

Changing the Environmental Narrative



Erica Bree Rosenblum is featured in the BBC film “Endangered,” which premiered on Discovery+ earlier this year.

From tropical forests to high-tech labs, Environmental Science, Policy and Management (ESPM) associate professor **Erica Bree Rosenblum** has spent decades researching amphibian biodiversity and the modern extinction crisis. More recently, Rosenblum has also turned her attention to storytelling—specifically, how to craft constructive narratives about conservation.

Earlier this year, Rosenblum partnered with the BBC to help bring on-the-ground conservation stories to life. Her work on amphibian conservation is one of the seven segments featured in the film “Endangered,” which streams on Discovery+ and is narrated by Ellen DeGeneres.

The film is only the latest in her ongoing commitment to redefining humans’ relationship with the natural world. From her research into how global environmental change impacts biodiversity, she developed the popular undergraduate course, Global Change Biology, in part to counteract the defeatist nar-



ratives she found to be prevalent among environmental science undergraduates.

Following the popularity of the class, Rosenblum created a new textbook of the same name (Oxford University Press, 2021). Its innovative curriculum empowers students to personally relate to environmental issues, and it encourages educators to foster constructive, critical thinking about global change.

“The story we tell matters,” said Rosenblum. “We can contribute to a sense of hopelessness and helplessness, or we can empower students, conservationists, and the public to be truly curious about our place in the world and create a more inspired vision for the future.”

Rausser College Reads BY JACOB SHEA

Getting to the Heart of Science Communication: A Guide to Effective Engagement

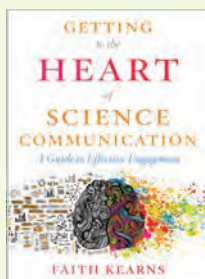
Island Press, May 2021
By Faith Kearns

At a community event in northern California years ago, scientist and author **Faith Kearns**, PhD '03 ESPM, gave a presentation on wildfire and firesafe housing. When an audience member whose house had been destroyed in a fire grew

distraught, Kearns began to reevaluate her approach to communication involving wildfire or other traumatic or polarizing scientific subjects.

Her new book, *Getting to the Heart of Science*

Communication, outlines how human relationships are central to successful practice-based science. It uses personal anecdotes, interviews,



and Kearns’s own field experience to explain the evolution of science communication and demonstrate how emotional, high-stakes issues—for example, wildfire, climate change, or COVID-19—can shape communication. The book provides useful tools that help readers listen, handle conflict, and understand trauma, loss, and healing. It also includes a conver-

sation about diversity, equity, and inclusion in science, as well as advice for researchers on how to manage their own emotional needs.

Climate Stewardship: Taking Collective Action to Protect California

University of California Press, September 2021
By Adina Merenlender with Brendan Buhler

As climate disruption intensifies globally,

Working for the White House



PATRICK GONZALEZ APPOINTED TO OFFICE OF SCIENCE AND TECHNOLOGY POLICY

In August, the White House Office of Science and Technology Policy (OSTP) appointed **Patrick Gonzalez** as assistant director for climate and biodiversity. OSTP advises the president, vice president, and the executive office on the science needed to develop and implement national policies.

An associate adjunct professor in ESPM, Gonzalez previously served as principal climate change scientist of the U.S. National Park Service (see “The New Conservation,” page 12). “I aim to advance science-based action on human-caused climate change to protect nature and people,” said Gonzalez,

who earned his PhD in the Energy and Resources Group (ERG).

Gonzalez credits **John P. Holdren**—ERG founder and his dissertation chair—as a role model for connecting science to policy. (Holdren served as the science advisor to President Obama.) “John emphasized to us that scientists can move beyond their research area and produce greater change through policy, which can positively affect people across the country and around the world,” said Gonzalez.

Gonzalez is a forest ecologist who has conducted field research in Africa, Latin America, and the U.S. He is a lead author on four reports of the Intergovernmental Panel on Climate Change, including both the forthcoming 2022 assessment and two of the previous reports for which the organization shared the 2007 Nobel Peace Prize.

Newsmakers

“I haven’t been this excited about a discovery since CRISPR.”



Jill Banfield, Professor, ESPM

Banfield caught the attention of the scientific community when she tweeted in July about her lab’s discovery of mysterious, extra-long DNA elements that are unlike anything ever found. The group named the elements BORGs—after *Star Trek*’s assimilation-prone Borg aliens—because they “assimilate” genes from microorganisms in their environment. In a preprint paper, Banfield and co-authors noted that BORGs may play a role in methane metabolism by microbes and could eventually have “important and unanticipated climate implications.” Outlets including *Nature*, *Science*, and *Vice* covered the finding.

“This is front-page news, and we’d better get it right.”



Marc Hellerstein, Professor, Nutritional Sciences and Toxicology

In a May film produced by Los Angeles Times Studios and the *Los Angeles Times*, researchers discussed COVID-19 vaccines, emergent variants, and the importance of scientific accuracy in the media. Hellerstein explained how vaccinations prevent infections, prospects for long-term immunity, and reasons for hope moving forward.

“It’s death by 5,000 cuts.”



Arthur Middleton, Assistant Professor, ESPM

In August, Middleton and graduate student **Wenjing Xu** were featured in *National Geographic*, offering expertise on how fences constrain the movement of wildlife and break up habitat. The researchers underscored the importance of studying the complex ecological impacts of fences and how to mitigate them, especially because fences are ubiquitous: No matter where a person stands in the Western United States, said Xu, they are on average less than two miles from a fence.



Californians have been finding unique solutions across diverse communities and landscapes. In *Climate Stewardship: Taking Collective Action to Protect California*, ESPM Cooperative Extension Specialist **Adina Merenlender** and co-author Brendan Buhler tell the stories of everyday people and how their actions enhance the resilience of both communities and ecosystems across the state. *Climate Stewardship* shares examples of community-based

climate actions and explains the science associated with them. Spanning ten distinct California bioregions, the book explores topics including wildfires, drier deserts, shrinking forests, San Francisco Bay wetlands, large-scale farming, sprawling urban development in Los Angeles, and oceanic temperature rise. It highlights stories about ecologically regenerative solutions in agriculture, energy, and land- and water-use across natural, working, and urban landscapes. The book also serves as the text for the UC California Naturalist’s new Climate Stewards certification program.

Adam Sings in the Timber (Gonzalez)