



# Environment, Wellness, and Communities

## Conference Errata



Schedule Changes and Additions		
Addition	Thursday June 22	7:45am JESS Editorial Board meeting Room S120A Contact: Tony Rosenbaum at <a href="mailto:tonyros@ufl.edu">tonyros@ufl.edu</a>
Presenter Changes and Additions		
p. 21	B-2	Paper withdrawn: Esther Conrad, University of California at Berkeley <i>Collaborative governance in the context of water management: California's Sustainable Groundwater Management Act</i>
p. 23	C-2	Change in discussant: Matthew Grabau, Desert LLC, replaced with Larry Fisher, University of Arizona, <a href="mailto:lafisher@email.arizona.edu">lafisher@email.arizona.edu</a>
p. 30	F-3	Paper withdrawn: Namita Gupta, Panjab University, Chandigarh (India) <i>Community Driven Approach for the Restoration of Local Ecology: Success stories from India</i>

**AESS** | ASSOCIATION FOR  
ENVIRONMENTAL  
STUDIES AND SCIENCES

ANNUAL CONFERENCE

JUNE 21 -24, 2017

*The University of Arizona*

2017

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JUNE 21 –24, 2017

*The University of Arizona*

# Conference at a Glance

All conference activities (with the exception of Friday dinner) take place in the Environment and Natural Resources 2 Building, 1064 E. Lowell Street

Wednesday, June 21		
8:00am – 5:00pm	Registration / Business Center	S107
9:00am – 4:00pm	All Day Workshops	Various
9:00am – 12:00pm	Morning Workshops ( <i>includes coffee break</i> )	Various
12:00pm – 1:00pm	Lunch ( <i>for full-day workshop participants</i> )	Served S120/ Seating in S107 and throughout building
1:00pm – 4:00pm	Afternoon Workshops ( <i>includes coffee break</i> )	Various
5:00pm – 6:00pm	Reception and Welcome	Courtyard
6:00pm – 7:30pm	Opening Keynote	N120
Thursday, June 22		
7:30am – 5:00pm	Registration / Business Center	S107
8:00am – 5:00pm	Exhibitions Open	S120
7:30am – 8:30am	Breakfast	Served in S120
8:30am – 10:00am	Plenary	N120
10:30am – 12:00pm	Session A	Various
12:15pm – 1:45pm	Lunch	Served S120/ Seating in S107 and throughout building
12:15pm – 1:45pm	Lunch Roundtable Discussions	S120A
12:15pm – 2:00pm	Poster Session	S107
2:00pm – 3:30pm	Session B	Various
3:30pm – 4:00pm	Coffee Break	S120
4:00pm – 5:30pm	Session C	Various
5:45pm – 6:45pm	AESS Member Meeting ( <i>includes afternoon tea</i> )	S107
7:00pm – 10:30pm	Film Night	N120
Friday, June 23		
7:00am – 5:30pm	Registration / Business Center	S107
8:00am – 5:00pm	Exhibitions Open	S120
8:00am	Breakfast / Coffee and Pastries	S120
7:00am* - noon	Field Trips ( <i>*see schedule for exact meeting times</i> )	Courtyard
12:30pm – 1:30pm	Lunch	Served S120/ Seating in S107 and throughout building
1:30pm – 3:00pm	Session D	Various
3:00pm – 3:30pm	Coffee Break	S120
3:30pm – 5:00pm	Session E	Various
6:00pm – 8:00pm	Awards Reception and Dinner	Tucson University Park Hotel
Saturday, June 24		
8:00am – 1:00pm	Registration / Business Center	S107
8:30am – 9:30am	Breakfast / Coffee and Pastries	S120
9:00am – 10:30am	Session F	Various
10:30am – 11:00am	Coffee Break	S120
11:00am – 12:30pm	Session G	Various
12:30pm	Lunch and Closing Panel	S120/S107
2:30pm	Adjourn	







## Mission

The Association for Environmental Studies and Science (AESS) is an independent faculty-and-student-based professional association in higher education, designed to serve the needs of environmental scholars and scientists who value interdisciplinary approaches to research, teaching, and problem solving.

Founded in 2008, the Association seeks to provide its members with the latest environmental information and tools to create better courses, strengthen research, develop more satisfying careers, harness the power of a collective voice for the profession, and enjoy each other's company at national and regional meetings.

A major aim of AESS is to encourage interdisciplinary understanding of environmental science, policy, management, ethics, history, and all of the other vital contributions of traditional disciplines. From its beginning, the Association has been envisioned as a community of environmental scholars and scientists, not a confederation of disciplines. Fundamental to its members' embrace of higher education is the notion that broad advances in environmental knowledge require disciplinary, interdisciplinary, and transdisciplinary approaches to research and learning.

Association for Environmental Studies and Sciences  
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# Welcome

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## President



**David M. Hassenzuhl, PhD**

*President, Association of Environmental Studies and Sciences*  
Dean, College of Natural Sciences, CSU Chico

Welcome to AESS 2017! To me, each year the AESS conference is an opportunity to meet with old friends and discover new ones. This year, in a challenging political environment for those of us dedicated to well informed environmental decision making, we gather in Tucson to focus on issues of Environment, Wellness, and Community. Each of these is an expansive concept, and I hope you will explore them broadly. One community I encourage you to focus on is our own community of environmental studies and sciences programs. What do we want for our students? What do we expect from ourselves? I look forward to discussing these issues with you, and using your ideas as AESS moves into its second decade of service to our community.

## Program Chair



**Valerie Rountree**

*AESS 2017 Program Chair*  
Founder and Director, Better Climate Research and Policy Analysis  
San Francisco Bay Area, California  
Affiliate, University of California Berkeley and Lawrence Berkeley National Laboratory

With over 60 presentation and discussion sessions, as well as workshops, mealtime roundtable discussions, poster presentations, and social events, this year's conference promises to be as unique and innovative as ever! Hosted by the University of Arizona located in sunny Tucson, all of the AESS Conference activities will take place in the ENR2 building. Designed to mimic a slot canyon, the building incorporates rainwater harvesting and other features of sustainable design, and reflects the university's

commitment to sustainability. Although June is one of the hottest months in Tucson, the Sonoran Desert is full of life to be discovered. I hope you will take the opportunity to explore the rich landscape and biodiversity this region has to offer, and the ever-changing city scape of Tucson—and stay hydrated!

This year the presentation sessions are organized into ten “tracks,” or themes, that epitomize the breadth and depth of environmental expertise among AESS members and conference participants. These tracks include: natural resource conservation and management, collaborating and partnering on environmental issues; subaltern perspectives in environmental studies and management; environmental arts and humanities; energy and water; climate change; adaptation and resilience; sustainability and environmental movement history; pedagogy; and academia: teaching, research and advocacy. The program showcases diversity in academic disciplines, research interests, approaches to teaching, and perspectives. There is so much to do every day, and the final day of presentations is as exciting as the first.

On behalf of the Program Committee, I welcome you and invite you to engage with your extraordinary colleagues and help AESS keep its reputation for warmth and friendliness. It has been a pleasure serving as the Program Chair for the 2017 AESS Conference, and I look forward to another great year of idea sharing and comradery!

## Site Coordinator



**Angie Brown**

*AESS 2017 Conference Site Coordinator*  
Project and Events Coordinator, Institute of the Environment  
The University of Arizona

Welcome to the University of Arizona and sunny Tucson! The University of Arizona Institute of the Environment is proud to be the local host of this year's conference. The building in which the conference will be held—Environment and Natural Resources 2—is a LEED-platinum building that showcases the University's commitment to sustainability, environmental research and education, and creative scholarship.

The Institute of the Environment is a major hub of sustainability at the University, serving to advance innovative solutions to environmental challenges in Arizona and around the planet. We embrace the significance of our location in the desert Southwest and harness expertise from across the university and external partners to help communities, especially those in dry regions, make the best-informed decisions for a sustainable future.

Tucson provides an ideal setting to explore this year's theme of Environment, Wellness, and Community. We offer field trips that include exploring the Sonoran Desert, visiting a subalpine forest on nearby Mount Lemmon, and experiencing what makes Tucson a UNESCO World City of Gastronomy, among others. We look forward to introducing you to our campus and the surrounding Tucson area.

## Acknowledgements

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**The AESS 2017 conference was made possible by the hard work of many staff and volunteers.**

A special thanks to all the wonderful people who made this conference happen, especially AESS Program Coordinator **Carolyn Anthon**, the main University of Arizona contact **Angie Brown**, Conference Program coordinator **Valerie Rountree**.

Many other people volunteered time to make the conference happen: **Jim Buizer** and **Skip Laitner** in Tucson, the conference program committee, and the **AESS Board of Directors**.

Thanks to all of the **sponsors and exhibitors**, whose commitment to our mission keeps our conferences affordable. Thanks to **Monty Hempel**, **Crystal Fortwangler**, and **Philip Brick** for organizing another excellent evening of film and discussion.

Special thanks to **Gina Murphy-Darling**, “Mrs. Green,” **Session**, **Field Trip**, and **Workshop contributors**.

And, endless thanks to **David Blockstein**, **Walter Rosenbaum**, and **Kim Smith**, who have supported AESS in many ways and for many years.

Thank you to all the **conference volunteers**, and graphic designer **Jodi Wroblewski** who created the conference logo to mimic the architectural wave feature of the ENR2 building at our host institution.

### **AESS Program Committee Members:**

**Valerie Rountree (Committee Chair)**, Doctoral Candidate, School of Natural Resources and the Environment, University of Arizona

**Jennifer Allen**, Associate Professor, Public Administration, Portland State University

**Ira Feldman**, President and Senior Counsel, Greentrack Strategies

**Curt Gervich**, Associate Professor, Center for Earth and Environmental Science, SUNY Plattsburgh

**Lissy Goralnik**, Assistant Professor, Department of Community Sustainability, Michigan State University

**Leslie Gray**, Professor, Department of Environmental Studies and Sciences, Santa Clara University

**Geoffrey Habron**, Director of ePortfolios, Warren Wilson College

**Stephanie Kaza**, Professor Emerita, Environmental Studies, University of Vermont

**Teresa Lloro-Bidart**, Assistant Professor, Department of Liberal Studies, California State Polytechnic University, Pomona

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**Majory Silisyene**, Doctoral Candidate, Department of Natural Resources Science and Management, University of Minnesota

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**Sandra Bernal**, PhD candidate, Arid Lands Resource Sciences, University of Arizona

**Jim Buizer**, Deputy Director, Climate Adaptation & International Development, University of Arizona

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**Peter Dobrovolny**, Tucson Emerging 2030 District and Pima Community College

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### **The University of Arizona Site Team:**

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**Maggie Heard**, Building Monitor and Technology

**Institute of the Environment communications team and student assistants**

**University of Arizona Residence Life Conference Services**

**University of Arizona Student Union and Arizona Catering Company**

**University of Arizona Facilities Management**

**University of Arizona Parking and Transportation Services**

**University of Arizona Police Department**

**University of Arizona College of Agriculture and Life Sciences**

### **National Council for Science and the Environment (NCSE) Staff, especially:**

**David Blockstein** Chief Scientist, National Council for Science and the Environment; Executive Secretary, Council of Energy Research and Education Leaders

**Michelle Wyman**, Executive Director

**Jessica Soule**, Director of Strategic Initiatives and Program Development

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Citizens' Climate Lobby



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## ENR2 Building



The Environment and Natural Resources 2 (ENR2) building at the University of Arizona provides a space for solving some of the world's most urgent environmental issues.

Researchers use state-of-the-art facilities to further our understanding of climate change and its impacts, wildlife and land conservation, water resources, renewable energy, and many other complex challenges. Interdisciplinary scholars, staff, and decision makers meet to develop innovative solutions that help ensure a vibrant and environmentally sound future. Thousands of students benefit from the latest audio and video capabilities in meeting rooms and a 600-person auditorium, boosting their opportunities for learning and discovery.

The building itself incorporates cutting-edge technologies that epitomize the UA's commitment to sustainability in higher education.

- ENR2's design mimics a slot canyon, echoing a southwestern sense of space, light, and shadow.
- A 52,000-gallon tank under the building captures and stores rainwater that is then used to irrigate the desert adapted plants.
- ENR2's heating and cooling system, coupled with the building's design, is projected to use 30 percent less energy than a traditional HVAC system.
- The rooftop is envisioned as a learning laboratory and includes space built into the roof for gardens.



Critters in the form of 9" x 11" metal inlays—lithoglyphs designed by Tucson's Creative Machines and "adopted" by members of the UA and broader Tucson community—help bring the building to life and provide an interesting environmental path for all who visit.



### observation notes

Pick up a Field Guide at the conference registration/business table and see how many observations of common (c), fairly common (fc), and rare (r) critters you can make during your time at AESS 2017!

## Contacts

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**Emergency:** Call **911** for any emergency requiring police, fire or medical assistance.  
Non-life threatening emergencies contact **University of Arizona Police Department (UAPD) 520-621-8273**

For questions regarding the conference program (sessions, dates and times):  
Conference Program Committee Chair, [conference@aessonline.org](mailto:conference@aessonline.org)

For AESS-related questions (membership, communications, etc.):  
Carolyn Anthon, AESS Program Coordinator, [support@aessonline.org](mailto:support@aessonline.org)

For questions on conference theme, keynote speakers, or sponsorship:  
David Hassenzahl, PhD, AESS President, [AESSpresident@aessonline.org](mailto:AESSpresident@aessonline.org)

For questions related to The University of Arizona facilities (housing, field trips):  
Conference Site Coordinator, [conferencecoordinator@aessonline.org](mailto:conferencecoordinator@aessonline.org)

For conference registration related questions:  
The University of Vermont, University Event Services, [EventRegistration@uvm.edu](mailto:EventRegistration@uvm.edu)

## FAQs

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### How do I get to the University?

- Tucson is serviced by Tucson International Airport ([www.flytucson.com](http://www.flytucson.com)). Access to the University of Arizona from the airport may be provided by rental car, taxi, shuttle, public transit ([www.suntran.com](http://www.suntran.com)), or ride-sharing services such as Uber and Lyft. The University of Arizona is directly connected to downtown Tucson via the SunLink Streetcar ([www.sunlinkstreetcar.com](http://www.sunlinkstreetcar.com)).

### If driving to campus, where do I park?

- Parking information for The University of Arizona can be found here: <https://parking.arizona.edu/parking/garages/visitor-parking>. Parking can be purchased at each visitor parking garage. The Sixth Street Parking Garage is located adjacent to the ENR2 building, where the AESS Conference will be taking place. Street and metered parking is also available throughout campus.

### Where do I check-in?

- Check-in for the conference will be in room S107 at the ENR2 building. Daily registration hours vary. Please be sure to arrive 30-45 minutes prior to your first session to allow adequate time for registration check-in.

### Where can I print or make copies? Is there a lost and found? What if I have general questions?

- The conference check-in site, ENR2 building, room S107 also serves as a business center. Stop by with any questions you may have, if you need a document printed, or perhaps lost or found an item.

### Where can I find dining options?

- A large selection of restaurants are located in [Main Gate Square](#) (located on University Blvd. between Euclid and Park Avenues), a 5-minute walk from ENR2 and the hotel. Additionally, the SunLink streetcar stops at Main Gate Square; more restaurants are about a 5-minute ride away on [Fourth Avenue](#) and in [downtown Tucson](#). Some local favorites include freshly roasted coffee at [Caffe Luce](#) on Park Ave, farm-to-table comfort food at [Pasco](#), solar-powered [Brooklyn Pizza](#) on Fourth Ave, and locally sourced and sustainably run [Senae Thai Bistro](#) downtown.

### Is there a grocery, pharmacy or convenience store nearby?

- A CVS is located at the corner of Park and Euclid, about a 10-minute walk from ENR2 and a 5-minute walk from the hotel.
- Additionally, Tucson boasts the [Food Conspiracy Co-op](#) a short streetcar ride away on Fourth Ave and [Johnny Gibson's Downtown Market](#). Within a 10-minute drive, you can find Safeway, Fry's and Albertson's.
- View the [shopping map](#) for more information.

### I need coffee, where can I find some?

- UA is home to two on-campus Starbucks. Additionally, coffee can be found at locally owned and operated Caffe Luce on Park Ave near University Boulevard, Starbucks on University near Euclid, and the Slot Canyon Cafe within the ENR2 building.

## What's in Store

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People often come to conferences as much for meeting other people and networking as for formal sessions. AESS has earned a reputation over the years as a friendly and warm gathering, and we are grateful to all for continuing this tradition. We extend our welcome to those who are here for the first time and to those who are returning; to those from close by and to those from far away.

