiking down steep cliffs and paddling for long distances. Overall, we not only came to appreciate the area in which we traveled, but also the people who we traveled with. We only wish that we could have stayed longer!

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Baja Expedition to be Repeated in 2009



Over the course of the past eight years, Spring-Break Baja trips have taken place every two years because there wasn't sufficient interest to necessitate an annual trip. Based on the increased interest this year, however, when 23 students applied for 16 spots and where everyone involved had an amazing experience, ESI and International Programs have decided to experiment with making the International Studies Sea Kayak Expedition an annual event. The goal for 2009 is once again to circumnavigate Isla Espiritu Santo.

Dates for the 2009 expedition are March 19th through 28th. During the winter quarter students will prepare for the expedition by participating both in ENVS 142b, Environmental Writing of Baja, taught by John Farnsworth, and ENVS 142, Natural History of Baja, taught by Elizabeth Dahlhoff. The two courses will be taught as a single TR class, with one professor teaching on Tuesdays and the other teaching on Thursdays.

Application forms to join the 2009 expedition will not be available until the Fall Quarter; Juniors and Seniors will be given priority during the application process. Costs for next year's program are not yet available, but they should be comparable with this year's program, which cost \$1,170 plus air fare. For further information, contact Juanito at jfarnsworth@scu.edu.



Environmental Studies Institute SEMINAR SERIES Fall 2008



FRIDAYS AT NOON
Kennedy Commons
(Unless noted otherwise)

April 11

Robert Van Buskirk, Staff Scientist
and Energy Analyst, Lawrence
Berkeley Lab

*Using a Socio-Environmental Economy
To Maximize Sustainable Development*



April 21

Chuck Reed, Mayor of San Jose
San Jose's Green Vision

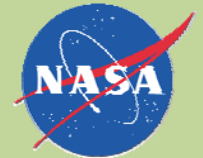
Location: Saint Clare Room, Harrington
Learning Commons (3rd Floor)

Time: 7:00-8:15 p.m.



May 16

Cynthia Schmidt, DEVELOP Coordinator,
NASA AMES Research Center
*The DEVELOP Internship Program at
NASA*



May 30

Liz Snyder-Liles, Communications
Director, Full Circle Farm
*Cultivating New Agricultural Roots and
Community in Silicon Valley*

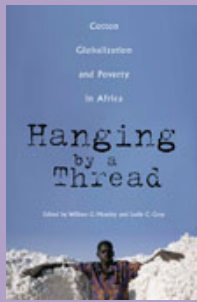


**Seminars are 12:00 pm–1:00 p.m. in
Kennedy Commons.**

Join us for coffee and cookies at 11:45 a.m.

If you have a disability and require reasonable
accommodations please call 408-551-7086 at least 48 hours
before the event date.

Visit our website at www.scu.edu/envs



HANGING BY A THREAD - (2008)

Cotton, Globalization, and Poverty in Africa

Edited by Leslie C. Gray and William G. Moseley

The textile industry was one of the first manufacturing activities to become organized globally, as mechanized production in Europe used cotton from the various colonies. Africa, the least developed of the world's major regions, is now increasingly engaged in the production of this crop for the global market, and debates about the pros and cons of this trend have intensified.

Hanging by a Thread: Cotton, Globalization, and Poverty in Africa illuminates the connections between Africa and the global economy. The editors offer a compelling set of linked studies that detail one aspect of the globalization process in Africa, the cotton commodity chain.

From global policy debates, to impacts on the natural environment, to the economic and social implications of this process, *Hanging by a Thread* explores cotton production in the postcolonial period from different disciplinary perspectives and in a range of national contexts. This approach makes the globalization process palpable by detailing how changes at the macroeconomic level play out on the ground in the world's poorest region. *Hanging by a Thread* offers new insights on the region in a global context and provides a critical perspective on current and future development policy for Africa.



Leslie C. Gray is an associate professor of environmental studies at Santa Clara University. She has published articles on environment and development in journals such as *World Development*, *Africa*, *African Studies Review*, *Development and Change*, *Geoforum*, and *Geographical Journal*.

