

# ES NEWS



Environmental Studies Program

University of California, Santa Barbara

Fall 2015

## Environmental Studies Welcomes Two New Faculty Members!

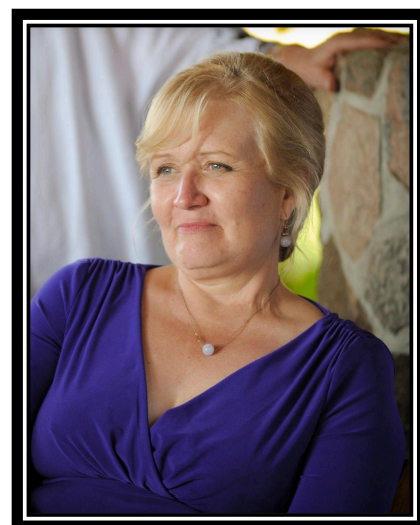


*Dr. David N. Pellow  
Dehlsen Chair and Director of the  
Global Environment Justice Project*

The Environmental Studies Program is proud to welcome Dr. David Pellow and Dr. Helene Gardner to the family.

David comes to Santa Barbara from the Department of Sociology at the University of Minnesota. He brings expertise on environmental justice and racism, as well as social movements. To read more about David Pellow and his work, turn to page 3 ("New Endowed Dehlsen Chair")

Helene returns to the Environmental Studies Program, previously hired as an instructor from 2011 to 2013. She will continue teaching courses on toxicology and environmental chemistry. Turn to page 8 to read more on Helene.



*Dr. Helene K. Gardner  
Lecturer with Potential  
Security of Employment*

### In this Issue:

A Message from the Chair	2
New Endowed Dehlsen Chair	3
ES 45 <sup>th</sup> Anniversary	4
Outstanding Alumni Award	5
Meet the Department	6
Faculty Awards and Recognition	8
Distinguished Visitor	11
Student Affairs	12
Alumni	15
Commencement 2015	17
Supporting ES	18

### Featured Articles:

#### RECAP: Environmental Studies 45<sup>th</sup> Anniversary

April 2015-The Environmental Studies Program celebrated its 45<sup>th</sup> Anniversary! Many of alumni, faculty, staff and friends partook in the festivities. The event also featured special guests and keynote speakers. Check out the spread in this issue!

Pages 4-5

#### Bob Wilkinson Retires

After 20 years of teaching in the Environmental Studies Program, Robert Wilkinson retired in 2015. Read ES Lecturer, Paul Wack's commemoration to Bob in this issue.

Page 9

#### Commencement 2015

Big congratulations to the ES Graduates of 2015! Be sure to mark your calendar for this year's ES commencement ceremony!



Page 17



# A Message from the Chair



*ES Chair, Carla D'Antonio along the shores of Lake Zurich, Switzerland on a surprisingly warm day in February.*

The ES Program continues to flourish. With nearly 800 majors and our dedicated staff, faculty, and lecturer-professionals, we continue to equip students with the tools to tackle the challenging, multi-faceted environmental problems of our changing world.

On the heels of a festive Earth Day celebration near downtown Santa Barbara, we celebrated the ES Program's 45<sup>th</sup> Anniversary. Alumni came from far and wide to share their stories, ideas and solutions and their sheer joy and satisfaction with their ES undergraduate education. Faculty and staff pitched in to organize thematic panels, and participate in a string of inspiring events. Bob Wilkinson organized one on water issues, David Cleveland organized one on food security, Celia Alario organized one on environmental communications, and Paul Wack organized one on environmental planning.

Furthermore, our outstanding alumnus, TJ (Tamara) DiCaprio, shared her story of how a single person with a good idea and a lot of initiative can bring about positive environmental change in a company as big as Microsoft. TJ's message—how a single person can affect change—was reiterated by our keynote speaker, Pete McCloskey, a political maverick who decades ago, stood up against his party (Republican) to help establish the first earth day, author the Endangered Species Act, the Marine Mammal Protection Act and so much more. Our staff worked tirelessly behind the

scenes to keep the program moving, get the food and drink set and much more. It was a wonderful weekend. Thank you to all who participated and made this so satisfying!

In June, we graduated another large class of talented students, so our number of alumni now tops 6,000. We established a new Senior Thesis Prize our panel of judges chose the recipient to be Natalia Nelson (see page 14). More than a dozen students participated in this competition and the quality of their work was amazing. Thank you to all the students who participated. We look forward to the innovative ideas and syntheses that other students will bring to the Senior Thesis Program.

We sadly, said goodbye to Bob Wilkinson, Professor of water policy, who taught in the ES program for 25 years. We are very grateful for the wisdom, insights and enthusiasm he gave to us and hundreds of students over the last quarter century. We also said hello to new faculty, Dr. David Pellow (Dehlsen Chair in Environmental Sustainability), and Dr. Helene Gardner (Environmental Chemistry). We thank Jim and Deanna Dehlsen for their support of the Dehlsen chair and of course our Dean, Pierre Wiltzius, for continuous support.

Behind the scenes we continue to work on updating our curriculum, growing our faculty numbers, refining our vision and empowering our students. We continue to take great pride in our standing teaching. Such as last year, several of our faculty members were nominated for teaching awards, and one of them, Peter Alagona received the award! Faculty research also continues to thrive. Faculty traveled to Hawaii, Alaska, Asia, Europe, South American and all around the U.S. for workshops, research presentations and research itself.

Education is the foundation for a better world—so from the frontlines...thank you for your continued interest in and support for our program.

-Carla D'Antonio, ES Program Chair



**Environmental  
Studies**



# David Pellow Hired as New Endowed Dehlsen Chair Professor

Five years have gone by since the passing of Environmental Studies' former Dehlsen Chair Professor, William Freudenberg. Beginning in 2012, a Search Committee led by Environmental Studies faculty member, David Cleveland, began a two-year effort to recruit the new Dehlsen Chair of Environmental Studies.

