



**College of the Atlantic faculty who have engaged in sustainability research in the last three years**  
2017

Faculty at COA are organized into three broad areas: Arts and Design (AD), Human Studies (HS), and the Environmental Sciences (ES). In the following list, we indicate both the discipline(s) in which the faculty teach and their administrative area (AD, ES, or HS). COA does not organize faculty by department.

John Anderson (Biology, ES)  
Molly Anderson\* (Food Systems, HS)  
Nancy Andrews (Performance Art and Video Production, AD)  
Jodi Baker (Theater and Performance, AD)  
Richard Borden (Psychology and Human Ecology, HS)  
Don Cass (Chemistry, AD)  
Ken Cline (Environmental Law and Policy; Parks and Protected Areas, HS)  
Catherine Clinger (Art History and Studio Art, AD)  
Dru Colbert (Arts and Design, Visual Communication, AD)  
Kourtney Collum (Food Systems, HS)  
J. Gray Cox (Peace Studies and Philosophy, HS)  
David Feldman (Physics and Mathematics, ES)  
Jay Friedlander (Sustainable Business, HS)  
Sarah Hall (Earth Science, ES)  
Helen Hess (Biology, ES)  
Anne Kozak (Writing, HS)  
Todd Little-Siebold (History, HS)  
Isabel Mancinelli (Architecture and Design, AD)  
Jamie McKown (Government and Polity, HS)  
Suzanne Morse (Botany, ES)  
Chris Peterson (Marine Biology, ES)  
Nishanta Rajakaruna\* (Botany, ES)  
Stephen Ressel (Biology, ES)  
Davis Taylor (Economics, HS)  
Doreen Stabinsky (Global Environmental Politics, HS)  
Sean Todd (Biology, ES)  
Karen Waldron (Literature and Women's Studies, HS)

Note: Molly Anderson, Donn Cass, and Nishanta Rajakaruna are not currently on the faculty but were faculty members during the time of this survey.



### **Sustainability research as defined by AASHE:**

Sustainability research is research that leads toward solutions that simultaneously support social well-being, economic prosperity, and ecological health. It includes academic research that:

- Explicitly addresses sustainability and/or furthers our understanding of the interconnectedness of social, economic and environmental issues;
- Contributes directly toward solving one or more major sustainability challenge (e.g. contributes toward achieving principles outlined in the Earth Charter); and/or
- Engages community members with the aim of combining knowledge and action to achieve positive social, economic and environmental outcomes (e.g. participatory and community-based research and engaged scholarship)

### **Inventory of sustainability research 2014-2016:**

This is a partial listing of sustainability-related research done by COA faculty during the three calendar years 2014, 2015, and 2016.

**John Anderson, Don Cass, Nishanta Rajakaruna and Sarah Hall** received a \$142,000 grant from the Davis Educational Foundation. Their project, titled "Transforming ecology education through interdisciplinary landscape-level research," used a local watershed as a case study for ecological research and teaching. This project ran from 2012 to 2014.

**Molly Anderson** published 9 articles and 2 book chapters on sustainable food systems.

**Molly Anderson, Anna Demeo, and C.J Walk** were all key personnel for a recently funded Arthur Vining Davis Foundation grant for \$150,000: "Empowering a Fossil Fuel Free Farm." The project runs from 2014 to 2016.

**Molly Anderson** was appointed to the International Panel of Experts on Sustainable Food Systems and served on the Technical Support Team for monitoring the Committee on World Food Security effectiveness.

**Nancy Andrews** completed a feature-length film *The Strange Eye of Dr. Myes (2015)*. The science in the film bears resemblance to current developments in neuro-computer interfaces, while at the same time it explores our relationships with the "natural" world and the subjectivity of human sensory experience.

**Richard Borden** published *Ecology and Experience: Reflections from a Human Ecological Perspective* (North Atlantic Books, 2014), an overview of the intellectual and institutional history of human ecology.



**Ken Cline** presented at the World Parks Forum in Sydney Australia in November, 2014, on the need for a Multidisciplinary Approach to Protected Area Education. The World Parks Forum is the preeminent conference of parks and protected area management. It is held every 10 years.

**Ken Cline** Gave a presentation in March 2015 at the George Wright Society meeting in Oakland, CA: "Re-Envisioning the Application of the National Environmental Policy Act (NEPA) Within Land Management Agencies" (with Chris Buczko from the National Park Service).

**Catherine Clinger** designed and created a print studio on campus that promotes safe methods of artmaking.

**Dru Colbert** is currently co-authoring the new permanent exhibition at the Abbe Museum in Bar Harbor, ME. This effort seeks to 'decolonize' the presentation of Wabanaki culture and history at the Abbe and present ideas developed by contemporary native people in Maine.

**Dru Colbert**, with a team of students, faculty, and staff, is researching and developing an exhibition to celebrate the centennial celebration of Acadia National Park. The exhibition focuses on the natural history of the park.

**Kourtney Kollum** gave presented a paper, "Adaptation and Cooperation in Agriculture: On-Farm Bee Conservation in the U.S. and Canada" at the Society for Applied Anthropology Annual Meeting. March 2017—Santa Fe, New Mexico.

**Kourtney Kollum** presented a paper, "We're Farmers, Not Beekeepers": Farmers' Cultural Models of Pollinator Conservation. Paper presented at the 115th Annual Meeting of the American Anthropological Association. November 2016—Minneapolis, Minnesota.

**Gray Cox** was the principal author of a short book published in June of 2014 by the Quaker Institute for the Future studying Quaker models of participatory and collaborative research for sustainability studies called "Quaker Approaches to Research: Collaborative Practices and Communal Discernment".