Can contamination of food from pharmaceutical crops be avoided?

By Michelle Marvier

Corporations such as Ventria, Prodigene, Monsanto, Pioneer and Dow have genetically engineered common food crops such as maize, rice, and barley to synthesize drugs. Although this statement has a ring of science fiction to it, the reality is that genetically engineering crops has



become relatively routine, and engineering crops to produce a wide range of pharmaceutical substances such as hormones, antibodies, and vaccines is a simple extension of well established genetic techniques. Corporations are pursuing the cultivation of pharmaceutical proteins in major commodity crops because grains such as maize and rice offer an inexpensive route to the production of large volumes of pharmaceuticals.

The intention when growing pharmaceutical crops is that these plants and their products should remain completely isolated from the crops that are headed to our dinner tables. Pharmaceutical crops are cultivated under tight regulations and are typically grown on small acreages. Despite the many precautions taken and the limited land areas directly involved, food safety groups and concerned citizens fear that pharmaceutical crops grown out of doors may pose unique risks. The biggest worry is that pharmaceutical crops could end up contaminating our human food supply. In fact, some researchers have argued that the decision to use food crops to synthesize drugs virtually guarantees that our foods will eventually be contaminated with pharmaceutical compounds. They argue that the extent and consequences of this contamination are the only uncertainties.

There are several major routes for potential contamination of the human food chain. First is the movement of pollen, either via wind or insect pollination, from fields of pharmaceutical crops to fields of food crops of the same species. The USDA mandates that many precautions be taken to prevent, or more likely limit, the amount of pollen flow between pharmaceutical and food crops. For example, minimum physical isolation distances are specified, as well as a minimum temporal offset in the timing of planting. In addition, the flowering parts of pharmaceutical crops may be manually removed or bagged to prevent pollen shed. These methods are not, however, foolproof.

A second route to contamination of the human food supply involves the movement of seed containing the pharmaceutical-coding genes. Seeds can be moved by birds or other animals, floods, strong winds and other storm events, and by spillage during transport. To date, the only documented case in which a pharmaceutical crop caused contamination was in fact due to seeds from the pharmaceutical crop remaining in a field post-harvest. In this case, ProdiGene Corporation failed to comply with federal regulations in two of its field trials, which involved maize genetically modified to produce a vaccine that prevents diarrhea in pigs. The USDA requires that fields be monitored in the subsequent years and that any volunteer plants of the pharmaceutical crop be destroyed.

See Contamination. Page 4

Contamination *Continued from Page 3*

Unfortunately, Prodigene did not follow the USDA protocol.

Some scouting dates were missed, and the volunteer pharmaceutical maize plants flowered in the field. ProdiGene was fined \$250,000 for these violations, in addition to cleanup costs.

Other examples of past contamination events further illustrate the difficulties of achieving full containment. Many of the precautions taken for pharmaceutical crop production were also used in the cultivation of rice genetically modified to tolerate the herbicide Liberty Link. Despite these precautions, genes from this rice variety, known as Liberty Link 601, have escaped containment, resulting in widespread, low level contamination of long-grain rice throughout the southeastern United States. This contamination has had an enormous economic impact on rice growers because trade with Europe has been affected. In this case, it appears that a wind storm produced the contamination event. Although Liberty Link 601 rice is not a pharmaceutical crop, this example illustrates the fallibility of efforts to contain the movement of pollen and seed and the potential economic consequences of a contamination event.

The clearest way to prevent the contamination of human food with pharmaceutical compounds produced by crops is to prohibit these sorts of genetic modifications in plant species that are used as food. Some potential alternatives include the use of non-food plants, such as cotton. If corporations continue to genetically engineer food crops to produce pharmaceuticals (and neither industry nor regulators show any sign of changing course on this), then it is pretty safe to conclude that at least a low level of contamination is a foregone conclusion. To many scientists, this seems like an unnecessary risk. There are plenty of alternative avenues, such as cotton or tobacco, that can be used to produce pharmaceuticals. This is not a matter of being against a new technology—but rather of being in favor of the thoughtful use of that new technology.