The recruitment effort called for "scholars whose expertise is on the human-environment interface from local to global, with an emphasis on solutions" (UC Recruit, 2013). Recognized by his contributions to environmental justice, his mentorship to graduate and undergraduate students, and involvement with numerous environmental organizations, David Pellow comes to UC Santa Barbara as the new Endowed Dehlsen Chair in Environmental Studies. He will also serve as the Director of the Global Environment Justice Project.

Dr. Pellow previously held the title of Don Martindale Endowed Chair in the Department of Sociology at the University of Minnesota. As a well-known activist-scholar with publications on environmental issues in communities of color, Pellow's research, teaching, and community work focus on the challenges associated with environmental inequality.

His research emphasizes the ways communities of color and working class communities around the globe have fought for environmental justice and sustainability. These communities face disproportionate exposure to toxic waste and pollution yet have been excluded from the policy-making process.

In all his work he highlights the role social inequality plays in producing our socioecological crises and how people have taken action to address these problems through the work of social change movements. Dr. Pellow uses historical, ethnographic, and participatory research methods and collaborates with and advises numerous organizations and collectives focused on achieving environmental justice. Pellow has also received various awards for his books and publications as well as for his teachings for



undergraduate and graduate students.

Pellow will teach courses on environmental and social justice, race and class relations in environmental conflict, human-animal conflicts, sustainability and social change movements.

He has served on the Boards of Directors of several organizations dedicated to improving the living and working environments for people of color, immigrants, indigenous peoples and working class communities. These organizations include: Global Action Research Center, the Center for Urban Transformation, Greenpeace, and Global Response.

With an academic specialization in diverse, underrepresented communities, as well as having a mixed heritage himself, David Pellow is truly an exceptional addition to the growing diversity of the Environmental Studies program as well as UC Santa Barbara's academic community. David Pellow is eager to start at UC Santa Barbara and will begin teaching ES 146: *Animals in Human Society* this winter!

## Dehlsen Chair in Environmental Studies

The Dehlsen Chair in Environmental Studies was established in honor of James and Deanna Dehlsen. The Dehlsen Chair is directed to the area of environmental policy, and to enhance the campus expertise in sustainability. Jim and Deanna Dehlsen have a long-standing relationship with UCSB and have been committed supporters of the Environmental Studies Program at UCSB for many years.





In conjunction with UCSB's All Gaucho Reunion, the Environmental Studies Program hosted its 45<sup>th</sup> Anniversary on April 24-25, 2015. Thank you to all the attendants, panelists, workers and guests who made this such a great event!

# CELEBRATING 45 YEARS



Chair, Carla D'Antonio gives opening remarks, welcomes and acknowledgements.



Dozens of alumni, friends, faculty, staff and community members mingled and reconnected on the Deckers Deck on the Bren Building.



Panelists Kim Prillhart, Matthew Burris, Nancy Bragado and Chris Stephens and Moderator Paul Wack discuss their experience in city and regional planning and their views on present and future environmental planning.





ES students Valerie Lee, Javier Venegas and Andrew Chen pose for a picture during the luncheon.

## OUTSTANDING ALUMNI



**Tamara ("TJ") DiCaprio** (Class of 1981) received this year's **ES Alumni of the Year Award** during the 45<sup>th</sup> reception. TJ is the Senior Director of Sustainability at Microsoft. TJ has been working to drive Microsoft to carbon neutrality through the creation of Microsoft's carbon-fee model.



**Pete McCloskey**, former U.S. Congressman and author of the Endangered Species Act was the 45<sup>th</sup>'s keynote speaker. The legislation was passed in 1970, the same year UCSB established the Environmental Studies Program.



The ES 45<sup>th</sup> Anniversary was a great opportunity for alumni and ES faculty and lecturers to get together and socialize with community members.



ES Instructor, Quentin Gee, takes a healthy bite out of the delicious fruit kabobs!



The 45<sup>th</sup> concluded with a special guest panel and discussion on endangered species and environmental protection.



# People of Environmental Studies



Established in 1970, the Environmental Studies Program at UCSB has been recognized as one of the most successful undergraduate environmental programs in the world. Our award-winning faculty strives to train the environmental stewards and leaders of the future. The program's skilled faculty and our environmental professional instructors aim to inspire our students to develop skills and encourage them to believe they have the power to shape a better future.

Peter Alagona



**Specialization:** *Environmental History; and Wildlife and Endangered Species of California*

Since arriving to UCSB in 2009, Peter Alagona has been recognized as one of UCSB's most outstanding junior faculty member. He is currently working on a new research initiative on the history of ideas of environmental change. He also serves as the director for the PhD emphasis.

Associate Professor

Oliver Chadwick



**Specialization:** *Soil Sciences; Soil Genesis and Classification; and Geomorphology*

Recognized as one of the world's leading soil scientists, Dr. Oliver Chadwick current research centers around soil nutrients in the Hawaiian Islands. Earlier this year, he attended the *Day of Young Soil Scientists* and spoke of his research at the Soil Science Society of Belgium.

Professor

Jordan Clark

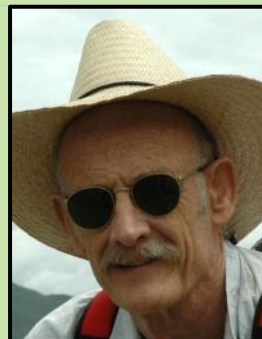


**Specialization:** *Geochemistry; Tracer Hydrology; and Environmental Geology*

Jordan Clark holds a joint appointment in Earth Science. His expertise in hydrological and geochemical interactions on the earth's surface brings an interesting field of study for students. His research currently focuses on aquifer storage and recovery in California.