AESS is a great place to meet new people, find old friends, talk over job opportunities and your latest book, and to have an in-person interaction with someone you have connected to virtually.

### **Workshops (Wednesday only)**

Workshops are interactive (as opposed to lecture-based) and have a formal educational or professional development component. Content may include presentations, discussions, exercises, formal training, or other methods of promoting heuristic goals. Workshops are expected to have clear goals and outcomes.

### **AESS Member Meeting (Thursday, 5:45pm)**

AESS members are invited to a Business Meeting to discuss current and future directions of the organization. Please come, listen, and share your ideas.

### **Discussion Symposia**

Discussion symposia are designed for focused discussion on a selected topic. Playing off the original ancient Greek symposia, the emphasis is on in-depth intellectual exchange. Opening remarks are appropriate but it is not expected that participants will deliver a formal presentation.

### **Exhibitors (Thursday and Friday)**

Exhibitors include publishers, universities, organizations, and others. They bring a wealth of information, book samples, and much more. Take the time to visit them all! This is a great opportunity to speak personally with, say, a publisher about your upcoming book project, or with a graduate school about their admissions criteria, or about the projects and approaches (and job opportunities?) of non-profits.

### **Mealtime Roundtables (Thursday, 12:15pm)**

Mealtime roundtables are designed to foster open discussion around a topic of general and collective interest to the AESS community. Anyone can join a roundtable. They are led by the coordinator listed in the program book.

### **Poster Session (Thursday 12:15pm)**

Poster presenters will be on hand during the Poster Session to converse informally about their work.

### **Presentation Panels**

Presentation panels are designed for presentation of research or other scholarly AESS-related endeavors. In general, they consist of up to five presenters who are each allotted approximately 15 minutes to speak, followed by questions and answers or discussion.

### **Sessions**

Sessions are a collection of 4-5 individual presentation papers unless otherwise indicated. If there is a session you particularly want to hear, we urge you to arrive early to get a seat as some classrooms have limited capacity.

### **The Arts at AESS and Film Night**

Arts abound at AESS conferences. The photos included on the program cover were submitted to the University's annual "Eye on the Environment" photo contest. Be sure to pick up the *Critter Guide* at registration and enjoy exploring the art of ENR2. Workshops and sessions include the arts, and Track 4 of the Sessions features presentations on *Environmental Arts and Humanities*. The tradition of *Film Night* continues on Thursday with short films and discussion with the filmmakers, and Friday's field trip offerings include a chance to visit the *San Xavier Mission*, which is widely considered to be the finest example of Spanish Colonial architecture in the United States.

**And awards, dinner, keynotes, field trips, and much more.**





## Workshops Overview (Wednesday)

Wednesday All Day Workshops 9:00am – 12:00pm & 1:00 – 4:00pm	
<b>W-1 Teaching for Turbulence: Contemplative Practice Under The Eye of the Doomsday Clock</b> <i>Room S495</i>	
<b>W-2 Bringing Energy Education to Environmental and Sustainability Studies and Sciences</b> <i>Room S217</i>	
Wednesday Morning Workshops 9:00am – 12:00pm	Wednesday Afternoon Workshops 1:00pm – 4:00pm
<b>W-3 Growing pains and lone wolves: A skill-sharing and networking workshop for faculty managing new programs</b> <i>Room S215</i>	<b>W-9 Navigating Science to Action in a Post-fact World</b> <i>Room S215</i>
<b>W-4 Block Party: Invigorating course assignments with woodblock printmaking</b> <i>Room S223</i>	<b>W-10 Health and Sustainability: The Way Forward</b> <i>Room S223</i>
<b>W-5 Improving Cross-disciplinary Communication: An Introduction to the Toolbox Dialogue Method</b> <i>Room S225</i>	<b>W-11 The Grand Challenge of Water: Designing Interdisciplinary Curriculum</b> <i>Room S225</i>
<b>W-6 Developing Collaborative and Interdisciplinary Leadership Capacity to Address Wicked Problems: Part I</b> <i>Room N595</i>	<b>W-12 Developing Collaborative and Interdisciplinary Leadership Capacity to Address Wicked Problems Part II</b> <i>Room N595</i>
<b>W-7 EcoTypes: Exploring Environmental Ideas With Your Students</b> <i>Room S210</i>	<b>W-13 Using Effective Environmental Education and Communication Principles and Tools In Your Work to Improve Outcomes, Foster Wellness and Cultivate Community</b> <i>Room S210</i>
<b>W-8 ADVANCE &amp; TE2030D SUSTAINABILITY AND BUILT ENVIRONMENT WORKSHOP: The environmental impact and the dream of a better interaction through the 2030 Districts</b> <i>Room S230</i>	<b>W-14 Embodied Transformation for Sustainability: Sparking creative capacity and agency</b> <i>Room S230</i>



## Lunch Roundtables (Thursday)

Thursday Lunch Roundtables 12:15pm – 1:45pm
<b>R-1 Each Individual Matters in Their Environment, Wellness and Community</b> <i>Room S210</i>
<b>R-2 Rethinking US Chemicals Policy to Account for Potable Water Reuse</b> <i>Room S215</i>
<b>R-3 The Role of Case Studies in Teaching in Environmental Studies and Sciences Programs</b> <i>Room S225</i>
<b>R-4 The US - Mexico Border: Climate, Politics and Environmental Changes</b> <i>Room S223</i>



## Sessions Overview (Thursday – A, B, C)

TRACK	Session A 10:30am – 12:00pm	Session B 2:00pm – 3:30pm	Session C 4:00pm – 5:30pm
<b>1</b> <b>Natural Resource Conservation and Management</b> <i>Room S210</i>	A-1 Adoption of natural resource conservation practices/proenvironmental behavior on private lands in rural and urban landscapes	B-1 Forest and Natural Resource Management I: Negotiating Complexities of Management	C-1 Forest and Natural Resource Management II: International Perspectives
<b>2</b> <b>Collaborating and Partnering on Environmental Issues</b> <i>Room N350</i>	A-2 Local Government and Academic Partnerships – Creating Synergies to Address Key Community Environmental Problems	B-2 The Challenge and Opportunity of Collaborative Governance: Case Studies for Natural Resource Management	C-2 Discussion Symposium: Collaborative Approaches to Complex Issues: Gleaning Lessons Learned
<b>3</b> <b>Subaltern Perspectives in Environmental Studies and Management</b> <i>Room S495</i>	A-3 Discussion Symposium: Beyond Environmental Justice: Engaging Minority Communities in Environmental Conservation and Activism	B-3 Local, place-based, and indigenous knowledge for ecological resilience I	C-3 Local, place-based, and indigenous knowledge for ecological resilience II
<b>4</b> <b>Environmental Arts and Humanities</b> <i>Room S223</i>	A-4 Art, Environmental Understanding, and action	B-4 The Role of Studio Art in Environmental Studies	C-4 [intentionally blank]
<b>5</b> <b>Energy and Water</b> <i>Room S225</i>	A-5 Discussion Symposium: Decoding the FEW nexus via 'Cognitive fix'	B-5 Public perception of water scarcity: new research to promote informed decision making	C-5 Multidimensional Impacts of Energy Development
<b>6</b> <b>Climate Change</b> <i>Room S230</i>	A-6 Water and Climate Adaptation, Planning and Management	B-6 Climate Change I: Perceptions and Education	C-6 Climate Change II: In Search of Carbon Neutrality
<b>7</b> <b>Adaptation and Resilience</b> <i>Room S215</i>	A-7 Adaptation and Resilience I: Understanding our publics	B-7 Adaptation and Resilience II: The role of place	C-7 Discussion Symposium: Communicating Themes of Resilience in a Time of Denial: An Integral Approach to Communicating Complex Issues Across Mental Models
<b>8</b> <b>Sustainability and Environmental Movement History</b> <i>Room S217</i>	A-8 Defining Sustainability Across Contexts	B-8 Community Building in Sustainability Education	C-8 Applied learning for sustainability: New 'fieldwork' cases enhancing interdisciplinary learning and action
<b>9</b> <b>Pedagogy</b> <i>Room N595</i>	A-9 Discussion Symposium: Service Learning and Diversity in Environmental Pedagogy and Practice	B-9 Sustainability Curriculum	C-9 Interdisciplinary Teaching for a Sustainable Future
<b>10</b> <b>Academia: teaching, research and advocacy</b> <i>Room 604</i>	A-10 Discussion Symposium: Teaching, Research and Advocacy in a Post-Fact Era I	B-10 Discussion Symposium: Teaching, Research and Advocacy in a Post-Fact Era II	C-10 Taking the long view: ESS as culture and history



## Sessions Overview (Friday - D, E)

TRACK	Session D 1:30pm - 3:00pm	Session E 3:30pm - 5:00pm
<b>1</b> <b>Natural Resource Conservation and Management</b> <i>Room S210</i>	<b>D-1 Parks, recreation, and land use</b>	<b>E-1 Wildlife Conservation and Governance</b>
<b>2</b> <b>Collaborating and Partnering on Environmental Issues</b> <i>Room N350</i>	<b>D-2 Education and community building through partnerships I: Bridging academics and communities</b>	<b>E-2 Education and community building through partnerships II: Collaborations in practice</b>
<b>3</b> <b>Subaltern Perspectives in Environmental Studies and Management</b> <i>Room S495</i>	<b>D-3 Intersectionality and the field of Environmental Studies and Sciences</b>	<b>E-3 Discussion Symposium: Film: EROSION OF LIFE</b>
<b>4</b> <b>Environmental Arts and Humanities</b> <i>Room S223</i>	<b>D-4 Writing and reflection on environmental studies</b>	<b>E-4 [intentionally blank]</b>
<b>5</b> <b>Energy and Water</b> <i>Room S225</i>	<b>D-5 Perspectives on Alternative Energies</b>	<b>E-5 The Promises and Pitfalls of Solar Technology: Local and Global Perspectives</b>
<b>6</b> <b>Climate Change</b> <i>Room S230</i>	<b>D-6 Discussion Symposium: New Frontiers in Visualizing Climate Change</b>	<b>E-6 Water and Climate in Latin America</b>
<b>7</b> <b>Adaptation and Resilience</b> <i>Room S215</i>	<b>D-7 Discussion Symposium: Planning for climate resiliency: From identifying risks to establishing strategies for community resilience and robustness</b>	<b>E-7 [intentionally blank]</b>
<b>8</b> <b>Sustainability and Environmental Movement History</b> <i>Room S217</i>	<b>D-8 Planning for Sustainable Urban Development</b>	<b>E-8 Waste Opportunities: Utilizing Campus Waste Streams for Sustainability Teaching and Learning in the ESS Curriculum</b>
<b>9</b> <b>Pedagogy</b> <i>Room N595</i>	<b>D-9 Experiential Education</b>	<b>E-9 Discussion Symposium: Collaborative Learning Spaces in Environmental Science and Environmental Studies General Education courses</b>
<b>10</b> <b>Academia: teaching, research and advocacy</b> <i>Room 604</i>	<b>D-10 Citizens First, Scientists Second: Activism by the Academy in the Anthropocene</b>	<b>E-10 Enhancing ESS Programs for Success</b>



## Sessions Overview (Saturday – F, G)



TRACK	Session F 9:00am – 10:30am	Session G 11:00am – 12:30pm
<b>1</b> <b>Natural Resource Conservation and Management</b> <i>Room S210</i>	<b>F-1 Discussion Symposium: Valuing and Conserving College Land for Community Resilience</b>	<b>G-1 Wildlife/Human Interface: Control or Coexistence?</b>
<b>2</b> <b>Collaborating and Partnering on Environmental Issues</b> <i>Room N350</i>	<b>F-2 Discussion Symposium: Bootstrap Sustainability: Building Momentum in Government and University Collaboration in the Absence of a Strong Mandate</b>	<b>G-2 Community Gardens and Urban and Rural Environmental Justice</b>
<b>3</b> <b>Subaltern Perspectives in Environmental Studies and Management</b> <i>Room S495</i>	<b>F-3 From Community Awareness to Engagement and Empowerment</b>	<b>G-3 Engaging Complexity on Complexity's Terms</b>
<b>4</b> <b>Environmental Arts and Humanities</b> <i>Room S223</i>	<b>F-4</b> [intentionally blank]	<b>G-4 Discussion Symposium: Environment, Wellness, and Community: Eco Art and Water</b>
<b>5</b> <b>Energy and Water</b> <i>Room S225</i>	<b>F-5 Negative Emissions Technologies as a Policy Response to Climate Change: Prospects and Risks</b>	<b>G-5</b> [intentionally blank]
<b>6</b> <b>Climate Change</b> <i>Room S230</i>	<b>F-6 Climate Change Outreach and Engaged Learning</b>	<b>G-6</b> [intentionally blank]
<b>7</b> <b>Adaptation and Resilience</b> <i>Room S215</i>	<b>F-7 Resilience through climate communication</b>	<b>G-7</b> [intentionally blank]
<b>8</b> <b>Sustainability and Environmental Movement History</b> <i>Room S217</i>	<b>F-8 Environmental Pragmatism: Twenty Years Later</b>	<b>G-8 American Environmental Politics in Historical Perspective</b>
<b>9</b> <b>Pedagogy</b> <i>Room N595</i>	<b>F-9 Engaging Many Shades of Green in Challenging Times: Theory and Research</b>	<b>G-9 Discussion Symposium: Engaging Many Shades of Green in Challenging Times: Debating Pedagogy and Praxis</b>
<b>10</b> <b>Academia: teaching, research and advocacy</b> <i>Room 604</i>	<b>F-10 Discussion Symposium: Supporting Interdisciplinary Academic Careers</b>	

## Keynote

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**Wednesday, June 21**

**6:00pm**

*Room N120*



### **“Natural History and the Deep Well of Community”**

**Thomas L. Fleischner, PhD**

Executive Director

*Natural History Institute*

Faculty Emeritus

*Prescott College*

[tfleischner.net](http://tfleischner.net)

Currently serving as Executive Director for the Natural History Institute, Dr. Tom Fleischner’s work is always rooted in natural history, ecology, and conservation biology, but plies the terrain at the margins of disciplines. He is most interested in the connections between sciences, humanities, and public policy, and between analytical and creative modes of thought. He is fascinated by the confluence of nature & culture, biology & adaptation, when considering humans as an ecological species.

Dr. Fleischner taught in the interdisciplinary Environmental Studies Program at Prescott College for 29 years. In addition to helping coordinate the Conservation Biology and Natural History and Ecology emphasis areas, he created courses that linked with many other curricular areas, including creative writing, environmental politics, and ecopsychology. He was also founding Director of the college's Natural History Institute, which seeks to integrate art, science, and humanities in the work of connecting humans and nature.

He was the founding President of the Natural History Network, and also co-founded the North Cascades Institute in Washington State, and has served on the Board of Governors of the Society for Conservation Biology, the Science Advisory Council of the Grand Canyon Trust, and many other local and regional organizations. Dr. Fleischner was a long-term member of the Education Committee of the Society for Conservation Biology, and served as President of the society’s Colorado Plateau Chapter.

Dr. Fleischner’s fieldwork and research has included addressing the growing crisis in American (and, indeed, global) ecological sciences training--that fewer and fewer students have the opportunity to study and learn in the field, directly from nature; the study of migratory and wintering shorebirds at Estero Santa Cruz in the Gulf of California, Mexico; and the ecological effects of livestock grazing in western North America. His earlier field research concerned marine mammals and marine birds.

Dr. Fleischner earned his PhD in Environmental Studies from The Union Institute in 1998, his MS in Biology from Western Washington University in 1983, and his BS in Field Biology from The Evergreen State College, 1977. He is author of two books—*Singing Stone: A Natural History of the Escalante Canyons* and *Desert Wetlands*, and editor of a third in the anthology, *The Way of Natural History*. He has also edited another anthology, *Nature, Love, Medicine: Essays on Healing in Wildness*, which will be released in September by Torrey House Press.

## AESS Lifetime Achievement Award

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The Association for Environmental Studies and Sciences  
is honored to present the

### **2017 William R. Freudenburg Lifetime Achievement Award**

to

**Patricia “Patty” DeMarco, PhD**

Visiting Researcher and Writer  
Institute for Green Sciences  
*Carnegie Mellon University*



Dr. Patricia "Patty" DeMarco is a Visiting Researcher and Writer at Carnegie Mellon University's Institute for Green Sciences, Senior Scholar at Chatham University, and member of the Forest Hills (Pennsylvania) Borough Council 2016-2020.