Juniors Jeannine Strenk and Tracey Mangin remove recycling from the trash during the Trash Audit hosted by the SCU Recycling Club.

New Upcoming Fall 2008 Courses

ENVS 1A Analyzing Environmental Rhetoric

This course, reserved for freshmen participating in the Sustainable Living Undergraduate Research Project, SLURP, will explore rhetoric surrounding current environmental issues. Since this course is a special pilot for the new university core, students will be enrolled in a two-quarter sequence that will not only fulfill their first-year writing requirements, but will give them the opportunity to explore issues of environmental criticism with a variety of media. All students taking this course will have the privilege of living on the SLURP floor as part of the CyPhi Residential Learning Community, and will thus have the opportunity to participate in a unique community dedicated to promoting a culture of environmental sustainability within the university. (4 units)

ENVS 197 Energy Resources & Environmental Impacts

This course will expose you to the state of energy supply and demand in the U.S. and internationally. We will look at specific energy options, their technical features, the advantages and limitations of each, as well as environmental and policy impacts. We will evaluate interrelationship of energy with national and global political policies, personal carbon footprint, material good production, food production, transportation, water usage, climate change, and waste management. You will be encouraged to think programmatically into the future about a suite of energy sources that together could provide reliable, sustainable, cost-effective, and environmentally sound energy. (5 units)

ENVS 199D Interdisciplinary Research: ENVS

This course will provide an overview of disciplinary approaches to environmental research and examine ways of integrating different types of research in interdisciplinary ways. Discussions will focus on the philosophy of science, methods for data collection, and different types of methods including field, lab and social science methods. The course will be open to research students of participating faculty and to SLURP students. (1-5 units)

Also this Fall:

- ENVS 11: Introduction to Environmental Science
- ENVS 98: Outdoor Leadership Expedition (OLE)
- ENVS 115: GIS in Environmental Science (L&L)
- ENVS 131: Environmental Education
- ENVS 146: Agri., Env. & Dev.: Latin America
- ENVS 198: Environmental Proseminar

Introducing: Sustainable Office Assessment Project (SOAP): Making SCU Cleaner and Greener!

Father Locatelli recently signed the Presidents Climate Commitment pledging to achieve campus climate neutrality. SCU is progressing to meet this goal by investing in green energy, building more efficiently, and finding ways to reduce campus emissions simply by using less energy. The Sustainability Program is piloting a project to decrease campus resource consumption by faculty and staff, effectively, to green up our offices.

SOAP will also provide opportunities for SCU student interns to get practical, green consulting experience. SOAP interns will assess the resources used in departments and offices targeting paper, office equipment/electronics, lighting, heating, water, and waste. Interns will analyze office operations, identify ways to increase efficiencies, and offer case-specific feedback reports suggesting best sustainable practices. Interns will provide ongoing consultation to answer questions, conduct follow up research, and ensure successful implementation of their strategies.



Jenny Gore is a junior, majoring in Economics and Finance. “I think sustainability can be an overwhelming and confusing concept,” said Jenny. “Preet and I will try to break down that barrier so it is something everyone can achieve. I am excited to be a part of this new project, especially with the steps our school has taken to be more sustainable and energy efficient. I want to learn as much as I can and become proficient in the aspects that directly affect SCU offices and events.” Jenny was formerly the VP of RLCA and is currently writing for and editing *One World*, a student produced magazine focused on social justice and environmental issues around the world.



Preet Anand is a sophomore Biological Engineering major with an interest in entrepreneurship. “I’m interested in sustainable building design and combating climate change through innovation,” said Preet. “I wanted the position as a SOAP Intern because I want to learn more about sustainability practices and how to make practical improvements that do not cramp lifestyle.” Preet is also an opinion section writer for *The Santa Clara*, a member of Solar Decathlon 2009 team, and a founder of the Santa Clara Entrepreneurship organization.