Professor

David Cleveland



**Specialization:** *Sustainable Agriculture; Small-scale Agrifood Systems; and Nutrition*

David Cleveland has worked with small-scale farmers around the world in the field of sustainable agriculture. Currently, his research focuses on the potential for agrifood system localization to improve nutrition, and reduce greenhouse gas emissions in Santa Barbara County.

Professor

Carla D'Antonio



**Specialization:** *Plant Ecology; Restoration Ecology; and Invasive Species*

Carla D'Antonio's teachings are centered on the application of ecological knowledge to environmental problem solving. She currently works with a variety of California plant communities evaluating how they respond to environmental change.

Chair, Professor

Helene Gardner



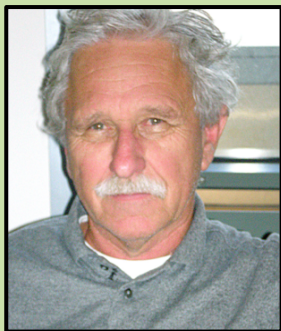
**Specialization:** *Environmental Toxicology; Air Quality; and Environmental Chemistry*

Newly hired Helene Gardner, is Environmental Studies' first female Lecturer with Potential Security of Employment (LPSOE). She has extensive background in toxicology and contaminants in various areas including air quality, landfills, wastewater and groundwater.

LPSOE



## Edward Keller

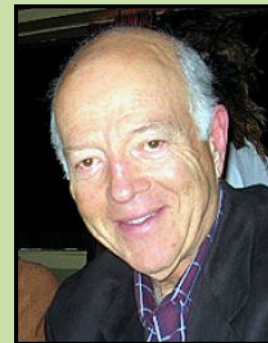


*Specialization: Environmental and Engineering Geology; and Geomorphology*

With over twenty years of experience in public service and consulting, Edward Keller is one of the foremost experts on tectonic geomorphology. Currently, as an offshoot of his research, he studies hydrologic processes in the chaparral ecosystem of southern California.

Professor

## Melvyn Manalis



*Specialization: Wind and Solar Energy; Planning and Evaluation of Renewable Energy*

Mel Manalis has been teaching at UCSB for over 35 years. He conducted the first wind energy study of the Vandenberg Air Force Base in Lompoc, California and the nascent study of solar energy applications for the California Energy Commission following the 1973 oil embargo.

Sr. LSOE

## David Pellow



*Specialization: Environmental Justice; Race and Ethnic Studies; and Social Movements*

David Pellow is known for his work in environmental justice especially in regard to race and class. One of his current projects is a study of the links among the US prison system, ecosystem harm, impacts on communities of color and their implications for social movements.

Dehlsen Professor

## Simone Pulver



*Specialization: Global Environmental Politics; Organizational Theory; and Development*

Simone Pulver joined the ES family in 2009. Her research focuses broadly on the engagement of non-state actors, such as firms and non-governmental organizations in climate change politics at the national and international levels. In addition, she is the ES Senior Thesis Coordinator.

Associate Professor

## Joshua Schimel



*Specialization: Terrestrial Ecosystem Ecology; Microbial Ecology; and Organismal Ecology*

Josh Schimel's research focuses on how bacteria and fungi in the soil control how whole ecosystems work, including plant growth and carbon storage. He has been involved in planning major National Science Foundation initiatives in Arctic science.

Professor

## ES Instructors, Affiliated Faculty, and Staff

### Instructors in Environmental Studies:

Celia Alario	Zach Horton	Stephanie Moret
Lisa Berry	Crisjoe Joseph	Lori Pye
Michael Brown	Denise Knapp	Michael Schindlinger
Wayne Chapman	Linda Krop	Daniela Soleri
Nellie Cohen	LeeAnne Kryder	David Stone
Thea Cremers	Manasendu Kundu	Lisa Stratton
Nate Emery	Bridget Lewin	Claudia Tyler
Matt Fore	Roland Lewin	Jennifer Thorsch
Quentin Gee	Julie Maldonado	Paul Wack
Greg Graves	Jennifer Martin	

### Affiliated Faculty:

Darby Feldwinn, *Chemistry*  
John Foran, *Sociology*  
Ken Hiltner, *English*  
Hugo Loaiciga, *Geography*  
Paulina Oliva, *Economics*  
Russ Schmitt, *EEMB*  
Samuel Sweet, *EEMB*  
Ines Talamantez, *Religious Studies*

### Program Staff

Cami Helmuth  
Cheryl Hutton  
Erinn O'Shea  
Martin Rodriguez  
Eric Zimmerman

### Student Staff

Marina Alvarado  
Vivon Crawford  
Marie Laule

## Q&A with Helene Gardner

The Environmental Studies Program sat down with Helene Gardner to catch up with her since leaving UCSB and her plans as a newly hired faculty member in Environmental Studies.

**ES:** Helene, you began teaching with Environmental Studies in 2011. How does it feel coming back, this time as a senate faculty member?

**HG:** It is a dream come true. When I left after winter 2013, I said I'd be back, mostly to help myself disengage because I didn't really want to leave. I am deeply grateful to the UC system for recognizing the efforts of lifelong teachers and making positions for us on UC campuses and to my colleagues in the ES program for selecting me to fill this teaching position.

**ES:** What were you doing before coming back?

**HG:** I was the technical director of an environmental testing lab in Orange County. I was legally responsible for all the data produced by the lab for drinking water providers, food and beverage makers, plumbing contractors, ground, surface, and waste water remediation specialists, and some fairly hefty industrial clients.

**ES:** You are known for your diverse teaching background. You have experience teaching in a liberal arts school, in private secondary schools, in special education, in noncredit educational schools, and also in the home setting. How do you tailor your teaching to reach students with mixed-abilities and different learning styles?

**HG:** When I first started homeschooling my son, I studied up on learning styles. My knowledge of sensitivity to learning styles really informed my teaching style soon after, and I began to incorporate different elements that would engage each type of learner: reading stories for auditory learners, displays for visual learners, worksheets for what are called "Perfect Paulas" and of course activities for hands-on-learners. I apply that with my students here.