A native of Pittsburgh, PA, she earned her doctorate in Biology from the University of Pittsburgh. She has spent a thirty-year career in energy and environmental policy in both private and public sector positions, including Commissioner of the Regulatory Commission of Alaska and Demand Side Manager for the Connecticut Municipal Electric Energy Cooperative.

She was the Executive Director of the Rachel Carson Homestead Association and Director of the Rachel Carson Institute at Chatham University. Her documentary film with Mark E. Dixon, "The Power of One Voice- A 50 Year Perspective on the Life of Rachel Carson," was featured at AESS 2016. Her book, *Pathways to Our Sustainable Future*, funded by the W. Clyde and Ida Mae Thurman Fund of The Pittsburgh Foundation, was recently published by The University of Pittsburgh Press. Inspired by Rachel Carson's environmental ethic, the book explores positive pathways toward sustainability based on 28 case studies in Pittsburgh.

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*The Lifetime Achievement Award seeks to recognize and advance the spirit of AESS co-founder, the late Professor William R. Freudenburg, whose seminal work in risk perception, social disruption and the causes of environmental degradation helped to shape our contemporary discipline. Through his mentorship, Professor Freudenburg also spawned a new generation of environmental professionals who have pursued interdisciplinary research to address some of the most pressing issues of our time. Through this award, AESS honors members of the profession who have also devoted their lives to strengthening our field and fostering outreach to critical decision makers and the public.*



# Film Night

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**Thursday, June 22**

**7:00pm**

**Room N120**

7:00pm **Introduction and Welcome**

7:10pm **Breaking the Log Jam** (12 min) + 3-min. intro from filmmaker Philip Brick

Residents of rural communities in the Pacific Northwest have been deeply frustrated by the collapse of timber economies and the erosion of their rural way of life, which has played itself out in the 25 years since the listing of the northern spotted owl. The writer Wendell Berry once argued that that gulf between urban and rural sensibilities cuts just as deeply deep as any great divide in American life, this was vividly on display in the recent national election. As we contemplate the contemporary populist moment, it seems imperative to explore how we might move forward—together. Set in rural Wallowa County, Oregon, the film grounds us in the local landscape, peering out through the eyes of local community members: a third generation logger, an urban transplant retiree, a Nez Perce fisheries biologist. At first glance their lives may seem worlds apart, but as our story unfolds, connections reveal themselves, common dreams supersede political differences, and a vision of a future built upon common ground is realized, a parable for many rural communities across the West and across the nation. Collaborative management isn't easy or fast, but this film demonstrates that it can be remarkably powerful and inspiring, perhaps even a vital signpost on the path to a sustainable future where everyone has a place.

7:30pm **It Ain't Easy Being Green** (37 min.) + 3-min. Intro from filmmaker Crystal Fortwangler

In the U.S. Virgin Islands, green iguanas are dramatically increasing in number and spreading. The situation has left most humans and iguanas scratching their heads about how to get by in the fast-changing island environment. The film engages in a lively debate about when and where animals are welcome, and if it is possible to create environments where it is easier for humans and all species to co-exist. Of great concern is how to protect local agricultural production and at the same time provide a welcoming place for iguanas.

To make sense of the island's changing ecosystems we turn to natural resource managers, long-time residents and tourists, emphasizing throughout the perspective of iguanas caught up in this crazy mix! Will human-iguana differences and tension prevail? Or can the island's two and four-legged creatures peacefully co-exist? Is there a solution that works for people and iguanas?

8:10pm **Erosion of Life** (60 min.) + 3 min. intro from filmmaker Monty Hempel

We humans like to define ourselves by what we build, invent or create, but our signature trait may be manifest most clearly by what we destroy. We are architects of the most advanced civilization yet achieved and at the same time we are the leading executioners of nonhuman life, presiding over the first mass extinction since the death of the dinosaurs 65 million years ago.

This film examines the importance of human-animal relationships in understanding broader environmental values, threats, and opportunities. We celebrate our personal independence but it is our interdependence that makes us human and capable of empathy. Wild animals open up a world that is not the product of human thought or domination, one that invites us to connect with the great mysteries of life. By encountering beings that have not been reared or trained by us, and that do not serve our aims, we have the unique opportunity to discover our place in the web of life. A world without wild animals is a world with a diminished capacity for empathy AND little hope for grasping the mysteries of life.

9:23pm **The Beaver Believers** (45 min.) + 3 min. intro from Philip Brick

This is a film about people who believe passionately in the power of one of nature's most industrious creatures, *Castor Canadensis*, to restore damaged watersheds to provide more water, more habitat, and greater appreciation for nature's potential resilience in an era of climate change. We follow our "beaver believers" across several iconic landscapes in the American West, where they are working tirelessly to re-introduce beaver into watersheds that have been damaged by years of neglect, manipulation, and overgrazing. The results are, quite frankly, stunning. Dry streambeds become lush threads of life in arid landscapes in just a few years after beaver begin their work. This is a story of what undaunted stewardship of public natural resources looks like—how just a few committed activists can make a huge difference by working with, not against nature, and by working at the capillaries of natural and social systems. [www.thebeaverbelievers.com](http://www.thebeaverbelievers.com)

10:11pm **Q&A and general discussion**

10:30pm **Adjourn. Discussion encouraged to continue informally.**



## Wednesday, June 21

### Registration / Business Center

8:00am – 5:00pm

ENR2 Building, S107

### All Day Workshops

9:00am – 4:00pm

(lunch break 12-1pm)

ENR2 Building

#### **W-1 Teaching for Turbulence: Contemplative Practice Under The Eye of the Doomsday Clock**

Room S495

##### FACILITATORS

- **Carol Atkinson-Palombo**, University of Connecticut, [carol.atkinson-palombo@uconn.edu](mailto:carol.atkinson-palombo@uconn.edu)
- **Phoebe C. Godfrey**, University of Connecticut, [phoebe.godfrey@uconn.edu](mailto:phoebe.godfrey@uconn.edu)

#### **W-2 Bringing Energy Education to Environmental and Sustainability Studies and Sciences**

Room S217

##### FACILITATORS

- **Richard Wolfson**, Middlebury College, [wolfson@middlebury.edu](mailto:wolfson@middlebury.edu)
- **Cathy Middlecamp**, University of Wisconsin-Madison, [cmiddle@wisc.edu](mailto:cmiddle@wisc.edu)
- **Sharlissa Moore**, Michigan State University, [moores60@msu.edu](mailto:moores60@msu.edu)
- **John H. Perkins**, The Evergreen State College, [perkinsj@evergreen.edu](mailto:perkinsj@evergreen.edu)

### Morning Workshops

9:00am – 12:00pm

ENR2 Building

#### **W-3 Growing pains and lone wolves: A skill-sharing and networking workshop for faculty managing new programs**

Room S223

##### FACILITATORS

- **Susan Caplow**, University of Montevallo, [scaplow@montevallo.edu](mailto:scaplow@montevallo.edu)
- **Barry R. Muchnick**, St. Mary's College of Maryland, [brmuchnick@smcm.edu](mailto:brmuchnick@smcm.edu)
- **Sam Whitehead**, Concordia University Texas, [samcwhitehead1977@gmail.com](mailto:samcwhitehead1977@gmail.com)

#### **W-4 Block Party: Invigorating course assignments with woodblock printmaking**

Room S215

##### FACILITATOR

- **Katharine Owens**, University of Hartford, [kowens@hartford.edu](mailto:kowens@hartford.edu)

#### **W-5 Improving Cross-disciplinary Communication: An Introduction to the Toolbox Dialogue Method**

Room S225

##### FACILITATORS

- **Marisa Rinkus**, Toolbox Dialogue Initiative and Michigan State University, [rinkusma@msu.edu](mailto:rinkusma@msu.edu)
- **Michael O'Rourke**, Toolbox Dialogue Initiative, [orourke51@msu.edu](mailto:orourke51@msu.edu)

#### **W-6 Developing Collaborative and Interdisciplinary Leadership Capacity to Address Wicked Problems: Part I**

Room N595

##### FACILITATORS:

- **Roderic Parnell**, School Earth Sciences & Environmental Sustainability, NAU, [Roderic.Parnell@nau.edu](mailto:Roderic.Parnell@nau.edu)
- **Diane Doser**, University of Texas at El Paso, [doser@utep.edu](mailto:doser@utep.edu)
- **David Hassenzehl**, California State University at Chico, [dhassenzehl@gmail.com](mailto:dhassenzehl@gmail.com)



Wednesday

## W-7 EcoTypes: Exploring Environmental Ideas With Your Students

Room S210

FACILITATOR:

- **James D. Proctor**, Lewis & Clark College, [jproctor@lclark.edu](mailto:jproctor@lclark.edu)

## W-8 ADVANCE & TE2030D SUSTAINABILITY AND BUILT ENVIRONMENT WORKSHOP: The environmental impact and the dream of a better interaction through the 2030 Districts

Room S230

FACILITATORS:

- **Michael Peel**, Pima Community College West Campus, [mpeel@pima.edu](mailto:mpeel@pima.edu)
- **Peter Dobrovolny**, Tucson Emerging 2030 District, [peter.dobrovolny@gmail.com](mailto:peter.dobrovolny@gmail.com)
- **Sandra M. Bernal**, The University of Arizona, USGBC, and Tucson Emerging 2030 District, [sbernal@email.arizona.edu](mailto:sbernal@email.arizona.edu)

## Lunch

12:00pm – 1:00pm

Served S120 with seating in S107 and throughout building

## Afternoon Workshops

1:00pm – 4:00pm

ENR2 Building

## W-9 Navigating Science to Action in a Post-fact World

Room N350

FACILITATORS:

- **Kathy Jacobs**, University of Arizona, [jacobsk@email.arizona.edu](mailto:jacobsk@email.arizona.edu)
- **Jim Buizer**, University of Arizona, [buizer@email.arizona.edu](mailto:buizer@email.arizona.edu)

## W-10 Health and Sustainability: The Way Forward

Room S215

FACILITATOR:

- **Tee L. Guidotti**, [tee.guidotti@gmail.com](mailto:tee.guidotti@gmail.com)

## W-11 The Grand Challenge of Water: Designing Interdisciplinary Curriculum

Room S225

FACILITATORS:

- **Michael Guidry**, University of Hawaii at Manoa, [guidry@hawaii.edu](mailto:guidry@hawaii.edu)
- **Maiana Minahal**, Kapi'olani Community College, [mminahal@hawaii.edu](mailto:mminahal@hawaii.edu)
- **Robert W. Franco**, Kapi'olani Community College, University of Hawaii, [bfranco@hawaii.edu](mailto:bfranco@hawaii.edu)
- **Krista Hiser**, Kapi'olani Community College, University of Hawaii, [hiser@hawaii.edu](mailto:hiser@hawaii.edu)

## W-12 Developing Collaborative and Interdisciplinary Leadership Capacity to Address Wicked Problems Part II

Room N595

FACILITATORS:

- **Roderic Parnell**, School Earth Sciences & Environmental Sustainability, NAU, [Roderic.Parnell@nau.edu](mailto:Roderic.Parnell@nau.edu)
- **Diane Doser**, University of Texas at El Paso, [doser@utep.edu](mailto:doser@utep.edu)
- **David Hassenzehl**, California State University at Chico, [dhassenzehl@gmail.com](mailto:dhassenzehl@gmail.com)

## W-13 Using Effective Environmental Education and Communication Principles and Tools In Your Work to Improve Outcomes, Foster Wellness and Cultivate Community

Room S210

FACILITATOR:

- **Elizabeth Beattie**, University of British Columbia, [lizbeattie@alumni.ubc.ca](mailto:lizbeattie@alumni.ubc.ca)

## W-14 Embodied Transformation for Sustainability: Sparking creative capacity and agency

Room S230

FACILITATORS:

- **Christine DeMyers**, Arizona State University, [Christine.DeMyers@asu.edu](mailto:Christine.DeMyers@asu.edu)
- **Neda Movahed**, Arizona State University, [nmovahed@asu.edu](mailto:nmovahed@asu.edu)





## Reception and Welcome

5:00pm – 6:00pm

ENR2 Courtyard

### Reception and Opening Welcome

- **Jim Buizer**, Deputy Director, Climate Adaptation and International Development, University of Arizona; Chair, National Council for Science and the Environment
- **Andrew C. Comrie**, Senior Vice President for Academic Affairs & Provost, The University of Arizona
- **Roderic Parnell**, President, Council of Environmental Deans and Directors; Professor of Earth Sciences and Environmental Sustainability, Northern Arizona University
- **David Hassenzahl**, President, AESS; Dean, College of Natural Sciences, CSU Chico

## Opening Keynote

6:00pm – 7:30pm

N120

### Natural History and the Deep Well of Community

- **Thomas L. Fleischner**, Executive Director, Natural History Institute; Faculty Emeritus, Prescott College

## Thursday, June 22

## Registration / Business Center

7:30am – 5:00pm

ENR2 Building, S107

## Exhibitions Open

8:00am – 5:00pm

Room S120

## Breakfast

7:30am – 8:30am

Served in Room S120

## Plenary

8:30am – 10:00am

Room N120

### Environmental Studies and Science Programs at 50: A Vision for Our Next Half Century

#### Moderators

- **David Hassenzahl**, President, AESS; Dean, College of Natural Sciences, CSU Chico
- **Tony Rosenbaum**, Director Emeritus, Bob Graham Center for Public Service, University of Florida; Editor-in-Chief, JESS

#### Panelists

- **David Blockstein**, Chief Scientist, National Council for Science and the Environment, Executive Secretary, Council of Energy Research and Education Leaders
- **Dale Jamieson**, Department Chair, Environmental Studies, New York University; Distinguished Visiting Professor, Dickson Poon School of Law, King's College, London, UK; Adjunct Professor, University of the Sunshine Coast, Maroochydore, Queensland, Australia
- **Nancy Mathews**, Professor, Dean, Rubenstein School, University of Vermont
- **Valerie Rountree**, Program Chair, AESS Conference, Graduate Student, University of Arizona

## Session A

10:30am – 12:00pm

ENR2 Building

### A-1 Adoption of natural resource conservation practices/proenvironmental behavior on private lands in rural and urban landscapes

Room S210

- **CO-CHAIR: Francis Eanes**, Purdue University, [feanes@purdue.edu](mailto:feanes@purdue.edu)  
*Leveraging Crop Advisers to deliver agricultural conservation advice and increase the adoption of conservation practices*
- **CO-CHAIR: Yuling Gao**, Purdue University, [gao305@purdue.edu](mailto:gao305@purdue.edu)  
*Understanding the adoption, maintenance and diffusion of urban stormwater best management practices*
- **Ajay S. Singh**, Purdue University, [singh364@purdue.edu](mailto:singh364@purdue.edu)  
*Framing Conservation Communication: The influence of framing information on recommendations to adopt climate change adaptation measures*
- **Casey L. Taylor**, Idaho State University, [taylcas3@isu.edu](mailto:taylcas3@isu.edu)  
*Social-Ecological Analysis of a Hydrologic System in Southeast Idaho*
- **Hilary Byerly**, University of Vermont, [hbyerly@uvm.edu](mailto:hbyerly@uvm.edu)  
*Adoption of Conservation Behaviors in New England's Privately Managed Forests*



## A-2 Local Government and Academic Partnerships – Creating Synergies to Address Key Community Environmental Problems

Room N350

- **CHAIR: Gary S. Silverman**, UNC Charlotte, [gsilver1@uncc.edu](mailto:gsilver1@uncc.edu). Co-authors: Eric Delmelle, UNC Charlotte, [Eric.Delmelle@uncc.edu](mailto:Eric.Delmelle@uncc.edu); Wenwu Tang, UNC Charlotte, [WenwuTang@uncc.edu](mailto:WenwuTang@uncc.edu); Samantha Dye, Gaston County Department of Health & Human Services, [Samantha.Dye@gastongov.com](mailto:Samantha.Dye@gastongov.com)  
*Protecting rural groundwater quality in Gaston County, North Carolina through a collaborative and integrated GIS-based data management and educational project*
- **Alexis Racelis**, University of Texas Rio Grande Valley, [alexis.racelis@utrgv.edu](mailto:alexis.racelis@utrgv.edu). Co-author: Parwinder Grewal, University of Texas Rio Grande Valley, [parwinder.grewal@utrgv.edu](mailto:parwinder.grewal@utrgv.edu)  
*Strategic partnerships in research, education, and community engagement to better understand and conserve ecosystem services in urban areas of south Texas*
- **Charles A. McClagherty**, University of Mount Union, [mcclauca@mountunion.edu](mailto:mcclauca@mountunion.edu)  
*Building bridges between town and gown: incorporating local issues into undergraduate teaching and research*
- **Kevin Jones**, Vermont Law School, [kbjones@vermontlaw.edu](mailto:kbjones@vermontlaw.edu)  
*Promoting local energy sustainability and resilience through academic partnerships with local governments and community based organizations on community renewable resources*
- **Patricia M. DeMarco**, Patricia DeMarco, Ph.D. LLC, [demarcop6@gmail.com](mailto:demarcop6@gmail.com)  
*A Zero Net Energy Town Hall Inspired by a University Campus*