**Gray Cox** published an article about the social and ethical impacts of artificial intelligence: "Reframing Ethical Theory, Pedagogy, and Legislation to Bias Open Source AGI Towards Friendliness and Wisdom", in the *Journal of Evolution and Technology*, November, 2015.



**Gray Cox** presented a paper on Gandhi and how his views can shed light on the nature of ecological change: “Gandhi’s Dialogical Truth Force: Applying Satyagraha Models of Practical Rational Inquiry to Ecological Change, Warfare, and the Technological Singularity”, Conference on Gandhi and the Contemporary World, New Delhi University, Feb. 24-25, 2016

**David Feldman**, Anna E. Demeo, and **Doreen Stabinsky** are co-PIs on a \$40,000 grant from the Henry David Thoreau foundation. The project, known as the Thoreau Environmental Leaders Initiative, prepares students to be effective advocats and activists in the areas of renewable energy and national and international climate change politics.

**Jay Friedlander** was a speaker at several venues including key note addresses at the Asian Conference for Sustainability, Energy and the Environment and the European Conference on Sustainability, Energy and the Environment. He also published From “Sustainability to Abundance” on the Stanford Social Innovation Review (December 2015, [http://ssir.org/articles/entry/from\\_sustainability\\_to\\_abundance#](http://ssir.org/articles/entry/from_sustainability_to_abundance#)). He also launced the website [www.abundancecycl.com](http://www.abundancecycl.com), on which he explores the notion of strategic sustainability for businesses.

**Sarah Hall** was co-PI on a \$341,000 grant from the National Science Foundation to created a field-based professional development program that includes skill building and networking for students in environmental science. One of the components of this projects is a novel approach for credentialing students' field skills so that future employers know what methods they are qualified to use.

**Helen Hess** is currently working with several COA students to develop a censusing protocol at Anemone Cave in Acadia National Park to monitor populations of three sea anemone species at the site. This research will inform Park decisions regarding mitigation of freshwater run-off into the tidepools, which may be increasing with changing weather patterns and may impose a physiological stress on the organisms. (Research permit #ACAD-2014-SCI-0023.)

Students in **Anne Kozak's** Spring 2014 course in Communicating Science wrote text for an exhibit on the effects of climate change in Acadia National Park. The exhibit, which is scheduled to open in 2016 for the 100th anniversary of Acadia, will be located in the Nature Center at Sieur de Monts Spring. Kozak also wrote articles for a local newspaper about the emerald borer and the wooly adelgid, both of which potentially threaten trees in Acadia and on Mount Desert Island



**Todd Little-Siebold** is working on an ongoing research project on the the history of apple production in Maine, focusing on heirloom varieties from the Penobscot river east. He has given several public presentations on his research at historical societies, land trusts, and local rod and gun clubs.

**Suzanne Morse** received a \$15,000 grant from SARE (Sustainable Agriculture Research & Education) to conduct research on farm use of resources for building soil fertility. She is currently exploring how chipped alder might be incorporated into intensive vegetable practices.

**Chris Petersen** conducted research on ocean acidification, invasive species, and shellfish population dynamics with commercial fishermen in Frenchman Bay. This work was done with the New England Sustainability Consortium, an NSF-funded group led by the Universities of Maine and New Hampshire. The title of the grant is Strengthening the scientific basis for decision-making: advancing sustainability science and knowledge-action capacities in coupled coastal systems.

**Nishanta Rajakaruna** and COA Student Jillian Gall co-authored a book chapter on phytoremediation for heavy-metal contaminated soils (The Physiology, Functional Genomics, and Applied Ecology of Heavy Metal-Tolerant Brassicaceae, in Brassicaceae: Characterization, Functional Genomics and Health Benefits (ed. Minglin Lang), Nova Science, 2013).

Jillian Gall, R.S. Boyd, and **Nishanta Rajakaruna** co-authored “Transfer of heavy metals through terrestrial food webs: A review.” *Environmental Monitoring and Assessment* 187: 201. 2015.

**Stephen Ressel** is currently examining the physiological and ecological correlates of a Spotted Salamander (*Ambystoma maculatum*) population that breeds along the coast of Maine. Preliminary data indicate that individuals in this population can tolerate elevated levels of salt in breeding pools (Messina, M. and S. Ressel. Breeding by the sea: coastal bluff vernal pools as breeding habitat for Spotted Salamanders, *Ambystoma maculatum*. Poster presented at: Society for the Study of Amphibians and Reptiles; 2015 July 30-August 3; Lawrence, KS.), which suggest amphibians may have higher tolerance for salt than previously thought and that coastal wetlands may sustain breeding populations of Spotted Salamanders—and perhaps other amphibians—in the face of rising sea levels along the northeastern United States.

**Doreen Stabinsky** published nine papers in 2015 on agriculture and climate change. This includes several discussion pieces on [theconversation.com](http://theconversation.com) and [medium.com](http://medium.com), as well as two



peer-reviewed papers: “Establishing institutional arrangements on loss and damage under the UNFCCC.” (with Juan Hoffmaister) *International Journal of Global Warming* 8: 295-318; and “Teaching and practicing climate politics at College of the Atlantic: student-inspired, student-driven.” *Radical Teacher* 102: 24-29.

**Davis Taylor** published an op-ed in the Bangor Daily News on November 9, 2016: “Here’s what the Maine economy is missing: more employee-owned businesses.” Taylor argued that co-operatively owned and operated businesses were an important part of strengthening the economy and social fabric of Maine.

**Sean Todd** assisted as professional guide aboard Antarctic ecotourism expedition vessels (2012, 2013, 2014) lecturing on various issues regarding human ecology, and sustainability in polar waters.

**Karen Waldron** has presented papers on literary ecology at the Northeast Modern Language Association annual conference for the last 10 years.