*Helene and former student/ES alum Kenta Ishii after a delightful breakfast.*



*Helene, glistening with joy at her daughter's wedding.*



*Helene (3<sup>rd</sup> from front) paddling with friends.*

**ES:** Environmental toxicology and chemistry are your specializations. Are there any expectations you have of students who take these courses? What would you like students interested in taking your courses to know about you?

**HG:** I expect them to want to learn. I expect them to be curious. I expect them to be willing to do the work. I want to engage with my students. How I structure my courses is not accidental but has been arrived through 29 years of teaching and is my best attempt to accomplish our mutual engagement. Learning is not a passive phenomenon. In many ways I facilitate learning by engaging students in the topic and asking questions and then pushing them off to do what scientists do. I want students to know that I care very much about them, and I want them to succeed.

**ES:** Any final comments? Or anything you want the readers to know about you?

**HG:** I love dogs. I love sea lions. And I especially love the ocean. I, of course, love my son and twin daughters; I miss them constantly as they all live on the East Coast. They were the best things that ever happened to me. Nonetheless I am happy to be here in California teaching.



## Robert Wilkinson Retires *(written by Paul Wack)*

ES was born out of the 1969 Santa Barbara Oil Spill by a group of UCSB faculty from several departments committed to establishing an interdisciplinary program designed to prepare students for the environmental issues awaiting them, which included the first generation of ES instructors Garret Hardin, Roderick Nash, and Barry Schuyler. Bob is a graduate of ES (1979) and serves as an excellent example of what the founders had in mind in building an informed constituency for the environment. Marc McGinnis, distinguished ES Emeritus, sums it up nicely: "In my eyes Bob stands shoulder to shoulder with his former mentors and friends Barry Schuyler and David Brower in terms of his contributions to the fields of environmental education and advocacy."

Bob is the 2<sup>nd</sup> generation Barry Schuyler and has contributed significantly to the ES mission over the past 35+ years through his teaching and tireless professional efforts. Bob has a track record of building bridges between governmental agencies, private entities, non-profit organizations, and people with differing worldviews. He enjoys bringing people together to discuss ideas and convert them into action. For example, Bob has a keen interest in sustainable development education and played a key role in the ultimate creation of AASHE (Association for the Advancement of Sustainability in Higher Education). Also, Bob and Bill Freudenburg originated the Association for Environmental Studies and Sciences here at UCSB. There are many more examples representing his commitment to water and energy policy, climate change, and environmental policy issues, which share in common Bob's ability to bring his efforts into the classroom giving life to environmental issues, seasoned with hope.

Bob's contributions to ES are many and his legacy is assured by the thousands of students who have taken his courses, enjoyed his spirit and energy about the environment, and his caring for people. He is a mentor to many and has been a great ambassador for ES. Bob is not retiring in the traditional sense, but rather reloading for the next chapter in his life, including spending more time in the environment he loves with his wife (Pam). When the 50<sup>th</sup> ES anniversary arrives in April 2020, Bob will be there exchanging adventures with his ES family and reminding us why we all love him.



*Peter Alagona during the 2014-2015 Academic Senate Awards.*

## Peter Alagona Receives Teaching Award

The Committee on Distinguished Teaching awarded Peter Alagona the Distinguished Teaching Award. Peter holds a joint appointment in Environmental Studies and History. He is described as a "superb teacher who is motivated, energetic and committed to keeping his instruction on the cutting edge of content, delivery and outcome." He teaches and advises students with various projects, senior theses and research. As the director of the PhD Emphasis in Environment and Society, he facilitates graduate students across campus in incorporating an interdisciplinary approach to their work. Peter is undoubtedly an unmatched unit of the university and the Environmental Studies Program.

## Simone Pulver Mentors Postdoc Fellows

Associate Professor, Simone Pulver, is on sabbatical for the 2015-2016 academic year. While away, Simone will be mentoring and guiding participants and postdocs in the Socio-Environmental Synthesis Center at the University of Maryland. SESYNC's mission is to foster, synthetic, actionable science related to structure, functioning and sustainability of socio-environmental systems. Simone is a Socio-Environmental Immersion Program mentor. Her expertise in economic and environmental sociology integration has made her an indispensable component in leading workshop discussions, providing mentorship, and integrating new ideas and projects. Environmental Studies looks forward to Simone's homecoming in the summer.



*Simone Pulver facilitates a session during the Ecology Immersion Workshop at SESYNC.*



## Josh Schimel Receives Career Achievement Award

The Soil Ecology Society's 2015 Career Achievement Award honors Josh Schimel for his "enduring and outstanding contribution to scientific advancement, student mentoring, and service in the field of soil ecology." The SES is an international organization of researchers, environmental professors, and others interested in the advancement and promotion of soil biology and ecology.

The Early Career Research Award recognizes a career soil ecologist who has begun making outstanding research contributions to the broad field of soil ecology. Will Beaton of the Global Soil Biodiversity Initiative commented that Josh has spent "[his] career going far out of [his] way to advance the field by studying not only science but the science (and art) of explaining it." Josh has also been recognized for his book, *Writing Science*, in which he discusses how to write proposals and scientific papers more effectively and coherently.

During the Soil Ecology Society conference Josh had this to say: "I think the number I see is the 99% of the calories that humans eat, which ultimately come from soil. Soil is rich, soil is where life comes from for people, and that's where agriculture comes from. It's where everything comes from! So dirt rules!"



*Josh Schimel takes a soil sample at the U.S. Arctic Long-Term Ecological Research site at Toolik Lake in northern Alaska.*

# 20

# THE YEAR OF SOIL

# 15

The UN declared 2015 as the International Year of Soils after recognizing December 5<sup>th</sup> as World Soil Day. The purpose of the IYS is to raise awareness worldwide of the importance of soils for food security, agriculture and sustainable development.