## A-3 Discussion Symposium: Beyond Environmental Justice: Engaging Minority Communities in Environmental Conservation and Activism

Room S495

- **MODERATOR: Robert M. East, Jr.**, Washington & Jefferson College, [reast@washjeff.edu](mailto:reast@washjeff.edu)

## A-4 Art, Environmental Understanding, and action

Room S223

- **CHAIR: Robert W. Turner**, Colgate University, [rturner@colgate.edu](mailto:rturner@colgate.edu); and **Christine Moskell**, Colgate University, [cmoskell@colgate.edu](mailto:cmoskell@colgate.edu)  
*Can a YouTube video lead to environmental change? Art on the Internet and Environmental attitudes, norms and beliefs*
- **Eve Andrée Laramée**, Pace University, [elaramee@pace.edu](mailto:elaramee@pace.edu)  
*Interaction: Learning Communities and Collaborations in Environmental/Ecological Art, the Sciences & Humanities*
- **Ardis DeFreece**, Pacific Northwest College of Art, [adefreece@pnca.edu](mailto:adefreece@pnca.edu). Co-author: Linda Wysong, Pacific Northwest College of Art, [lwysong@pnca.edu](mailto:lwysong@pnca.edu)  
*Art + Ecology: Multidisciplinary Practice and Collaborations to Inspire Change*

## A-5 Discussion Symposium: Decoding the FEW nexus via 'Cognitive fix'

Room S225

- **MODERATOR: Nirav S. Patel**, Cornell University/ Rutgers University, [nsp6@cornell.edu](mailto:nsp6@cornell.edu)  
*Impact of sustainability education on students motivations to engage in environmental significant behaviors*

## A-6 Water and Climate Adaptation, Planning and Management

Room S230

- **CHAIR: Yehuda L. Klein**, Brooklyn College and CUNY Graduate Center, [yklein@brooklyn.cuny.edu](mailto:yklein@brooklyn.cuny.edu) and **Hildegard Link**, CUNY Graduate Center, [HLlink@gc.cuny.edu](mailto:HLlink@gc.cuny.edu)  
*Adaptation Strategies for Urban Water-Electricity Resilience*
- **Courtney Crosson**, The University of Arizona, [ccrosson@email.arizona.edu](mailto:ccrosson@email.arizona.edu)  
*Designing a Carbon and Water Neutral Master Plan: Architects Affecting Policy*
- **Kelsey C. Cody**, University of Colorado at Boulder, [codykc@colorado.edu](mailto:codykc@colorado.edu)  
*Institutional Adaptation, User-Governed Irrigation Systems, and Climate Change: the San Luis Valley of Colorado*
- **Abigail Sullivan**, Arizona State University, [sullivan.abiev@gmail.com](mailto:sullivan.abiev@gmail.com)  
*Climate change adaptation or responsible future water management? The framing of climate change adaptation efforts in the Colorado River Basin*

## A-7 Adaptation and Resilience I: Understanding our publics

Room S215

- **CHAIR: Laura A. Bakkensen**, The University of Arizona, [laurabakkensen@email.arizona.edu](mailto:laurabakkensen@email.arizona.edu)  
*Estimating Heterogeneous Preferences to Avoid Flood Risk and the Implications for Disaster Exposure*
- **Lisa Doner**, Plymouth State University, [ladoner@plymouth.edu](mailto:ladoner@plymouth.edu)  
*Building Risk Awareness and Resilience for Major Storms of the 21st Century and Beyond*
- **Md. Ashiqur Rahman**, University of South Florida, [ashique@usf.edu](mailto:ashique@usf.edu)  
*What money cannot buy back: climate change, loss and damage, and environmental social science*
- **Scott C. Hagen**, Louisiana State University, [shagen@lsu.edu](mailto:shagen@lsu.edu). Co-author: Denise E. DeLorme, Louisiana State University, [ddelorme@lsu.edu](mailto:ddelorme@lsu.edu)  
*Conducting Stakeholder Focus Groups in Updating a Real-Time Coastal Storm Surge Forecasting Model and Visualization Tool*

## A-8 Defining Sustainability Across Contexts

Room S217

- **CHAIR: Ira Feldman**, Greentrack Strategies, [ira@greentrack.com](mailto:ira@greentrack.com)
- **Rob Alexander**, James Madison University, [alexanrw@jmu.edu](mailto:alexanrw@jmu.edu)  
*Personal Definitions of Sustainability and Assessing a 'Sustainability Culture'*
- **Peter Jacques**, University of Central Florida, [Peter.Jacques@ucf.edu](mailto:Peter.Jacques@ucf.edu) and **Rafaella Lobo**, Duke University, [r.lobo@duke.edu](mailto:r.lobo@duke.edu)  
*The Shifting Context of Sustainability: Marine Politics and the World Ocean Regime*
- Presentations followed by discussion: *Defining sustainability across contexts*. **MODERATOR: Ira Feldman**

## A-9 Discussion Symposium: Service Learning and Diversity in Environmental Pedagogy and Practice

Room N595

- **MODERATOR: Brent Olson**, Westminster College, [bolson@westminstercollege.edu](mailto:bolson@westminstercollege.edu). Co-author: Christy Clay, Westminster College, [cclay@westminstercollege.edu](mailto:cclay@westminstercollege.edu)

## A-10 Discussion Symposium: Teaching, Research and Advocacy in a Post-Fact Era I

Room 604

- **MODERATOR: Leslie Gray**, Santa Clara University, [lcgray@scu.edu](mailto:lcgray@scu.edu)
- **Wil Burns**, Forum for Climate Engineering Assessment and American University, [wil@feronia.org](mailto:wil@feronia.org)
- **Simon Nicholson**, American University, [simon.nicholson@american.edu](mailto:simon.nicholson@american.edu)
- **Rebecca J. Romsdahl**, University of North Dakota, [romsdahl@icloud.com](mailto:romsdahl@icloud.com)
- **Peter Buckland**, Penn State University, [pdb118@psu.edu](mailto:pdb118@psu.edu)

## Lunch

12:15pm – 1:45pm

Served S120 with seating in S107 and throughout building

## Lunch Roundtable Discussions

12:15pm – 1:45pm

Participants pick up lunch in S120

### R-1 Each Individual Matters in Their Environment, Wellness and Community

Room S210

- **FACILITATOR: Pamela Herring**, University of Texas Rio Grande Valley, [pamela.herring@utrgv.edu](mailto:pamela.herring@utrgv.edu)

### R-2 Rethinking US Chemicals Policy to Account for Potable Water Reuse

Room S215

- **FACILITATOR: Caroline Scruggs**, University of New Mexico, [cscruggs@unm.edu](mailto:cscruggs@unm.edu)

### R-3 The Role of Case Studies in Teaching in Environmental Studies and Sciences Programs

Room S225

- **FACILITATOR: Wil Burns**, Forum for Climate Engineering Assessment and American University, [wil@feronia.org](mailto:wil@feronia.org)
- **Jennifer Bernstein**, University of Hawaii, [jennifer.bernstein@gmail.com](mailto:jennifer.bernstein@gmail.com)
- **Cynthia Wei**, National Socio-Environmental Synthesis, [cwei@sesync.org](mailto:cwei@sesync.org)
- **Dustin Mulvaney**, San Jose State University, [dustin.mulvaney@sjsu.edu](mailto:dustin.mulvaney@sjsu.edu)
- **Abby Lindsay**, American University, [abby.lindsay@american.edu](mailto:abby.lindsay@american.edu)

### R-4 The US - Mexico Border: Climate, Politics and Environmental Changes

Room S223

- **FACILITATOR: Mark Howe**, International Boundary and Water Commission, [mlhowe1@hotmail.com](mailto:mlhowe1@hotmail.com)



## **Poster Session**

12:15pm – 2:00pm  
Room S107

### **P-01 The Integration of Nature in Cities: Universities as a Key Sustainability Partner**

- **Bemmy J. Maharramli**, University of California, Irvine, [bmaharra@uci.edu](mailto:bmaharra@uci.edu)

### **P-02 Developing and Teaching a Qualitative Research Methods Course with a Community-Based Project for Coastal Resiliency**

- **Denise E. DeLorme**, Louisiana State University, [ddelorme@lsu.edu](mailto:ddelorme@lsu.edu)

### **P-03 Design and Instruction of an Interdisciplinary Environmental Campaigns Course with an Example Project to Promote Precautions about Flood-Related Pests**

- **Denise E. DeLorme**, Louisiana State University, [ddelorme@lsu.edu](mailto:ddelorme@lsu.edu)

### **P-04 Birds as bellwethers of environmental change: Predictive modeling to understand species response, identify habitat hotspots, and inform conservation strategies**

- **Jean Mangun**, Siena College, [jmangun@siena.edu](mailto:jmangun@siena.edu)

### **P-05 Climate Change and Community Wellness: Food Markets and Community Gardens how it relates to the Food Deserts in Virginia**

- **Darlette Meekins**, Virginia State University, [darlettete.meekins@vdot.virginia.gov](mailto:darlettete.meekins@vdot.virginia.gov)  
Co-authors: Stacey Bradshaw, Virginia State University, [sbra9870@students.vsu.edu](mailto:sbra9870@students.vsu.edu); Latia Jackson Virginia State University, [Ljac9919@students.vsu.edu](mailto:Ljac9919@students.vsu.edu); Millissa Knight, Virginia State University, [MKni3446@students.vsu.edu](mailto:MKni3446@students.vsu.edu); Marcus M. Comer, Virginia State University, [mcomar@vsu.edu](mailto:mcomar@vsu.edu); Shobha Sriharan, Virginia State University, [sriharan@vsu.edu](mailto:sriharan@vsu.edu)

### **P-06 Temporal and Spatial Impact of an Increase in Tree Canopy of Urban Trees Cover Along Appomattox River and James River**

- **Shobha Sriharan**, Virginia State University, [sriharan@vsu.edu](mailto:sriharan@vsu.edu)  
Co-authors: Darlette Meekins, Virginia State University, [darlettete.meekins@vdot.virginia.gov](mailto:darlettete.meekins@vdot.virginia.gov); Millissa Knight, Virginia State University, [MKni3446@students.vsu.edu](mailto:MKni3446@students.vsu.edu); Latia Jackson, Virginia State University, [Ljac9919@students.vsu.edu](mailto:Ljac9919@students.vsu.edu); Joel Koci, Virginia State University, [jkoci@vsu.edu](mailto:jkoci@vsu.edu); Marcus M. Comer, Virginia State University, [mcomar@vsu.edu](mailto:mcomar@vsu.edu)

### **P-07 Ecosystemic Valuation: Assigning a Value to Natural Resources**

- **Benjamin Sonnega**, University of Michigan, [bsonnega@umich.edu](mailto:bsonnega@umich.edu)  
Co-authors: James White, University of Michigan, [jamesdw@umich.edu](mailto:jamesdw@umich.edu); Paul Mohai, University of Michigan, [pmohai@umich.edu](mailto:pmohai@umich.edu)

### **P-08 Place Attachment and conservation volunteerism in Scottsdale, Arizona's McDowell Sonoran Preserve**

- **Ryan Bleam**, Arizona State University, [rbleam@asu.edu](mailto:rbleam@asu.edu)

### **P-09 Energy Justice in Portland, OR**

- **Frances Swanson**, Lewis & Clark College, [fswanson@lclark.edu](mailto:fswanson@lclark.edu) and **Kori Ann Groenfeld**, Lewis and Clark College, [korigroenfeld@lclark.edu](mailto:korigroenfeld@lclark.edu)

### **P-10 Collaborative and community-based scientific research through The Hudson River Subwatershed & Tributary (THuRST) Research Network**

- **Jean Mangun**, Siena College, [jmangun@siena.edu](mailto:jmangun@siena.edu).  
Author: Kate Meierdiercks, Siena College, [kmeierdiercks@siena.edu](mailto:kmeierdiercks@siena.edu)

### **P-11 Policy Streams and Isolated Wetlands: Vernal Pool Protections in the Northeastern U.S.**

- **Jean Mangun**, Siena College, [jmangun@siena.edu](mailto:jmangun@siena.edu)  
Co-authors: Kristin Floress, USDA Forest Service, [kfloress@fs.fed.us](mailto:kfloress@fs.fed.us); Mary Beth Kolozsvary, Siena College, [mkolozsvary@siena.edu](mailto:mkolozsvary@siena.edu)

### **P-12 SUCO Ecological Footprint Assessment**

- **Jonelle Reyes**, State University of New York Oneonta, [reveyb13@oneonta.edu](mailto:reveyb13@oneonta.edu)



## Session B

2:00pm – 3:30pm  
ENR2 Building

### B-1 Forest and Natural Resource Management I: Negotiating Complexities of Management

Room S210

- **CHAIR: Ute Brady**, Arizona State University, [Ute.Brady@asu.edu](mailto:Ute.Brady@asu.edu). Co-authors: Michael Schoon, Arizona State University, [mlschoon@asu.edu](mailto:mlschoon@asu.edu); Candice Carr Kelman, Arizona State University, [ccarrkel@asu.edu](mailto:ccarrkel@asu.edu)  
*Collaboration as collective action: Exploring collaborative forest restoration projects in Arizona as social-ecological systems*
- **Javier E. Revelo-Rebolledo**, University of Pennsylvania, [jrev@sas.upenn.edu](mailto:jrev@sas.upenn.edu)  
*Amazon Deforestation, Development and the Reach of the State. The Case of Caquetá, Colombia*
- **Michael A. Reiter**, Bethune-Cookman University, [reiterm@cookman.edu](mailto:reiterm@cookman.edu)  
*A Combined Ecological-Societal Systems Model for the Mission-Aransas National Estuarine Research Reserve area*
- **Jeanene Mitchell**, University of Washington, [jmm2170@uw.edu](mailto:jmm2170@uw.edu)  
*At the Confluence of Transnational and Local Actors: Transboundary River Management in the Kura Basin*

### B-2 The Challenge and Opportunity of Collaborative Governance: Case Studies for Natural Resource Management

Room N350

- **CHAIR: Jennifer H. Allen**, Portland State University, [jhallen@pdx.edu](mailto:jhallen@pdx.edu)
- **Annie Sawabini**, National Oceanic and Atmospheric Administration, [anniesawabini@gmail.com](mailto:anniesawabini@gmail.com). Co-author: Lindsey Williams, University of New Hampshire, [lindsey.c.williams@gmail.com](mailto:lindsey.c.williams@gmail.com)  
*The role of place-based ocean and coastal partnerships in collaborative governance*
- **Daniel Ghebretensae**, Union Institute and University, [dghebre13@gmail.com](mailto:dghebre13@gmail.com)  
*Why and how collaborative approaches succeed or fail in sub-Saharan Africa?*
- **Esther Conrad**, University of California at Berkeley, [estherconrad@berkeley.edu](mailto:estherconrad@berkeley.edu)  
*Collaborative governance in the context of water management: California's Sustainable Groundwater Management Act*
- **Casey Taylor**, Idaho State University, [taylcas3@isu.edu](mailto:taylcas3@isu.edu)  
*Stakeholder Perspectives on the Role of Science in Decision-Making: Lessons from Sage Grouse Collaborations Across the West*

### B-3 Local, place-based, and indigenous knowledge for ecological resilience I

Room S495

- **CHAIR: K. Whitney Mauer**, Hobart and William Smith Colleges, [mauer@hws.edu](mailto:mauer@hws.edu)  
*Maps, Memory, and Imagined Futures: Ecological Restoration at the Lower Elwha Klallam Tribe*
- **Jacqline Wolf Tice**, Lehigh University, [jwtedu@gmail.com](mailto:jwtedu@gmail.com). Co-author: David Casagrande, Lehigh University, [dac511@lehigh.edu](mailto:dac511@lehigh.edu)  
*Under The Earth Lodge: Ethical Extraction of Place-Based Community*