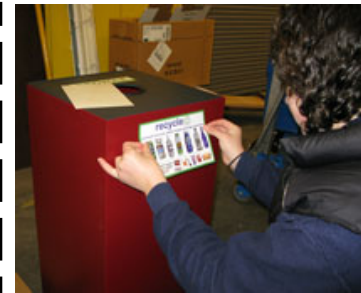
How to Get Involved: Any SCU faculty or staff who would like to reduce their environmental impact should email sustainabilityintern@scu.edu

RecycleMania

By Tracey Mangin

On April 5, 2008 the 8th annual RecycleMania competition came to a close. RecycleMania is a 10-week intercollegiate recycling competition in which schools try to recycle the most and reduce their waste. This year (Santa Clara University’s second year participating) 400 schools entered RecycleMania with the hopes of taking first place in categories such as Grand Champion, Waste Minimization, and Targeted Materials. While it is a competition, the main goal of the event is to promote awareness of and participation in campus recycling and waste minimization. This year, Kalamazoo College took first place in both the Grand Champion and Per Capita Classic categories. Some of SCU’s accomplishments include placing 28th out of 87 in the Waste Minimization category, and 37th out of 136 in the Targeted Materials (Bottles and Cans) category.

During the 10-week period, the SCU Recycling Club organized a number of events to promote the competition and encouraged participation among students, faculty and staff. The SCU Recycling Club applied new instructional labels to recycling bins that were distributed across campus, surveyed students in residence halls about their recycling habits, adopted a basketball game to help attendees recycle properly, and gave away a number of prizes. Students, faculty, and staff were given prizes if they were seen doing something sustainable, and students won solar bags and portable solar panels that charged electronics during a Benson RecycleMania night. The club’s hard work helped to increase recycling awareness on campus, and made this year’s RecycleMania competition a great success at SCU!



New recycling stickers... coming soon to a container near you!

Get caught “green handed” and you could win a coozie!



Upcoming Events!

RecycleMania might be over, but there are still a number of recycling events coming up this Spring Quarter. There will be one more opportunity to participate in RecycleTrivia at the end of the quarter during SCU Move-Out. During Move-Out 2008, students, faculty, and staff will be encouraged to minimize waste at the end of the academic year by utilizing collection sites, seen throughout campus. The campus community will be encouraged to dispose of items that can be reused, donated, or recycled at these locations.

Internship Opportunities

Environmental Education Intern – Student Conservation Association (SCA)

Start Date: 5/6/08 **End Date:** 8/26/08

About the position: Facilitate educator-led field trip program for K-6 grades and provide educator support, 30%; assist with office work, coordination of events, communicate with educators and perform equipment maintenance, 20%; assist in development of new summer program for teens, 20%; assist with weekend programs, 10%; develop education curriculum for on and off-site use, 10%; greet visitors and provide Refuge information, 10%.

Requirements: Valid driver's license; ability and willingness to undergo a required criminal history background check; ability to research, organize information and work both independently and as part of a team; experience working with people, especially children; upper division college standing.

For more information or to apply for this position, please [visit www.thesca.org](http://www.thesca.org)

Interpretation Intern – Student Conservation Association (SCA) (Two Positions)

Start Date: 6/15/08 **End Date:** 9/07/08

Start Date: 7/15/08 **End Date:** 10/07/08

About the position: Conduct interpretive walks, talks and tours of the town site and the historic stamp mill structure; perform roving interpretation and foot patrol; assist at the museum; operate the entry kiosk; provide some light maintenance, resource management and money handling. This is a great opportunity to gain all-around experience in the many aspects of park operations.

Requirements: Valid driver's license; ability and willingness to undergo a required criminal history background check; comfortable speaking in public; comfortable living and working in a isolated location.

For more information or to apply for this position, please [visit www.thesca.org](http://www.thesca.org)

EnviroNews is prepared by Leah Nakasaki. Comments or Suggestions? Send to lnakasaki@scu.edu.

www.scu.edu/envs

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