*Oliver Chadwick poses in a soil pit while measuring a cross section of soil and identifying the different soil horizons.*

## Oliver Chadwick Recognized Globally for Contributions to Soil Science

The Soil Science Society of Belgium honored Oliver Chadwick in April at the Royal Academies of Belgium for Science and the Arts. His contributions to soil science have been recognized globally by being invited to speak on the *Day of Young Soil Scientists*. His key-note presentation entitled "Pedogenic thresholds determine Polynesian land-use decisions and agricultural productivity on volcanic islands," is one of the several presentations he gave this year. He was also recognized and spoke in Japan at the Geoscience Union Meeting and Germany as part of the International Year of Soils celebrations this year.

Earlier this year, Oliver joined archaeologists in examining six agriculture sites of the Rapa Nui society on Easter Island. In their research Oliver aims to answer the question as to whether the native Polynesian group declined due to environmental degradation or a political revolution and disease epidemic. Their results suggest that the Rapa Nui reacted to regional variations and natural environmental barriers to producing sufficient crops rather than degrading the environment themselves.



# *Distinguished Visitor:*

## **Julia Marton-Lefèvre**

*Former Director General of the International Union for Conservation of Nature*



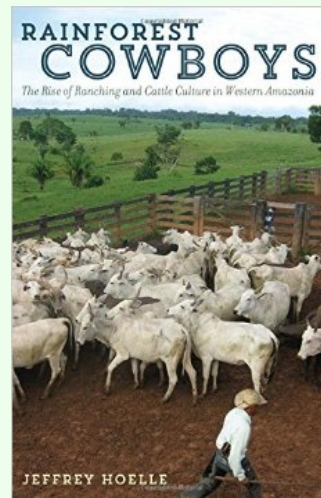
Environmentalist Julia Marton-Lefèvre gave the Environmental Studies Program's 34<sup>th</sup> **Annual Manley Memorial Lecture**. Titled "From Conservation Research to Influencing Policy," Marton-Lefèvre discussed the way nature is governed.

"One of the recurring challenges has been to demonstrate that conservation is not a side activity of a few passionate scientists or well-meaning 'tree huggers,' but that it is absolutely essential for human well-being," she presents. Using an example of the debate on the construction of a road across a World Heritage Site in the Serengeti, Marton-Lefèvre emphasized the importance of finding the balance between saving biodiversity and sustainable development. "Is it versus or can you do it in harmony?" she asked.

Good science is essential for influencing good decision-making by government and nongovernmental organizations. Giving the case of the Sustainable Development Goals, she noted how the UN is attempting to incorporate the so-called three pillars of sustainable development: the social, economic and environmental. In the discourse of sustainability, Marton-Lefèvre has explained what she believes is the fourth pillar, not commonly referred to or discussed: how humans organize themselves to bring about sustainability. Governance, in this sense, becomes a critical issue in influencing policy for sustainable development. As she looked into the crowd, she encouraged many of the young academics to explore this issue, as it will be critical in the way future generations position nature in development.

**About the Steven Manley Memorial Lectures:** Established in memory of Steven Manley (1958-1979), a third year Environmental Studies major who lost his life battling a brush wildfire near Santa Maria. He was an active proponent of the conservation of the environmental landscape, and had a lifelong interest in the outdoors. This lecture series is a celebration of his life.

## Recently Published Books



### *Rainforest Cowboys*

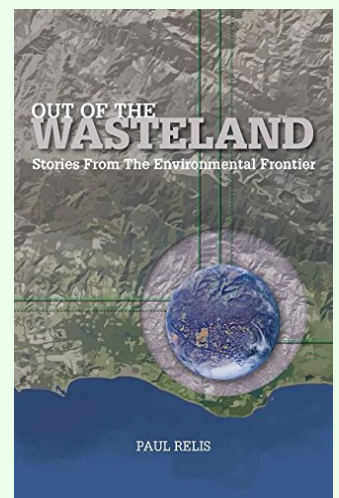
By Jeffrey Hoelle  
Affiliated Assistant Professor



Jeffrey Hoelle shows how cattle raising is about much more than beef production or deforestation. He contextualizes the rise of ranching in relation to political economic structures to understand the spread of "cattle culture." *Rainforest Cowboys* is essential reading for a global audience interested in understanding the economic and cultural features of cattle raising, deforestation and the continuing tensions between conservation and development in the Amazon.

### *Out of the Wasteland*

By Paul Relis  
Former Lecturer



In *Out of the Wasteland*, former lecturer in Environmental Studies, Paul Relis, takes us on a journey of the environmental frontier, from the heady days of the birth of environmentalism in Santa Barbara, into the intricate, obfuscated but all-important world of government and policy, to important new technologies that can free us from this age of oil.



## Industrial Ecology Students Meet Patagonia Founder, Yvon Chouinard

Students in Environmental Studies' course, Industrial Ecology (ES 118), had the opportunity to get out of the classroom and get an inside view of a business engaged in the pursuit of sustainability practices on a field visit to the corporate offices of Patagonia in Ventura, CA.

The students toured the company, checked out the sand volleyball court, day care facility, cafeteria with organic items, design studio, sample sewing room, and employee surfboard rack. They met with Patagonia staff involved in a variety of sustainability efforts and got a surprise visit from Yvon Chouinard. He spoke to students about corporate environmental responsibility and how his vision for environmental stewardship began Patagonia.

ES 118 aims to provide students with an understanding of sustainability, resource and material flows and the relationship between industrial ecology, business and innovation.



*Students and Lecturer Michael Brown (far right) pose with Yvon Chouinard (first row) in Patagonia's headquarters.*

## Lecturer David Stone Mentors Students

David Stone has been a lecturer for the Environmental Studies Program for over 15 years. As the Cultural Resources Manager and Environmental Project Manager, David brings expertise on environmental project planning. He teaches ES 165A, Environmental Impact Analysis.