### B-4 The Role of Studio Art in Environmental Studies

Room S223

- **CHAIR: Kim Smith**, Carleton College, [ksmith@carleton.edu](mailto:ksmith@carleton.edu)
- **Karin Warren**, Randolph College, [kwarren@randolphcollege.edu](mailto:kwarren@randolphcollege.edu)  
*Infusing artistic consideration and expression into environmental studies and science*
- **Robert W. Turner**, Colgate University, [rturner@colgate.edu](mailto:rturner@colgate.edu)  
*Measuring the impact of environmental art*
- **Katharine Owens**, University of Hartford, [kowens@hartford.edu](mailto:kowens@hartford.edu)  
*The Arts and Student Learning*
- **Kim Landsbergen**, Antioch College, [klandsbergen@antiochcollege.org](mailto:klandsbergen@antiochcollege.org)  
*Mapping a Biodiverse, Human-Impacted Landscape Using Art: Science Pedagogy*

### B-5 Public perception of water scarcity: new research to promote informed decision making

Room S225

- **CHAIR: Caroline Scruggs**, University of New Mexico, [cscruggs@unm.edu](mailto:cscruggs@unm.edu). Co-authors: Jason Herman, University of New Mexico, [jherman@unm.edu](mailto:jherman@unm.edu); Claudia Pratesi, University of New Mexico, [cpratesi@unm.edu](mailto:cpratesi@unm.edu); Lauren Distler, University of New Mexico, [distler@unm.edu](mailto:distler@unm.edu); John Fleck, University of New Mexico, [fleckj@unm.edu](mailto:fleckj@unm.edu)  
*Public Acceptance of Potable Water Reuse in Arid Inland Communities: The Importance of Perceptions, Education, and Outreach*
- **Anthony Van Witsen**, Michigan State University, [tonyvanwitsen@gmail.com](mailto:tonyvanwitsen@gmail.com)  
*Water conflicts across two media markets: An exploratory content analysis of frames*
- **Melissa Haeffner**, [melissahaeffner@gmail.com](mailto:melissahaeffner@gmail.com). Co-authors: Douglas Jackson-Smith, Utah State University, [jackson-smith.1@osu.edu](mailto:jackson-smith.1@osu.edu)  
*Working with public utilities to promote data-driven water sustainability in the Wasatch Front, Utah*



## B-6 Climate Change I: Perceptions and Education

Room S230

- **CHAIR: John A. ("Skip") Laitner**, Economic and Human Dimensions Research Associates, [EconSkip@gmail.com](mailto:EconSkip@gmail.com)  
*Reframing Energy Education for the 21st Century: Understanding the Economic Imperative of Energy Efficiency*
- **Kurt Waldman**, Ostrom Workshop in Political Theory and Policy Analysis, [kbwaldma@iu.edu](mailto:kbwaldma@iu.edu). Co-authors: Noemi Vergopolan, Princeton University, [noemi@princeton.edu](mailto:noemi@princeton.edu), Shahzeen Z. Attari, School of Public and Environmental Affairs and Indiana University Bloomington, [sattari@indiana.edu](mailto:sattari@indiana.edu); Tom Evans, Indiana University Bloomington, [evans@indiana.edu](mailto:evans@indiana.edu)  
*Matching perceptions of climate change with historical hydroclimate data in Zambia*
- **Rebecca C. Potter**, University of Dayton, [rpotter1@udayton.edu](mailto:rpotter1@udayton.edu)  
*Crusoe's Island: Moving from isolation to environmental action*

## B-7 Adaptation and Resilience II: The role of place

Room S215

- **CHAIR: Emily Bialowas**, University of New Hampshire, [emily.bialowas@gmail.com](mailto:emily.bialowas@gmail.com). Co-author: Catherine M. Ashcraft, University of New Hampshire, [catherine.ashcraft@unh.edu](mailto:catherine.ashcraft@unh.edu)  
*Collaborating for Coastal Resilience: Stakeholder Assessment and Interdependence in Seabrook, New Hampshire*
- **Travis Reynolds**, Colby College, [twreynol@colby.edu](mailto:twreynol@colby.edu). Co-authors: Gloria Otieno, Bioversity International, [g.otieno@cgiar.org](mailto:g.otieno@cgiar.org); Hannah LaCasse, Colby College, [hlacasse@colby.edu](mailto:hlacasse@colby.edu); Eliza Baker-Wacks, Colby College, [embakerw@colby.edu](mailto:embakerw@colby.edu); Emilie Klein, Colby College, [eaklein@colby.edu](mailto:eaklein@colby.edu)  
*Farmer Seed Networks and Climate Change Adaptation in East Africa*
- **Mohammed Rabbi**, Valley Forge Military College, [rabbim@vfmac.edu](mailto:rabbim@vfmac.edu)  
*Sustainable Cities and Climate Change: Perspectives on Integrated Approach of Addressing Urban Climate Challenges*

## B-8 Community Building in Sustainability Education

Room S217

- **CHAIR: Nancy J. Manring**, Ohio University, [manring@ohio.edu](mailto:manring@ohio.edu)  
*Building Community in a World of Wounds*
- **Valerie S. Banschbach**, Roanoke College, [banschbach@roanoke.edu](mailto:banschbach@roanoke.edu). Co-author: Marwood Larson-Harris, Roanoke College, [mdharris@roanoke.edu](mailto:mdharris@roanoke.edu)  
*Building empathy across species: An interdisciplinary approach to teaching ethical reasoning about animals*
- **Lissy Goralnik**, Michigan State University, [goralnik@msu.edu](mailto:goralnik@msu.edu)  
*Whole Student Sustainability Education for Ethics and Action: contemplative practice, community building, and integration*

## B-9 Sustainability Curriculum

Room N595

- **CHAIR: Rachel F. Brummel**, Luther College, [brumra02@luther.edu](mailto:brumra02@luther.edu). Co-author: Laura C. Peterson, Luther College, [laura.peterson@luther.edu](mailto:laura.peterson@luther.edu)  
*Environmental Podcasting as Interdisciplinary Pedagogy*
- **Elyzabeth W. Engle**, The Pennsylvania State University, [ewe5019@psu.edu](mailto:ewe5019@psu.edu), and **Peter Buckland**, Penn State University, [pdb118@psu.edu](mailto:pdb118@psu.edu)  
*Integrating a Meta-Competencies Framework into Sustainability Curriculum Design*
- **Keith McDade**, Lenoir-Rhyne University, [keith.mcdade@lr.edu](mailto:keith.mcdade@lr.edu)  
*Making Switches Stick in Sustainability Studies education?: Requiring a psychology course to enhance efforts to improve environment, wellness, and community*
- **Lee Frankel-Goldwater**, University of Colorado Boulder, [lee.fg@colorado.edu](mailto:lee.fg@colorado.edu)  
*Developing Affective Awareness in the Context of Interdisciplinarity: Authentic Learning for Environmental Studies in Higher Education*
- **Yehuda L. Klein**, Brooklyn College and CUNY Graduate Center, [yklein@brooklyn.cuny.edu](mailto:yklein@brooklyn.cuny.edu) and **Tomas Lopez-Pumarejo**, Brooklyn College, [samot25@mac.com](mailto:samot25@mac.com)  
*The Urban Sustainability Curriculum: Breaking Down Barriers between Economics, Business and Science*

## B-10 Discussion Symposium: Teaching, Research and Advocacy in a Post-Fact Era II

Room 604

- **MODERATOR: Leslie Gray**, Santa Clara University, [lcgray@scu.edu](mailto:lcgray@scu.edu)
- **Michael Finewood**, Pace University, [mfinewood@pace.edu](mailto:mfinewood@pace.edu)
- **Teresa Lloro-Bidart**, California State Polytechnic University, Pomona, [tllor001@ucr.edu](mailto:tllor001@ucr.edu)
- **Robert Mason**, Temple University, [rmason@temple.edu](mailto:rmason@temple.edu)

## Coffee Break

3:30pm – 4:00pm  
Room S120

## Session C

4:00pm – 5:30pm  
ENR2 Building

### C-1 Forest and Natural Resource Management II: International Perspectives

Room S210

- **CHAIR: Majory Silisyene**, University of Minnesota, [silis003@umn.edu](mailto:silis003@umn.edu)  
*Exploring Determinants of Forest-Related Behaviors in Loliondo Area, Tanzania*
- **Anil Bhargava**, University of Michigan, [anilbhar@gmail.com](mailto:anilbhar@gmail.com)  
*Is Forest Dependence Good? Evidence from Nepal on the Role of Natural Capital in Poverty Traps*
- **Wesley Mlsna Zebrowski**, Colby College, [wzebrows@colby.edu](mailto:wzebrows@colby.edu)  
*Consumed From Within: Social and Ecological Drivers of Expanding Internal Clearings in Ethiopian Orthodox Church Forests from 1960 to Present*
- **Sarah J. Becker**, US Army Corps of Engineers, [sjbecker14@gmail.com](mailto:sjbecker14@gmail.com). Co-authors: Craig S.T. Daughtry, USDA ARS, [Craig.Daughtry@ars.usda.gov](mailto:Craig.Daughtry@ars.usda.gov); Andrew L. Russ, USDA ARS, [Andrew.Russ@ars.usda.gov](mailto:Andrew.Russ@ars.usda.gov)  
*Robust forest indices for detecting trees using multispectral imagery*
- **Travis Reynolds**, Colby College, [twreynol@colby.edu](mailto:twreynol@colby.edu). Co-authors: Jacob Wall, Colby College, [jawall@colby.edu](mailto:jawall@colby.edu); Elsie Fisher, University of California at Berkeley, [emfisher@colby.edu](mailto:emfisher@colby.edu); Alemayehu Wassie, Bahir Dar University, [alewas2008@yahoo.com](mailto:alewas2008@yahoo.com); Atalel Wubalem, Bahir Dar University, [wubalematalel@yahoo.com](mailto:wubalematalel@yahoo.com)  
*Ecological and socioeconomic drivers of scattered tree abundance and species richness in farmland surrounding church forests in northern Ethiopia*

### C-2 Discussion Symposium: Collaborative Approaches to Complex Issues: Gleaning Lessons Learned

Room N350

- **MODERATOR: Jennifer H. Allen**, Portland State University, [jhallen@pdx.edu](mailto:jhallen@pdx.edu)
- **Rebecca J. Romsdahl**, University of North Dakota, [romsdahl@aero.und.edu](mailto:romsdahl@aero.und.edu)
- **Annie Sawabini**, National Oceanic and Atmospheric Administration, [anniesawabini@gmail.com](mailto:anniesawabini@gmail.com)
- **Esther Conrad**, Stanford University, [esther@stanford.edu](mailto:esther@stanford.edu)
- **Matthew Grabau**, Desert LLC, [matthew\\_grabau@fws.gov](mailto:matthew_grabau@fws.gov)

### C-3 Local, place-based, and indigenous knowledge for ecological resilience II

Room S495

- **CHAIR: Heather E. Campbell**, Claremont Graduate University, [heather.campbell@cgu.edu](mailto:heather.campbell@cgu.edu). Co-authors: Adam Eckerd, Virginia Tech, [aeckerd@vt.edu](mailto:aeckerd@vt.edu); Yushim Kim, Arizona State University, [ykim@asu.edu](mailto:ykim@asu.edu)  
*Cleaning Up Brownfields, Improving Environmental Justice: Assessing Community Involvement*
- **Dan Millis**, Sierra Club Grand Canyon Chapter, [dan.millis@sierraclub.org](mailto:dan.millis@sierraclub.org)  
*Protecting Nature and Human Rights in the Borderlands*
- **Claire Perrott**, The University of Arizona, [cperrott@email.arizona.edu](mailto:cperrott@email.arizona.edu)  
*A Cultural and Environmental History of Parícutin, Volcano in a Cornfield*
- **Heather Ward**, USACE ERDC Geospatial Research Laboratory, [heatherward63@gmail.com](mailto:heatherward63@gmail.com)  
*Contesting Norms – Indigenous Geographies of Protest*

### C-4 [intentionally blank]

### C-5 Multidimensional Impacts of Energy Development

Room S225

- **CHAIR: Sarah Mills**, University of Michigan, [sbmills@umich.edu](mailto:sbmills@umich.edu). Co-authors: Andrew Stephenson, University of Northern Iowa, [andrew.stephenson@uni.edu](mailto:andrew.stephenson@uni.edu); Jill Wittrock, University of Northern Iowa, [jill.wittrock@uni.edu](mailto:jill.wittrock@uni.edu); Ki-Hyung Park, University of Northern Iowa, [ki.park@uni.edu](mailto:ki.park@uni.edu); John Degroote, University of Northern Iowa, [john.degroote@uni.edu](mailto:john.degroote@uni.edu)  
*Enough is enough, or not? The effect of wind turbine proximity and density on attitudes toward wind energy*



- **Michael Irwin**, Duquesne University, [irwinm@duq.edu](mailto:irwinm@duq.edu), and **Annette MacKay**, West Virginia University, [amm0065@mix.wvu.edu](mailto:amm0065@mix.wvu.edu)  
*Labor In-migration Impacts on Community Residential Distribution: Changes in Out-migration and Commuting in Fracking Impacted Municipalities Across Pennsylvania*
- **Sarmistha Majumdar**, Texas Southern University, [smajumdr@gmail.com](mailto:smajumdr@gmail.com)  
*A Community's Response to Fracking: A Case Study*
- **Gulnihal Ozbay**, Delaware State University, [gozbay@desu.edu](mailto:gozbay@desu.edu). Co-authors: Chunlei Fan, Morgan State University, [chunlei.fan@morgan.edu](mailto:chunlei.fan@morgan.edu); Kelton Clark, Morgan State University; Shobha Sriharan, Virginia State University, [sriharan@vsu.edu](mailto:sriharan@vsu.edu)  
*Environmental Impact of Offshore Wind Farms on Black Sea Bass Population in Maryland Coastal Region*

## C-6 Climate Change II: In Search of Carbon Neutrality

Room S230

- **CHAIR: Jim McMahon**, Better Climate Research and Policy Analysis, [jim@betterclimate.info](mailto:jim@betterclimate.info)  
*Consumer Guide to Climate Solutions*
- **Shahzeen Z. Attari**, Indiana University Bloomington, [sattari@indiana.edu](mailto:sattari@indiana.edu). Co-authors: Elke Weber, Princeton University, [eweber@princeton.edu](mailto:eweber@princeton.edu); David H. Krantz, Columbia University, [dhk@psych.columbia.edu](mailto:dhk@psych.columbia.edu)  
*Statements about climate researchers' carbon footprints affect their credibility and the impact of their advice*
- **Edward Yim**, Corbis, [edward.yim@dc.gov](mailto:edward.yim@dc.gov)  
*Data-driven investment prioritization to achieve carbon-neutral energy for cities*

## C-7 Discussion Symposium: Communicating Themes of Resilience in a Time of Denial: An Integral Approach to Communicating Complex Issues Across Mental Models

Room S215

- **MODERATOR: John A. ("Skip") Laitner**, Economic and Human Dimensions Research Associates, [EconSkip@gmail.com](mailto:EconSkip@gmail.com)
- **David Schaller**, [daschaller@me.com](mailto:daschaller@me.com)
- **Ryan Keller**, Economic and Human Dimensions Research Associates, [rkeller310@gmail.com](mailto:rkeller310@gmail.com)
- **Claire Herrick**, [claire.herrick@gmail.com](mailto:claire.herrick@gmail.com)

## C-8 Applied learning for sustainability: New 'fieldwork' cases enhancing interdisciplinary learning and action

Room S217

- **CHAIR: Keith McDade**, Lenoir-Rhyne University, [keith.mcdade@lr.edu](mailto:keith.mcdade@lr.edu)  
*Visions of Sustainable Communities: An interdisciplinary graduate school class helps Asheville plan for improving its environment, wellness, and community*
- **Elizabeth Albert**, St. John's University, [alberte@stjohns.edu](mailto:alberte@stjohns.edu)  
*Littoral/Marginal: The Urban Waterfront as Focus of an Interdisciplinary Seminar on Environmental and Social Justice*

## C-9 Interdisciplinary Teaching for a Sustainable Future

Room N595

- **CHAIR: David Gosselin**, University of Nebraska-Lincoln, [dgosselin2@unl.edu](mailto:dgosselin2@unl.edu)
- **Jonathan Silverman**, Saint Michael's College, [jsilverman@smcvt.edu](mailto:jsilverman@smcvt.edu)  
*An Interdisciplinary Perspective of Bringing Ecojustice to Life Through Curriculum*
- **Richard Schultenbrandt Gragg**, Florida A&M University, [richard.gragg@famu.edu](mailto:richard.gragg@famu.edu)  
*Food as the Foundation for Healthy Communities Teaching Module*
- **Cara Thompson**, [cara.k.thompson@gmail.com](mailto:cara.k.thompson@gmail.com)  
*Integrate Ocean Sustainability Module*
- **Vince Cronin**, Baylor University, [Vince\\_Cronin@baylor.edu](mailto:Vince_Cronin@baylor.edu)  
*GETSI module on GPS, Strain, and Earthquakes*

## C-10 Taking the long view: ESS as culture and history

Room 604

- **CHAIR: Stephanie Kaza**, University of Vermont, [skaza@uvm.edu](mailto:skaza@uvm.edu)  
*Building an Academic Culture of Support for Advocacy*
- **Andy Davey**, University of Wisconsin-Madison, [adavey@wisc.edu](mailto:adavey@wisc.edu)  
*Revisiting The Origins of Environmental Studies*
- **Jeffrey Swofford**, Arizona State University, [jeffrey.swofford@asu.edu](mailto:jeffrey.swofford@asu.edu)  
*When the end of human civilization is your day job: how climate change scientists identify and cope with their profession*
- **David Downie**, Fairfield University, [ddownie@fairfield.edu](mailto:ddownie@fairfield.edu). Co-authors: James Brochhausen, Fairfield University, [ames.brochhausen@student.fairfield.edu](mailto:ames.brochhausen@student.fairfield.edu);





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*The First Six Years of JESS: Categorizing Authors and  
 Topics*

## **AESS Member Meeting with Afternoon Tea**

5:45pm – 6:45pm  
 Room S107

## **Film Night**

7:00pm – 10:30pm  
 Room N120

[See page 14 for film descriptions.]

7:00pm **Introduction and Welcome**

7:10pm **Breaking the Log Jam** (12 min.) + 3-min.  
 Intro from filmmaker Philip Brick

7:30pm **It Ain't Easy Being Green** (37 min.) + 3-min.  
 Intro from filmmaker Crystal Fortwangler

8:10pm **Erosion of Life** (60 min.) + 3 min.  
 Intro from filmmaker Monty Hempel

9:23pm **The Beaver Believers** (45 min.) + 3 min.  
 Intro from Philip Brick

10:11pm **Q&A and general discussion**

10:30pm **Adjourn**  
 Discussion encouraged to continue  
 informally.

## **Friday, June 23**

### **Registration / Business Center**

7:00am – 5:30pm  
 ENR2 Building, S107



## **Exhibitions Open**

8:00am – 5:00pm  
 Room S120

## **Breakfast/Coffee and Pastries**

8:00am  
 Room S120

## **Field Trips**

7:00am – 12:00pm

- See individual trips below for meeting times.
- Meet your guide in ENR2 Courtyard.
- Bottled water and granola bars will be available.

### **T-1 Kartchner Caverns**

- Arrive at ENR2 at 7:30am
- Guide: Kartchner Caverns will provide guide on site

### **T-2 Mt. Lemmon: Going from Mexico to Canada in One Morning!**

- Arrive at ENR2 at 7:30am
- Guide: Don Falk

### **T-3 San Xavier Mission and Compost Cats**

- Arrive at ENR2 at 7:30am
- Guides: Ben Champion and Bob Vint

### **T-4 Tucson: A World City of Gastronomy**

- Arrive at ENR2 at 7:30am
- Guide: Jonathan Mabry

### **T-5 Colorado River Water: Slaking Tucson's Thirst**

- Arrive at ENR2 at 7:30am
- Guide: Fernando Molina

### **T-6 Arizona-Sonora Desert Museum**

- Arrive at ENR2 at 7:30am
- Guide: Skip Laitner

### **T-7 Tucson Emerging 2030 District**

- Arrive at ENR2 at 7:00am
- Guides: Sandra Bernal, Michael Peel

### **T-8 An Ocean in the Desert... and More at Biosphere2**

- Arrive at ENR2 at 7:30am
- Guide: Biosphere2 will provide guide on site



## Lunch

12:30pm – 1:30pm

Served S120 with seating in S107 and throughout building

## Session D

1:30pm – 3:00pm

ENR2 Building

### D-1 Parks, recreation, and land use

Room S210

- **CHAIR: Rebecca L. Jordan**, Rutgers University, [rebecca.jordan@rutgers.edu](mailto:rebecca.jordan@rutgers.edu). Co-author: Amanda E. Sorensen, Rutgers University, [amasoren@rutgers.edu](mailto:amasoren@rutgers.edu)  
*Urban and Suburban Park User Identity Framework*
- **Erin Rugland**, Arizona State University, [erugland@asu.edu](mailto:erugland@asu.edu). Co-authors: Joanna Lucio, Arizona State University, [Joanna.Duke@asu.edu](mailto:Joanna.Duke@asu.edu); Elizabeth Corley, Arizona State University, [corley.elizabeth@gmail.com](mailto:corley.elizabeth@gmail.com); Yushim Kim, Arizona State University, [ykim@asu.edu](mailto:ykim@asu.edu)  
*Park Development and Civic Engagement: A Case Study of Two Urban Parks in Arizona*
- **Michael Kruse**, [mikekruse8@gmail.com](mailto:mikekruse8@gmail.com)  
*Is This Land Our Land? Attitudes Toward Public Lands in Arizona and Texas*
- **Daniel G. Clark**, Rutgers University and SUNY College of Environment and Forestry, [dangclark@gmail.com](mailto:dangclark@gmail.com). Co-author: Rebecca C. Jordan, Rutgers University, [rebeccacjordan@yahoo.com](mailto:rebeccacjordan@yahoo.com)  
*Environmentally Responsible Behavior and Public Use of Outdoor Space: Integrating Knowledge to Inform Policy Decision-Making*
- **Alfonso Orozco**, University of Wyoming and Latino Outdoors, [alfonso@latinooutdoors.org](mailto:alfonso@latinooutdoors.org) and **Courtney Carlson**, University of Wyoming, [courtney.carlson@uwyo.edu](mailto:courtney.carlson@uwyo.edu)  
*Analysis of Latino Outdoors Mission and organizational Performance: A multiple constituency approach*

### D-2 Education and community building through partnerships I: Bridging academics and communities

Room N350

- **CHAIR: Courtney Crosson**, University of Arizona, [ccrosson@email.arizona.edu](mailto:ccrosson@email.arizona.edu)  
*Tucson 2050 Vision: an academic, public, private partnership envisions a resilient urban future*
- **Molly Craft Johnson**, The New School, [molly@newschool.edu](mailto:molly@newschool.edu). Co-author: Ana Isabel Baptista, The New School, [baptista@newschool.edu](mailto:baptista@newschool.edu)  
*Academic Community Partnerships for Environmental Justice*
- **Claire Herrick**, Citizens' Climate Lobby, [claire.herrick@gmail.com](mailto:claire.herrick@gmail.com). Co-author: John Laitner, Association for Environmental Studies and Sciences (AESS), [skip@energystresstest.com](mailto:skip@energystresstest.com)  
*Building Climate Change Synergies Among Grass Root Organizations and Academic Programs*

### D-3 Intersectionality and the field of Environmental Studies and Sciences

Room S495

- **CHAIR: Teresa Lloro-Bidart**, California State Polytechnic University, Pomona, [tlor001@ucr.edu](mailto:tlor001@ucr.edu). Co-author: Michael Finewood, Pace University, [mfinewood@pace.edu](mailto:mfinewood@pace.edu)  
*Looking outward and inward: What feminist theory offers the field of environmental studies and sciences*
- **NK Chung**, Pace University, [nickesha.chung@fulbrightmail.org](mailto:nickesha.chung@fulbrightmail.org)  
*The intersectional challenges of researching and implementing water empowerment in Swaziland's Hhohho Region*
- **Pamela McMullin-Messier**, Central Washington University, [mcmullin@cwu.edu](mailto:mcmullin@cwu.edu)  
*Reframing the population connection: Intersectionality and critical demography in the environmental movement*
- **Leslie Gray**, Santa Clara University, [lcgray@scu.edu](mailto:lcgray@scu.edu)  
*Empowerment and clean energy: The gendered impacts of solar technology in Tanzania*
- **Michael Finewood**, Pace University, [mfinewood@pace.edu](mailto:mfinewood@pace.edu)  
*Jock capital and white savior syndrome - How to be a part without getting in the way*

### D-4 Writing and reflection on environmental studies

Room S223

- **CHAIR: Nancy J. Keiser**, North Central College, [njkeiser@noctrl.edu](mailto:njkeiser@noctrl.edu)  
*College students reflect on required nature experiences in a humanities course in Environmental Studies*
- **Joni M. Palmer**, University of New Mexico, [joni.palmer@colorado.edu](mailto:joni.palmer@colorado.edu)  
*Fieldbooks ... as vehicles for interdisciplinary place-based studies*
- **Kathryn Finin**, SUNY Oneonta, [kathryn.finin@oneonta.edu](mailto:kathryn.finin@oneonta.edu)  
*Right-Brain Practices and Teaching Environmental Humanities*
- **Monty Hempel**, University of Redlands, [monty\\_hempel@redlands.edu](mailto:monty_hempel@redlands.edu)  
*Eye-to-Eye with Whales: Environmental Thought in a Divided Brain*

## D-5 Perspectives on Alternative Energies

Room S225

- **CHAIR: Jennifer L. Dunn**, Michigan Technological University, [jdunn@mtu.edu](mailto:jdunn@mtu.edu). Co-authors: Kathleen E. Halvorsen, Michigan Technological University, [kehalvor@mtu.edu](mailto:kehalvor@mtu.edu); Mark D. Rouleau, Michigan Technological University, [mdroulea@mtu.edu](mailto:mdroulea@mtu.edu); John B. Barnett, Michigan Technological University, [barnett@mtu.edu](mailto:barnett@mtu.edu)  
*Wisconsin forest landowners' intent to harvest biomass for bioenergy production*
- **Emma K. Redfoot**, University of Idaho, [redf3263@vandals.uidaho.edu](mailto:redf3263@vandals.uidaho.edu)  
*Nuclear Power as a Low Emissions Solution*
- **Valerie Rountree**, University of Arizona, [vrountree@email.arizona.edu](mailto:vrountree@email.arizona.edu). Co-author: Elizabeth Baldwin, University of Arizona, [elizabethb@email.arizona.edu](mailto:elizabethb@email.arizona.edu)  
*Mechanisms and motivation for stakeholder participation in renewable energy policy implementation*

## D-6 Discussion Symposium: New Frontiers in Visualizing Climate Change

Room S230

- **MODERATOR: Beth Karlin**, University of Southern California, [bkarlin@usc.edu](mailto:bkarlin@usc.edu)
- **Richard Matthew**, UC – Irvine, [rmatthew@uci.edu](mailto:rmatthew@uci.edu)
- **Irina Feygina**, Climate Central, [irina.feygina@gmail.com](mailto:irina.feygina@gmail.com)

## D-7 Discussion Symposium: Planning for climate resiliency: From identifying risks to establishing strategies for community resilience and robustness

Room S215

- **MODERATOR: Karin Warren**, Randolph College, [kwarren@randolphcollege.edu](mailto:kwarren@randolphcollege.edu)
- **Charles A. McClougherty**, University of Mount Union, [mcclauca@mountunion.edu](mailto:mcclauca@mountunion.edu)
- **Amy L. Seidl**, University of Vermont, [Amy.Seidl@uvm.edu](mailto:Amy.Seidl@uvm.edu)
- **Ashwani Vasisht**, Ramapo College of New Jersey, [vasisht@ramapo.edu](mailto:vasisht@ramapo.edu)

## D-8 Planning for Sustainable Urban Development

Room S217

- **CHAIR: Joshua Lockyer**, Arkansas Tech University, [jlockyer@atu.edu](mailto:jlockyer@atu.edu)  
*The Ecovillage as a Site for Multidisciplinary Sustainability Research: Collaboration, Community, & Environment*
- **Bhavna Shamasunder**, Occidental College, [bhavna@oxy.edu](mailto:bhavna@oxy.edu)  
*The South Los Angeles Neighborhood Oil Drilling Health and Exposure Study: Structuring Buffers and Setback Distances for Health*
- **Adrah Parafiniuk**, Northern Arizona University, [amp8@nau.edu](mailto:amp8@nau.edu)  
*The Boulder Model: How creative capitalism can create funding for housing that is both economically and environmentally sustainable*

## D-9 Experiential Education

Room N595

- **CHAIR: Robert Mason**, Temple University, [rmason@temple.edu](mailto:rmason@temple.edu)  
*Teaching Environmental Sustainability in Cross-National Context: The Study Abroad Experience*
- **Kenneth W. Foster**, Concordia College, Moorhead MN, [foster@cord.edu](mailto:foster@cord.edu)  
*Creating Sustainability-Focused Experiential Learning Opportunities for Students: Opportunities, Challenges, and Lessons Learned*
- **Sam Whitehead**, [samcwhitehead1977@gmail.com](mailto:samcwhitehead1977@gmail.com)  
*Incentives for Student Engagement in Conservation*

## D-10 Citizens First, Scientists Second: Activism by the Academy in the Anthropocene

Room 604

- **CHAIR: Nancy J. Manring**, Ohio University, [manring@ohio.edu](mailto:manring@ohio.edu)
- **Tee L. Guidotti**, [www.teeguidotti.com](http://www.teeguidotti.com)  
*Reconciling Academic and Professional Caution with Advocacy by Creating a Second Voice: The Canadian Association of Physicians for the Environment*
- **Melinda Harm Benson**, University of New Mexico, [mhbenson@unm.edu](mailto:mhbenson@unm.edu)  
*Activism in the Anthropocene -- beyond the human*
- **Peter Buckland**, Penn State University, [pdb118@psu.edu](mailto:pdb118@psu.edu)  
*Channeling climate passion into a policy window: Thoughts from a Penn State activist*
- **Neva Hassanein**, University of Montana, [Neva.Hassanein@mso.umt.edu](mailto:Neva.Hassanein@mso.umt.edu)  
*Teaching to Transform: Reflections on Pedagogy and Activism*



## **Coffee Break**

3:00pm – 3:30pm  
Room S120

## **Session E**

3:30pm – 5:00pm  
ENR2 Building

### **E-1 Wildlife Conservation and Governance**

Room S210

- **CHAIR: Sara Kross**, California State University, Sacramento, [sara.kross@csus.edu](mailto:sara.kross@csus.edu)  
*Kiwis love falcons: A case-study of successful community-led conservation*
- **Courtney Carlson**, University of Wyoming, [courtney.carlson@uwyo.edu](mailto:courtney.carlson@uwyo.edu)  
*Omen for the Land: Saving the World's Most Critically Endangered Antelope*
- **Ute Brady**, Arizona State University, [Ute.Brady@asu.edu](mailto:Ute.Brady@asu.edu)  
*Coding anarchy: Utilizing the Institutional Grammar Tool to understand institutional feedbacks and fit of international wildlife governance treaties*
- **Erin M. Burkett**, Michigan Technological University, [emburket@mtu.edu](mailto:emburket@mtu.edu). Co-author: Richelle L. Winkler, Michigan Technological University, [rwinkler@mtu.edu](mailto:rwinkler@mtu.edu)  
*Integrating social science and natural science to improve Great Lakes recreational fisheries management*
- **Gordon Steinhoff**, Utah State University, [gordon.steinhoff@usu.edu](mailto:gordon.steinhoff@usu.edu)  
*Biodiversity Conservation and the 2012 Planning Rule*

### **E-2 Education and community building through partnerships II: Collaborations in practice**

Room N350

- **CHAIR: Krystyna Stave**, UNLV, [krystyna.stave@unlv.edu](mailto:krystyna.stave@unlv.edu)  
*Social and Ecological System Dynamics: A book project for practical collaboration and regional integration*
- **Matthew B. Johnson**, The University of Arizona/Boyce Thompson Arboretum, [mjohnson@ag.arizona.edu](mailto:mjohnson@ag.arizona.edu). Co-authors: Tanya M. Quist, The University of Arizona, [tquist@email.arizona.edu](mailto:tquist@email.arizona.edu); Seymour H. Sohmer, Boyce Thompson Arboretum, [shsohmer@email.arizona.edu](mailto:shsohmer@email.arizona.edu)  
*Seeing the Forest for the Trees*
- **Richard Adu Antwako**, William V.S. Tubman University, [richardadu52@yahoo.com](mailto:richardadu52@yahoo.com)  
*Failing private-public partnership to provide sustainable solid waste management in Accra Metropolitan Area*

### **E-3 Discussion Symposium:**

#### **Film: EROSION OF LIFE**

Room S495

- **MODERATOR: Monty Hempel**, University of Redlands, [monty.hempel@redlands.edu](mailto:monty.hempel@redlands.edu)