Earlier this year he provided an hour presentation on archaeological resources to a group of students from Santa Barbara La Cuesta Continuation High School. The group of 20 students visited UCSB as an activity sponsored by the Educating Leaders for the Future (ELF) program, in collaboration with UCSB's Early Academic Outreach Program, Sustainability Program, and La Cuesta High School.



*Lecturer David Stone shows students artifacts from a nearby site.*

## ES Students Win Scholarship

Vivon Crawford and Marie Laule are the recipients of a California Planning Foundation scholarship representing the Central Coast Section of the American Planning Association (APA).

Vivon and Marie are co-founders of the Environmental Planning Coalition, the first APA sanctioned student organization in the history of UCSB. Congrats to them both!



*Marie (left) and Vivon (right) pose for a picture during the ceremony.*



# OUT IN Nature

In 2005, Author Richard Louv coined the term “Nature Deficit Disorder.” While not a medical condition, it is a description of the cost humans have from the alienation of nature. Attention problems, anxiety and depression are often associated with the expanding societal disconnect with nature. With resources from funds such as The William Freudenberg Academic Fund, the Environmental Studies Program has been able to adopt programs, offer courses and opportunities to connect our students as well as the community with the outdoors. Whether it is camping, kayaking, farm visits or bird watching, these programs and courses have proven to be most popular among our students.



**Out in the Field (above):** In Professor David Cleveland's Small Scale Food Production class (ES 166FP) Students learn of the benefits of local foods and operate and manage their own garden plots for an enlightening food experience. Fieldtrips to local farms are frequent. Above, Shu Takikawa of “The Garden of .....” shows students how a plug transplanter operates. Students have the privilege to work alongside farmers during these trips.



**Kids in Nature (above):** Every year, Environmental Studies offers a Nature and Science Education Practicum (ES 191). Students enrolled in the course work with and mentor 5<sup>th</sup> graders from a school in Santa Barbara. Students will learn about plant morphology, insect anatomy, seeds and seed dispersal. The 5<sup>th</sup> grade students will also learn about some of the scientific equipment.



**A Trip to Santa Cruz Island (above & left):** Students enrolled in Environmental Studies' Channel Islands course (ES 111) have the opportunity to learn about the islands' history and geography as well as various environmental affects on the plant and animal communities. Students have expressed the trip to Santa Cruz Island was the highlight of their academic career at UCSB.





At Environmental Studies, we are proud to offer opportunities in research and scholarship for students to enhance their educational and career goals. In 2015, Environmental Studies established two new bestowments: the **Environmental Studies Research Enhancement Award** and the **Environmental Studies Senior Thesis Award**.

## Research Enhancement Award Recipient:

*Jared Williams*



Jared Williams has received the Research Enhancement Award. His project focuses on the potential impact *Phragmites australis* may have on wetland ecosystem functionality. Hybrids of two *P. australis* lineages now exist and are at risk of spreading throughout the wetlands in the American Southwest due to their possible increased invasive potential.

The purpose of Jared's project is to determine the affect of winter temperatures on the invasive potential of the two hybrids in comparison to their native and introduced parental haplotypes. This award has provided Jared funding for soil, trays, peat moss, field collection, and greenhouse spaces necessary to run germination trials. Jared's research stems from current data that demonstrates how as climate change continues, seeds experience less of a natural cold treatment period in the winter and thus affect the plant's invasive potential.

*"The ES Research Enhancement Award has allowed me to continue pursuing my research, which aside from being personally fulfilling is also extremely valuable experience. This work will likely contribute to my competency as a restoration ecologist in the near future."* -Jared

## Senior Thesis Award Recipient:

*Natalia Nelson*



The very first Senior Thesis Award went to Natalia Nelson. Titled "Climate Change and Hydraulic Fracturing Proppants: Calculating the CO<sub>2</sub>e Emissions from Silica Sand Production in Wisconsin," Natalia's thesis explored hydraulic fracturing techniques and their impact on climate change.

Using Wisconsin as a case study and facility permits as her primary source data, she estimated a numerical quantity of the carbon dioxide equivalent (CO<sub>2</sub>e) emissions from the life cycle of silica sand, from initial mining to final well delivery. Her findings were that approximately 0.2 tons of greenhouse gas emissions are released from every ton of silica sand produced. NASA invited Natalia to present her research at the 2015 International Workshop on Environment and Alternative Energy in Spain. She was one of only two undergraduates invited and won third place!

*"I am extremely excited to present my findings to scientists and professionals in this field. I highly recommend taking the ES Senior Thesis course to all seniors because the skills you learn from developing your own research is unparalleled."* - Natalia



# Environmental Studies

## FEATURED ALUMNI SPOTLIGHT



### Leila Salazar-López

*Class of 1998*

The Environmental Studies Program recognizes Leila Salazar-López for her recent accession as the Executive Director of Amazon Watch. Leila came to UCSB in 1993 as a political science major. While a student, Leila traveled to Ecuadorian Amazon where she learned the basics of tropical ecology and became fascinated by life's interconnectedness. Her experience in the Amazon motivated her passion for the environment and soon after her arrival she declared the B.A. major in Environmental Studies. Upon graduating she volunteered and worked for meaningful organizations such as Green Corps, Global Exchange and the Rainforest Action Network. A proud Chicana-Latina and mother of two, Leila lives in San Francisco where she leads this organization at a critical time for the Amazon.

For her passion in global environmental justice, advocacy in indigenous and environmental rights, and her leadership in defending the world's rainforests and its peoples, the Environmental Studies Program congratulates Leila for her accomplishment and gives thanks for her life-long commitment to a better future. To learn more about Leila or the Amazon Watch, please visit: [www.amazonwatch.org](http://www.amazonwatch.org).

#### ES ALUM:

Watch for the **ES Alumni Survey** in early 2016!

Join our **Friends of ES Listserv**:

<https://lists.lsit.ucsb.edu/listinfo/friends-of-es.es>

### Liz Clark

*Class of 2002*

Liz Clark, dubbed "The Surfer" by National Geographic for their Adventurer of the Year 2014-2015 issue, gained interest in surfing and sailing at age 10 when she completed a 5,000-mile sailing trip with her family. Liz came to UCSB in 1998 where her passion for the environment intensified while studying abroad in Australia. With the encouragement of former lecturer and fellow sailing-enthusiast, Barry Schuyler (1923-2011) and various locals, Liz set sail from Santa Barbara Harbor in 2005. Since then, Liz has surfed and sailed across the globe as an ambassador for Patagonia, and has been a proponent of self-sufficiency and environmental protection. In the freedom of solitude, Liz sails west with the intention of just simply 'living.'

For her environmental advocacy, dedication to personal growth and self-awareness, and a true champion of "doing what you love," the Environmental Studies Program recognizes Liz for her inspiring journey and philosophy and wishes her a swell voyage to her next adventure. To find out and follow Liz's next journey, please visit her website: [www.swellvoyage.com](http://www.swellvoyage.com)





# New Lecture Series and Fund Created to Honor Memory of ES Alumna



**Darcy Aston**  
*Environmental Studies, Class of 1981*

A new Annual Lecture and Community Gathering on Water Sustainability has been launched in memory of Darcy, Aston, UCSB Environmental Studies Alum, Class of 1981. Darcy was a beloved member of the Santa Barbara community. In her honor, these lectures will focus on innovative approaches to the complex issues of water quality, water conservation and watershed protection. The first lecture and potluck gathering is scheduled for January 2016. Contributions to help endow the lecture fund are now being accepted.

Darcy was passionate about wise water resource management and gained much admiration and respect throughout her career. She educated, inspired, and supported the public on complex water quality problems and helped find effective and practical solutions. These include but were not limited to: community outreach on pollution prevention; sustainable landscaping; development of classroom curricula on water conservation and watershed issues; leadership in watershed and creek restoration efforts; and development of educational signage for local creek and beaches.

The Annual Lecture and Community Gather on Water Sustainability will emphasize the things that were most important Darcy: protection of wild places and wildlife, improving public health and minimizing the human footprint on the earth. A potluck reception will follow each lecture. The events will be free to all in the community and will provide an annual opportunity to explore a critical environmental issue area and to honor and remember Darcy.

The fund to support this lecture series has been established through the UC Santa Barbara Foundation and donations are welcome. The Environmental Studies Program will manage the fund in perpetuity. Donations are tax deductible and can be made by mail, phone or online. To learn more about the fund or make a donation please visit: [www.giveucsb.com/astonfund.htm](http://www.giveucsb.com/astonfund.htm) or turn to page 19 of this newsletter.

The first lecture will take place on Saturday, January 30, 2016 at the Mosher House Alumni Hall on the UCSB campus. The lecture will begin at 3:00PM with a potluck immediately following. For further details, please check the events page on the ES website: [www.es.ucsb.edu/news](http://www.es.ucsb.edu/news).



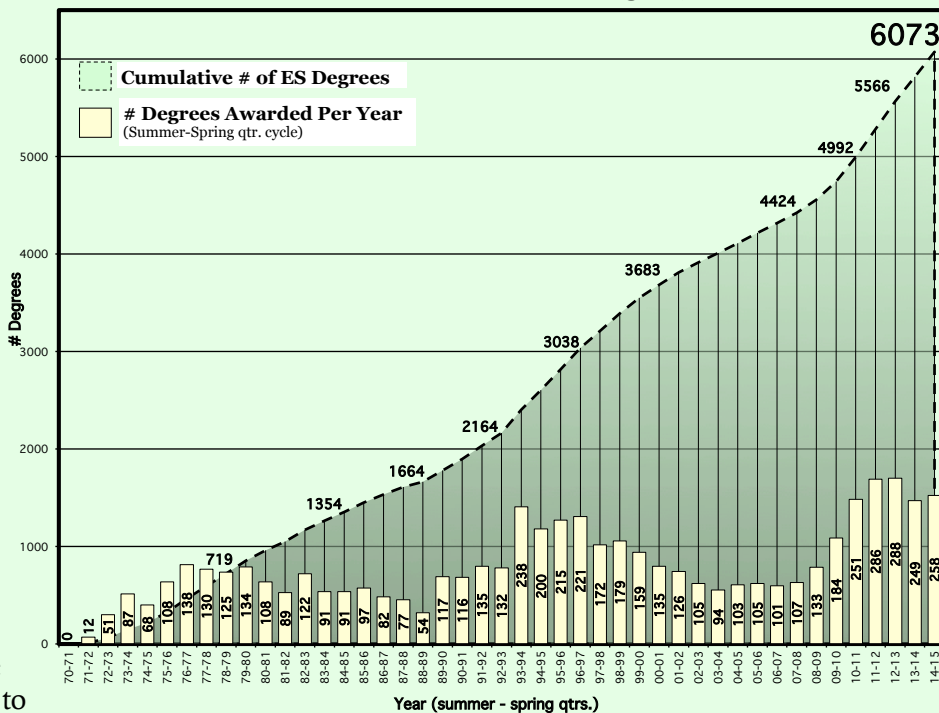
# Congratulations ES Graduates, Class of 2015!

This year, Environmental Studies had an astonishing **258 graduates**, making the Class of 2015, the **THIRD largest** ever in the 45-year history of the program. Somewhere out in the world is our **6,000<sup>th</sup> graduate!** Combined, this brings the Environmental Studies Program a **grand total of 6,073 graduates** since 1970!