**E-4** [intentionally blank]

### **E-5 The Promises and Pitfalls of Solar Technology: Local and Global Perspectives**

Room S225

- **CHAIR: Leslie Gray**, Santa Clara University, [lcgray@scu.edu](mailto:lcgray@scu.edu)  
*The Social Power of Solar: The Impact of Solar Lanterns on Rural Households in Tanzania*
- **Jennifer Bernstein**, University of Hawaii, [jennifer.bernstein@gmail.com](mailto:jennifer.bernstein@gmail.com)  
*Beyond NIMBYism: Dissonant Attitudes Towards the Scale of Solar in Joshua Tree, California*
- **Dustin Mulvaney**, San Jose State University, [dustin.mulvaney@sjsu.edu](mailto:dustin.mulvaney@sjsu.edu). Co-author: Candice Carr Kelman, Arizona State University, [Candice.Carr.Kelman@asu.edu](mailto:Candice.Carr.Kelman@asu.edu)  
*Lessons learned from managing end-of-life photovoltaics in rural electrification projects*

### **E-6 Water and Climate in Latin America**

Room S230

- **CHAIR: Abby Lindsay**, American University, [abby.lindsay@american.edu](mailto:abby.lindsay@american.edu)  
*Investing Upstream: Insight from Peruvian Urban Water Supply Management*
- **Emily Benton Hite**, University of Colorado Boulder, [Emily.B.Hite@colorado.edu](mailto:Emily.B.Hite@colorado.edu)  
*Political Ecology of Costa Rica's Climate Policy: How Strategies of Indigenous Resistance Inform State Policy*
- **Thomas Shahady**, Lynchburg College, [Shahady@lynchburg.edu](mailto:Shahady@lynchburg.edu)  
*Watershed Management Through Community Engagement in Costa Rica*
- **Marta A. Panero**, New York Institute of Technology, [mpanero@nyit.edu](mailto:mpanero@nyit.edu). Co-authors: Nada Anid, New York Institute of Technology, [nanid@nyit.edu](mailto:nanid@nyit.edu); Weslynn Ashton, Illinois Institute of Technology, [washton@stuart.iit.edu](mailto:washton@stuart.iit.edu)  
*Linking Education to Water Sustainability and Lower Carbon Footprint in Latin America*

**E-7** [intentionally blank]





## E-8 Waste Opportunities: Utilizing Campus Waste Streams for Sustainability Teaching and Learning in the ESS Curriculum

Room S217

- **CHAIR: Thomas Bryan**, University of Wisconsin-Madison, [tbryan@wisc.edu](mailto:tbryan@wisc.edu)
- **Timothy D. Lindstrom**, University of Wisconsin-Madison, [tlindstrom@wisc.edu](mailto:tlindstrom@wisc.edu)  
*Trash Audits in the Classroom: an Academic and Operations Partnership*
- **Lissy Goralnik**, Michigan State University, [goralnik@msu.edu](mailto:goralnik@msu.edu)  
*From Knowledge to Action: Campus Waste and Behavioral Change for Whole Student Sustainability Learning*
- **Amy Knisley**, Warren Wilson College, [aknisley@warren-wilson.edu](mailto:aknisley@warren-wilson.edu)  
*The Interface of an Academic Curriculum and Campus Recycling at a Work College*
- **Erin Fried**, University of Colorado Boulder, [erin.fried6@gmail.com](mailto:erin.fried6@gmail.com). Co-authors: Amanda Carrico, University of Colorado, [amanda.carrico@colorado.edu](mailto:amanda.carrico@colorado.edu); Mary O'Neill, University of Colorado Boulder, [Mary.Oneill@Colorado.edu](mailto:Mary.Oneill@Colorado.edu)  
*Increasing recycling on campus: Incorporating behavioral science into campus sustainability programs*

## E-9 Discussion Symposium: Collaborative Learning Spaces in Environmental Science and Environmental Studies General Education courses

Room N595

- **MODERATOR: Joan Curry**, University of Arizona, [jecurry@email.arizona.edu](mailto:jecurry@email.arizona.edu)
- **Jacqueline R. Maximillian**, University of Arizona, [maximillianj@email.arizona.edu](mailto:maximillianj@email.arizona.edu)
- **Monica D. Ramirez-Andreotta**, University of Arizona, [mdramire@email.arizona.edu](mailto:mdramire@email.arizona.edu)

## E-10 Enhancing ESS Programs for Success

Room 604

- **CHAIR: Nirav S. Patel**, Cornell University and Rutgers University, [nsp6@cornell.edu](mailto:nsp6@cornell.edu)  
*Motivating adult and youth engagement with environment through renewable energy education*
- **Simone Hausknecht**, Simon Fraser University, [shauskne@sfu.ca](mailto:shauskne@sfu.ca). Co-author: Ingrid Stefanovic, Simon Fraser University, [fenvdean@sfu.ca](mailto:fenvdean@sfu.ca)  
*Challenges to interdisciplinary environmental education in Canada*
- **James D. Buthman**, Hartwick College, [buthmanj@hartwick.edu](mailto:buthmanj@hartwick.edu)  
*Transcending Boundaries: Interdisciplinary Environmental Studies and Community Outreach*



- **Richard Shearman**, Rochester Institute of Technology, [rlsgsh@rit.edu](mailto:rlsgsh@rit.edu)  
*Ethics and Environmental Science Curricula*
- **Nancy J. Keiser**, North Central College, [njkeiser@noctrl.edu](mailto:njkeiser@noctrl.edu)  
*Do experiences in nature in childhood and adolescence promote interactions in nature and interest in environmental studies in adults?*

## Awards Reception and Dinner

6:00pm – 8:00pm

Tucson University Park Hotel, Canyons-Madera Ballrooms

- **Freudenburg Lifetime Achievement Award**  
Honoree: **Patricia "Patty" DeMarco**, Visiting Researcher and Writer, Institute for Green Sciences, Carnegie Mellon University
- **Best Student Paper**  
Honoree: **Drew F. Bush**, PhD Candidate, Department of Geography & School of Environment, McGill University  
*The Educational Impact of Climate Models on Understandings of Anthropogenic Global Climate Change*
- **President's Recognition Award for Educational and Environmental Collaboration and Excellence**  
AESS recognizes the valuable work of this year's honorees for their collaborative work and development of plans supporting the Tucson Emerging 2030 District, in which building owners and operators pursue goals of reducing energy, water, and transportation-related GHG emissions 50 percent by 2030.  
Honoree: **The University of Arizona College of Architecture, Planning & Landscape Architecture**, and **GLHN Architects and Engineers**  
Honoree: **Pima Community College**, and **Tucson Emerging 2030 District**

## Saturday, June 24

### Registration / Business Center

8:00am – 1:00pm

ENR2 Building, S107

### Breakfast/Coffee and Pastries

8:30am – 9:30am

Room S120

### Session F

9:00am – 10:30am

ENR2 Building



## F-1 Discussion Symposium: Valuing and Conserving College Land for Community Resilience

Room S210

- **MODERATOR: Jack Byrne**, Middlebury College, [jmbyrne@middlebury.edu](mailto:jmbyrne@middlebury.edu)
- **Nan Jenks Jay**, Middlebury College, [enksjay@middlebury.edu](mailto:enksjay@middlebury.edu)
- **Bob Heiser**, Vermont Land Trust, [bheiser@vlt.org](mailto:bheiser@vlt.org)

## F-2 Discussion Symposium: Bootstrap Sustainability: Building Momentum in Government and University Collaboration in the Absence of a Strong Mandate

Room N350

- **MODERATOR: John A. "Skip" Laitner**, Economic and Human Dimensions Research Associates, [EconSkip@gmail.com](mailto:EconSkip@gmail.com)
- **Julie Robinson**, Pima County, Arizona Sustainability Programs, [Julie.Robinson@pima.gov](mailto:Julie.Robinson@pima.gov)  
*Connecting County Sustainability Efforts with Academic Disciplines*
- **Ben Champion**, University of Arizona, [bchampion@email.arizona.edu](mailto:bchampion@email.arizona.edu)
- **Braden Kay**, City of Tempe, Arizona, [braden\\_kay@tempe.gov](mailto:braden_kay@tempe.gov)
- **Susanne Cotty**, Pima Association of Governments, [scotty@pagregion.com](mailto:scotty@pagregion.com)
- **Jason Laros**, City of Tucson, Arizona, [jason.laros@tucsonaz.gov](mailto:jason.laros@tucsonaz.gov)

## F-3 From Community Awareness to Engagement and Empowerment

Room S495

- **CHAIR: Amy Knisley**, Warren Wilson College, [aknisley@warren-wilson.edu](mailto:aknisley@warren-wilson.edu)  
*Living With It: Community Involvement vs. Community Empowerment in Superfund Policy*
- **Caroline Scruggs**, University of New Mexico, [cscruggs@unm.edu](mailto:cscruggs@unm.edu). Co-author: Rachel Moore, University of New Mexico, [rachelbbmoore@gmail.com](mailto:rachelbbmoore@gmail.com)  
*Advancing interdisciplinary collaboration to stimulate public awareness and engagement on US chemicals policy*
- **Alyssa Bueno**, Skidmore College, [abueno@skidmore.edu](mailto:abueno@skidmore.edu)  
*Using GIS to Increase Public Awareness on Potential Water Quality Risks due to Dairy Farming*
- **Namita Gupta**, Panjab University, Chandigarh (India), [namita4rights@gmail.com](mailto:namita4rights@gmail.com)  
*Community Driven Approach for the Restoration of Local Ecology: Success stories from India*

F-4 [intentionally blank]

## F-5 Negative Emissions Technologies as a Policy Response to Climate Change: Prospects and Risks

Room S225

- **CHAIR: Wil Burns**, Forum for Climate Engineering Assessment and American University, [wil@feronia.org](mailto:wil@feronia.org)  
*A Human Rights-Based Approach to Assessing the Implications of Bioenergy and Carbon Capture and Storage (BECCS)*
- **Simon Nicholson**, American University, [simon.nicholson@american.edu](mailto:simon.nicholson@american.edu)  
*How Negative Emissions Could Reshape International Climate Politics*
- **Klaus Lackner**, Arizona State University, Center for Negative Carbon Emissions, [Klaus.Lackner@asu.edu](mailto:Klaus.Lackner@asu.edu)  
*The Why and How of Negative Emissions*

## F-6 Climate Change Outreach and Engaged Learning

Room S230

- **CHAIR: Drew F. Bush**, McGill University, [drew.bush@mail.mcgill.ca](mailto:drew.bush@mail.mcgill.ca). Co-authors: Renee Sieber, McGill University, [renee.sieber@mcgill.ca](mailto:renee.sieber@mcgill.ca); Gale Seiler, Iowa State University, [gseiler@iastate.edu](mailto:gseiler@iastate.edu); Mark Chandler, Columbia University, NASA-GISS, [mac59@columbia.edu](mailto:mac59@columbia.edu)  
*Classroom Communities of Engagement: How Student Group Research With An Authentic Scientific Instrument Alters Classroom Learning of Climate Change*
- **Elizabeth Anne Kryder**, [kryder@writing.ucsb.edu](mailto:kryder@writing.ucsb.edu)  
*Expanding the Community: using multi-disciplinary insights for student-authored communication plans for re-introducing Grizzly Bears to a national park*
- **Clara Changxin Fang**, [clara@earthdeeds.org](mailto:clara@earthdeeds.org)  
*Our Climate Put a Price on It: The Millennial campaign for climate change*
- **Gulnihal Ozbay**, Delaware State University, [gozbay@desu.edu](mailto:gozbay@desu.edu). Co-authors: Laurieann Phalen, Delaware State University, [laurieannphalen@gmail.com](mailto:laurieannphalen@gmail.com); Shobha Sriharan, Virginia State University, [sriharan@vsu.edu](mailto:sriharan@vsu.edu); Chunlei Fan, Morgan State University, [chunlei.fan@morgan.edu](mailto:chunlei.fan@morgan.edu)  
*Using MSI-REaCH School of Ice and Ocean Sediment Workshops on Reconstructing Earth's Climate History Laboratory Tools for Undergraduate Climate Education*

## F-7 Resilience through climate communication

Room S215

- **CHAIR: Thomas A. Kovacs**, Eastern Michigan University, [tkovacs@emich.edu](mailto:tkovacs@emich.edu). Co-author: Kristin Wegner, University Corporation for Atmospheric Research, [kwegner@ucar.edu](mailto:kwegner@ucar.edu)  
*Climate Voices - a national network of climate experts engaging in a dialogue about climate change with the public*
- **John Foran**, UC Santa Barbara, [foran@soc.ucsb.edu](mailto:foran@soc.ucsb.edu)  
*Averting the Collapse of Humanity: A Novella of How Climate Justice Might Get Us All to 2050 in One Piece*
- **Carla May Dhillon**, University of Michigan, [carladhil@gmail.com](mailto:carladhil@gmail.com)  
*A Network Approach to Climate Change Collaborations between Indigenous Peoples and Climate Scientists*

## F-8 Environmental Pragmatism: Twenty Years Later

Room S217

- **CHAIR: Jennifer McErlean**, Siena College, [mcerlean@siena.edu](mailto:mcerlean@siena.edu)
- **David Henderson**, Western Carolina University, [dghenderson@email.wcu.edu](mailto:dghenderson@email.wcu.edu)  
*Pragmatic Conceptions of Nature in the Anthropocene*
- **Steven A. Fesmire**, Green Mountain College, [fesmires@greenmtn.edu](mailto:fesmires@greenmtn.edu)  
*Rescuing the Sustainability Movement (and Our Democracy) from Moral Fundamentalism*
- **Albert R. Spencer**, Portland State College of Liberal Arts and Science, [aspencer@pdx.edu](mailto:aspencer@pdx.edu)  
*Engaging Coal Country: Pragmatic Strategies for Eco-Justice*
- **Andrew Light**, George Mason University, [alight1@gmu.edu](mailto:alight1@gmu.edu)

## F-9 Engaging Many Shades of Green in Challenging Times: Theory and Research

Room N595

- **CHAIR: James D. Proctor**, Lewis & Clark College, [jproctor@lclark.edu](mailto:jproctor@lclark.edu)  
*EcoTypes: Navigating the Landscape of Environmental Ideas*
- **Emma Brush**, The Breakthrough Institute, [emma@thebreakthrough.org](mailto:emma@thebreakthrough.org)  
*Pluralism, Pragmatism, and Civil Disagreement: A Proposed Framework for Environmental Engagement in Theory and Practice*

- **Jennifer Bernstein**, University of Hawaii, [jennifer.bernstein@gmail.com](mailto:jennifer.bernstein@gmail.com)  
*Contemporary Environmental Typologies: Renewing the New Environmental Paradigm Scale*
- **Robin Globus Veldman**, Iowa State University, [robin.globus@gmail.com](mailto:robin.globus@gmail.com)  
*Barriers and Opportunities for Evangelical Environmentalism: Results from An Ethnography in Georgia, USA*

## F-10 Discussion Symposium: Supporting Interdisciplinary Academic Careers

Room 604

- **MODERATOR: David Hassenzahl**, California State University at Chico, [dhassenzahl@gmail.com](mailto:dhassenzahl@gmail.com)
- **Stephanie Kaza**, University of Vermont, [skaza@uvm.edu](mailto:skaza@uvm.edu)
- **Nancy Mathews**, University of Vermont, [nancy.mathews@uvm.edu](mailto:nancy.mathews@uvm.edu)
- **Leslie Gray**, Santa Clara University, [lcgray@scu.edu](mailto:lcgray@scu.edu)

## Coffee Break

10:30am – 11:00am

Room S120

## Session G

11:00am – 12:30pm

ENR2 Building

## G-1 Wildlife/Human Interface: Control or Coexistence?

Room S210

- **CHAIR: Christian Hunold**, Drexel University, [hunoldc@drexel.edu](mailto:hunoldc@drexel.edu)  
*Green Infrastructure and Urban Wildlife: From Animal Control to Shared Existence?*
- **Renee Cornue**, St. Edwards University, [rcornue@stedwards.edu](mailto:rcornue@stedwards.edu) and **Peter Beck**, St. Edwards University, [peterab@stedwards.edu](mailto:peterab@stedwards.edu)  
*Loving them and loathing them: Conflicting attitudes towards deer management alternatives in Central Texas*
- **Annie Booth**, University of Northern British Columbia, [Annie.Booth@unbc.ca](mailto:Annie.Booth@unbc.ca). Co-author: Dan Ryan, University of Northern British Columbia, [dan.ryan@unbc.ca](mailto:dan.ryan@unbc.ca)  
*Who's Afraid of the Big Bad Bear: Community Support for Urban Bears and Their Challenges*