- **70 graduates** this year received the B.S. degree in Environmental Studies and
- **6 graduates** received the B.S. degree in Hydrologic Sciences & Policy
- **Just under 200 graduates** received one of the most difficult B.A. degrees offered at UCSB
- **18% (twice the campus average)** graduated with a double major in disciplines ranging from Anthropology to Zoology

Over half of this year's graduates completed an internship and more than a third studied abroad. Again, congratulations ES graduates class of 2015. We wish you the best of luck in your future goals and ask you to please stay in touch.

Number (#) Degrees Awarded  
UCSB Environmental Studies Program, 1971 - 2015



## Wilderness Youth Project Receives Community Service Award

The Environmental Studies Program awarded the Wilderness Youth Project (WYP) with the Community Service Award for its mentorship and outreach to local youth.

WYP is a local non-profit with a mission to foster confidence, health, and a life-long love of

learning through active outdoor experiences and mentoring. In the last fifteen years they have connected hundreds of youth each year with nature through after-school, summer, and expedition programs.

Studies show outdoor time helps children grow lean and strong, enhances imaginations and attention spans, decreases aggression, and boosts classroom performance. In addition, children who spend time in nature regularly are shown to become better stewards of the environment. These quantifiable benefits are all good and well, but at the root of the conversation is one singular concept: we know in our hearts that nature is the natural habitat for children. Director Dan Fontaine accepted the award on behalf of the program.





# *A Thank You To Our Donors*

The Environmental Studies Program would like to recognize the following individuals who contributed to our program from July 1, 2014 – June 30, 2015. We offer you a sincere **THANK YOU** for your support. Through you, we have been able to provide our students with outstanding opportunities and caliber education to develop their understanding and leadership in environmental studies.

**Ms. Janice E. Jagelski and Mr. Patrick J. Morrin (Danevra Foundation)**

**Mr. Christopher K. and Mrs. Malin Fletcher**

**Mr. Howard J. and Mrs. Lisa A. Wenger**

**Ms. Sara C. Aminzadeh**

**Mr. Jess R. Booth**

**Mr. Brendan R. Bream and Mrs. Kathleen D. Bream**

**Ms. Andrea L. Cullinen**

**Ms. Gwen Dandridge and Dr. Joshua Schimel**

**ExxonMobil Foundation**

**Ms. Merrilee A. Fellows**

**Mrs. Mary A. Gosselin**

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**Mr. Kevin A. Hart**

**Mrs. Fran F. and Mr. M. Leroy Harvey**

**Mr. Robert M. Henderson**

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**Mr. Gregory W. Mohr and Ms. Wendy J. Wittl**

**Mr. Stephen E. Oliva and Ms. Susan R. Ellis**

**Mr. Timothy A. Olson**

**Mrs. Jeanne and Mr. Walter Sedgwick**

**Mr. John and Mrs. Michelle Taguchi**

**Mrs. Jean L. Thomson**

**Toyota Motor Sales USA Foundation, Inc.**

**Mrs. Cynthia L. and Mr. Ted Uthus**

**Mr. Kevin G. Vielbaum**

A special **THANK YOU** to our UC Santa Barbara Foundation Donors who have made a Permanent Investment in the Future of the Environmental Studies Program through Endowment Gifts.

***Barker Scholarship Endowment Fund in Environmental Studies***

***Matthew Charles Decker Memorial Environmental Scholarship Fund***

***Dehlsen Chair in Environmental Studies***

***William Freudenberg Academic Development Fund***

***Steve Manley Memorial Fund***

***Arent and Jean Schuyler Chair in Environmental Studies***

***Barry Schuyler Lecturer Fund in Environmental Studies***



# *Giving Opportunities in Environmental Studies*

Each year the Environmental Studies Program is fortunate to receive support from alumni, friends, family and community members who recognize the value of our program. The support from our donors goes a long way toward enhancing classroom and fieldtrip experiences, providing scholarships and awards, bringing speakers, and other student support. Our goal has always been to provide our students with the best possible opportunities to explore, learn and develop. We invite you to join us in pursuit of these goals by donating to one or more of the following causes:

## **William Freudenburg Academic Fund**

The William Freudenburg Academic Fund was established in 2011 to honor the quintessential Environmental Studies Professor. William Freudenburg was a dedicated and beloved teacher, a committed member to the UCSB community and a world-class scholar. This fund supports the educational mission of the ES Program by enhancing teaching and learning, and building closer ties among faculty and students. It specifically supports field trips, classroom technology, and teaching assistants among other essential functions.

## **Education Development Fund**

This fund directly supports undergraduate student activities and development through Environmental Studies internships, scholarships, and awards. Support from contributions to the fund include, but are not limited to the Marc McGinnes Environmental Law and Advocacy Scholarship, the Outstanding Senior Award, and the Matthew Charles Decker Scholarship.

## **Environmental Studies General Fund**

The Environmental Studies Program has a general fund, which is intended to give the chair complete discretion to provide funding for the program's most pressing needs.

## **Darcy Aston Memorial Lecture Fund**

This fund will support an Annual Lecture and Community Gathering on Water Sustainability. These annual lectures will focus on innovative approaches to the complex issues of water quality and watershed protection with an emphasis on the things that were most important to Darcy: protection of wild places and wildlife, public health and minimizing the human footprint on earth. These annual lectures will also serve as an opportunity for Darcy's friends, family and colleagues to gather to honor and remember Darcy.

To find out more about each opportunity, please visit the ES website: <http://www.es.ucsb.edu/giving>  
If you would like to support the program, please indicate which area you'd like to support.

Environmental Studies also has "Unrestricted Funds." These funds help cover important aspects of the ES academic mission for which there are no sources of funding.

### *Mail checks to:*

Carla D'Antonio, Chair  
Environmental Studies  
Program  
University of California  
Santa Barbara, CA  
93106-4160

**OR**

### *Contact:*

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Director of Development  
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