## G-2 Community Gardens and Urban and Rural Environmental Justice

Room N350

- **CHAIR: Elyzabeth W. Engle**, The Pennsylvania State University, [ewe5019@psu.edu](mailto:ewe5019@psu.edu)  
*Coal is in our Food, Coal is in our Blood": Environmental Justice Implications of Community-Based Gardening Programs in Rural Appalachia*
- **Maggie Siebert**, [ms.paeonia@gmail.com](mailto:ms.paeonia@gmail.com). Co-author: Tema Milstein, University of New Mexico, [tema@unm.edu](mailto:tema@unm.edu)  
*Lessons from the Field of On-Campus Community Food Gardens*
- **Diamond Holloman**, UNC Chapel Hill, [diamond2@live.unc.edu](mailto:diamond2@live.unc.edu)  
*More Than a Garden: Urban Community Gardens as Spaces of Reclamation*
- **Kylie Bailin**, Lafayette College, [bailink@lafayette.edu](mailto:bailink@lafayette.edu). Co-authors: Sarah Edmonds, Lafayette College, [edmondss@lafayette.edu](mailto:edmondss@lafayette.edu); Sarah Morris, Lafayette College, [morrise@lafayette.edu](mailto:morrisse@lafayette.edu)  
*Creating a college seed library through partnerships with the college farm and students*

## G-3 Engaging Complexity on Complexity's Terms

Room S495

- **CHAIR: Paul Hirsch**, SUNY- ESF, [pahirsch@esf.edu](mailto:pahirsch@esf.edu)
- **Melinda Harm Benson**, University of New Mexico, [mhbenson@unm.edu](mailto:mhbenson@unm.edu)  
*Environmental Governance in the Anthropocene*
- **Ashwani Vasishth**, Ramapo College of New Jersey, [vasishth@ramapo.edu](mailto:vasishth@ramapo.edu)  
*Getting at Community Decision Making Under Complexity from Within a Process-Function Ecosystem Approach*
- **Patricia M. DeMarco**, Rachel Carson Institute, [demarcop6@gmail.com](mailto:demarcop6@gmail.com)  
*A Confluence of Complexities: The Challenge of Shifting Public Policy Direction for Effective Action on Climate Change and Global Chemical Pollution*
- **Jeff Ramsey**, Smith College, [jramsey@smith.edu](mailto:jramsey@smith.edu)  
*Not by Evidence Alone: Engaging All Components of Science in Complex and Multi-faceted Environmental Problems*

## G-4 Discussion Symposium: Environment, Wellness, and Community: Eco Art and Water

Room S223

- **MODERATOR: Elizabeth Demaray**, Association for Environmental Studies and Sciences (AESS), [demaray@rutgers.edu](mailto:demaray@rutgers.edu)

- **Matt Garica**, Kansas State University, [mattgarica@ksu.edu](mailto:mattgarica@ksu.edu)  
*Edible Desert Landscapes as Public Art*
- **Stacie G. Widdifield**, University of Arizona, [staciew@email.arizona.edu](mailto:staciew@email.arizona.edu). Co-author: Jeffrey Banister, University of Arizona, [banister@email.arizona.edu](mailto:banister@email.arizona.edu)  
*The Water Garden Museum in Mexico City's Chapultepec Park*
- **Ellen McMahon**, University of Arizona, [emcmahon@email.arizona.edu](mailto:emcmahon@email.arizona.edu)  
*Ground Work: Preparing the Next Generation of Visual Communicators*
- **Thomas Asmuth**, University of West Florida, [thomas.asmuth@gmail.com](mailto:thomas.asmuth@gmail.com). Co-Author: Sara Gevurtz, University of West Florida, [skgevurtz@vcu.edu](mailto:skgevurtz@vcu.edu)  
*Turbidity Paintings Project*

G-5 [intentionally blank]

G-6 [intentionally blank]

G-7 [intentionally blank]

## G-8 American Environmental Politics in Historical Perspective

Room S217

- **CHAIR: Kim Smith**, Carleton College, [ksmith@carleton.edu](mailto:ksmith@carleton.edu)
- **Sarah Mittlefehldt**, Northern Michigan University, [mittlefehldts@nmu.edu](mailto:mittlefehldts@nmu.edu)  
*The Politics of Green Energy: What History Can Teach Us About the Cultural & Political Challenges of Developing Renewable Energy Technologies*
- **Megan Chew**, Independent Scholar, [MeganLChew@gmail.com](mailto:MeganLChew@gmail.com)  
*Smokestacks and Cornfields: Policies of Power in the Ohio Valley during the 1970s*
- **Jessica Hejny**, Amherst College, [jhejny@amherst.edu](mailto:jhejny@amherst.edu)  
*Partisan Politics and the Environment Prior to the Reagan Revolution: What History Can Teach Us About the Current Political Divide Over Environmental Policy*
- **Erin Pischke**, Michigan Technological University, [epischke@mtu.edu](mailto:epischke@mtu.edu). Co-authors: Adam Wellstead, Michigan Technological University, [awellste@mtu.edu](mailto:awellste@mtu.edu); Barry Solomon, Michigan Technological University, [bdsolomo@mtu.edu](mailto:bdsolomo@mtu.edu)  
*Taking Paris Seriously: Measuring Renewable Energy Policy Output in the Americas*

## **G-9 Discussion Symposium: Engaging Many Shades of Green in Challenging Times: Debating Pedagogy and Praxis**

*Room N595*

- **MODERATOR: James D. Proctor**, Lewis & Clark College, [jproctor@lclark.edu](mailto:jproctor@lclark.edu)
- **Charles A. McClaugherty**, University of Mount Union, [mcclauca@mountunion.edu](mailto:mcclauca@mountunion.edu)
- **Emma Brush**, The Breakthrough Institute, [emma@thebreakthrough.org](mailto:emma@thebreakthrough.org)
- **Kenneth W. Foster**, Concordia College, [foster@cord.edu](mailto:foster@cord.edu)
- **Philip D. Brick**, Whitman College, [brick@whitman.edu](mailto:brick@whitman.edu)
- **Susan Caplow**, University of Montevallo, [scaplow@montevallo.edu](mailto:scaplow@montevallo.edu)

## **Lunch and Closing Panel**

12:30pm – 2:30pm

*Room S120 / S107*

### **Hearing Voices: Finding Solutions by Integrating Grassroots, Local Government, and Academic Knowledge and Perspective**

- **MODERATOR: Gina Murphy-Darling**, Mrs. Green's World
- **Jim Buizer**, University of Arizona, convener
- **Michael Peel**, Pima Community College and Local First Arizona
- **Courtney Crosson**, University of Arizona
- **Julie Robinson**, Pima County Sustainability Program
- **John A. "Skip" Laitner**, Economic and Human Dimensions Research

## **Adjourn**



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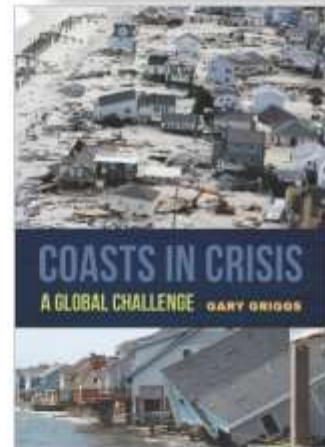
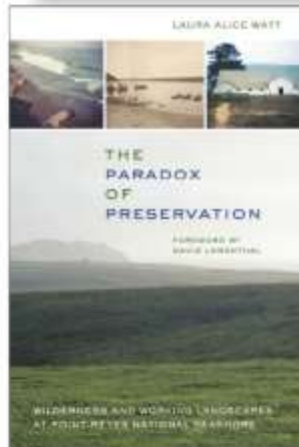
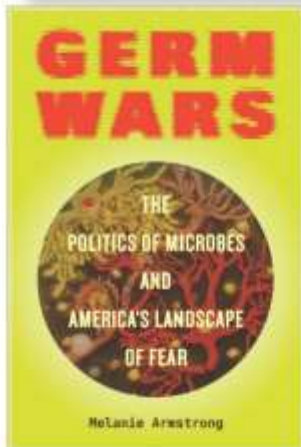
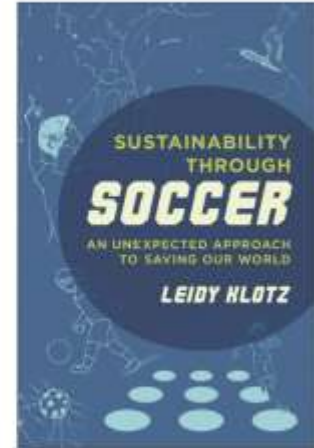
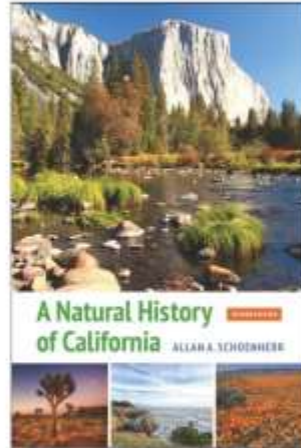
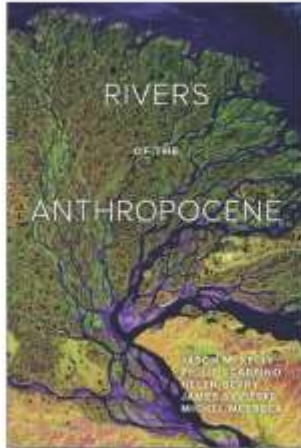
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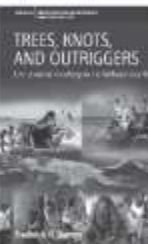
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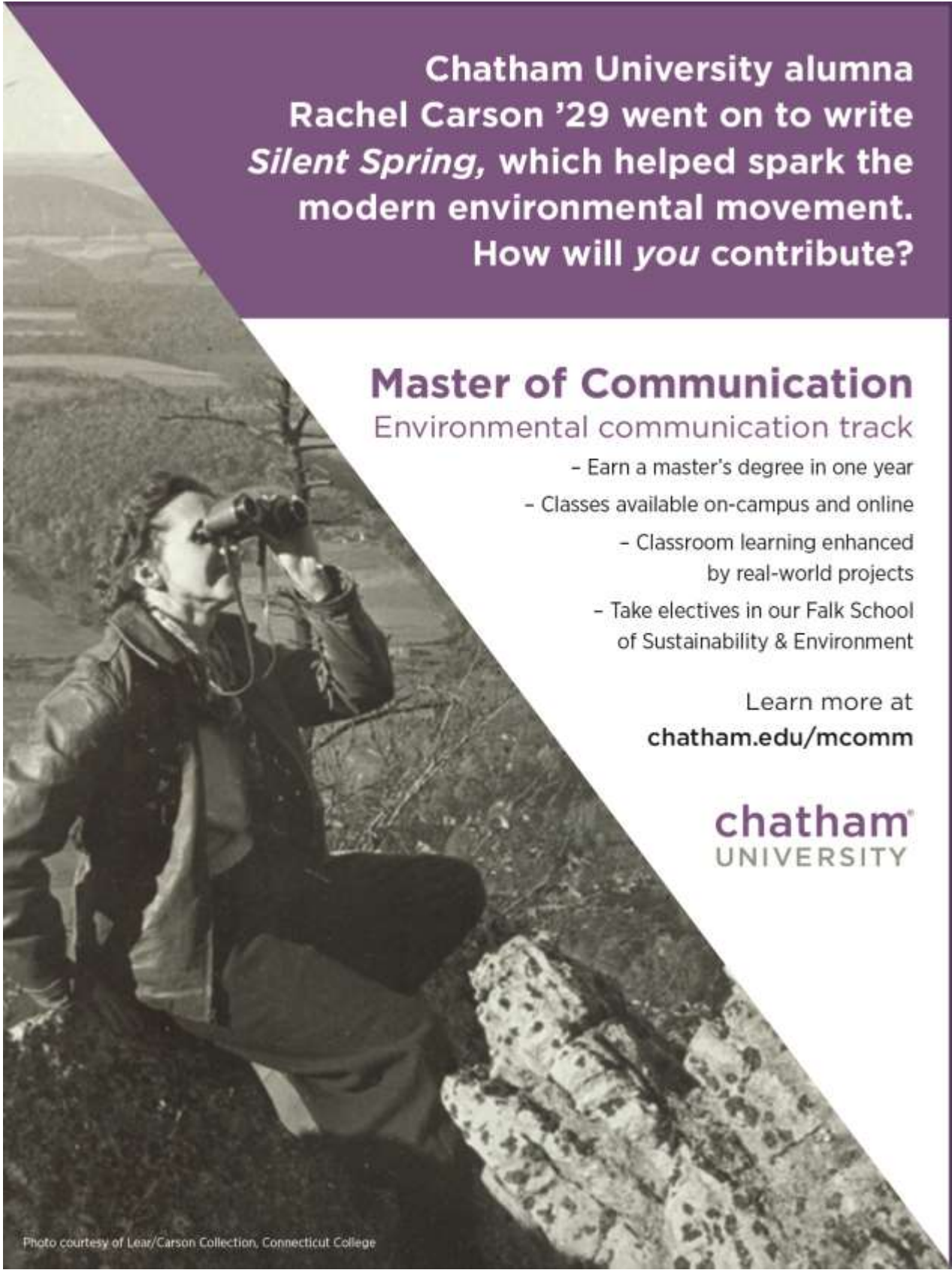


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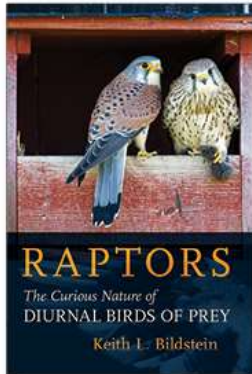


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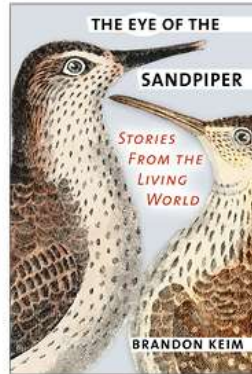
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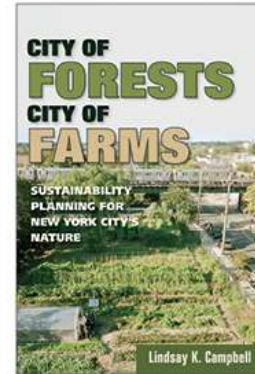
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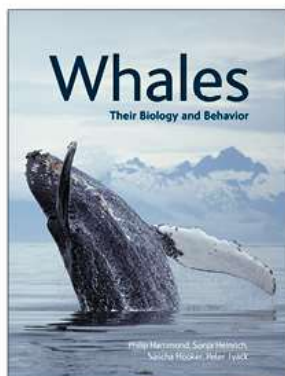
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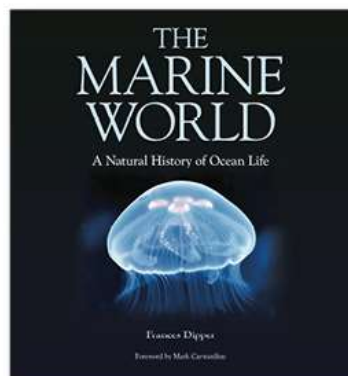
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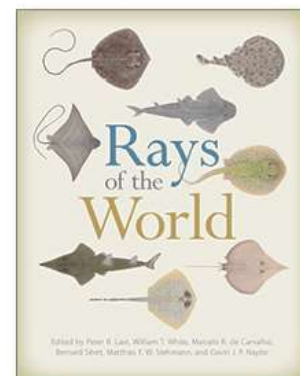
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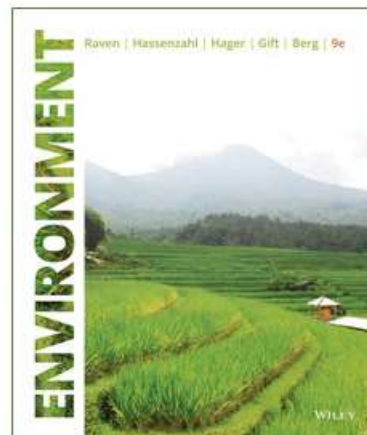
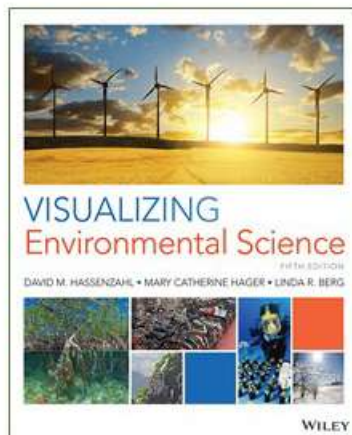




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