Spring 2018 Lunch & Learn Schedule

January 18, 2018
12:00-1:00pm | Rabb Room, Lincoln Filene Center

Medicinal Plants in their Environments: The chemical warfare of ethnobotany

John de la Parra, Visiting Lecturer, Tufts Experimental College

How do environmental influences impact ethnobotanical choices? This can be a crucial, yet often explored area of drug discovery when we consider the fact that humans have relied on plant-derived therapies for thousands of years. Indeed, the historical remedies for diseases ranging from malaria to cancer trace an evolution of human-plant interactions. This presentation will discuss 1.) the past, present, and future of environmental influences upon ethnobotanical drugs 2.) what we can learn from a plant's environmental interactions, and 3.) how biotechnology, particularly when it is influenced by indigenous environmental knowledge, presents new paths to diversify the drug discovery process.

John de la Parra is an ethnobotanist and biotechnologist who works to progress both women's health and medicinal plant research, particularly for antidiabetic drugs and treatments for neglected tropical diseases. His scientific interests are in the foundations of indigenous women's medicine and the rigorous scientific development of pharmaceuticals from the plants they have used. To that end, his research involves projects in highly-complex sample analysis, plant biotechnology, and the biosynthesis of plant-derived drugs. He first became curious about how women use medicinal plants while growing up on a small farm in Alabama and learning from his grandmother. From there he studied Chemical Engineering at the Cooper Union in New York City. He subsequently founded Vine Research and Consulting where he has investigated, collected, cultivated, and verified rare and unusual plant material for use in novel pharmaceutic al research in industry and academia. He will complete his PhD in chemistry this spring at Northeastern University. Besides teaching chemistry for several years, he has also developed a class and associated text entitled "Medicinal Plants: From the Sacred to the Scientific" (forthcoming from Springer Nature).
Recent press coverage: http://news.northeastern.edu/2017/07/why-plants-represent-untapped-potential-for-innovative-drug-discovery/

January 25, 2018
12:00-1:00pm | Rabb Room, Lincoln Filene Center

Adapting to Climate Change in the Gulf of Maine

Nicholas Record, Senior Research Scientist, Bigelow Laboratory for Ocean Sciences

Recent warming in the Gulf of Maine has been faster than 99.9% of the world's oceans. This rapid warming rate has affected everything from the microbiome, to whales and fisheries. We'll discuss these changes in a historical context, what they portent for the future, and what adaptation tools and technologies are being developed to help cope with the changes. We will also provide information for students interested in being involved in this research through undergraduate research opportunities at Bigelow Laboratory for Ocean Sciences.

Dr. Record is a computational ocean ecologist at Colby College. He uses computational ocean models and mathematical ecology to understand and predict ocean biogeography, biogeochemistry, and climate. Models typically combine ocean physics with biological and ecological processes, as well as machine learning and artificial intelligence. He has worked on short-range forecasting, such as predicting the migration patterns of whales, as well as long-range forecasting, such as investigating the way ecosystems will respond to climate change.

February 1, 2018
12:00-1:00pm | Rabb Room, Lincoln Filene Center

Redistributing Power:
Energy Democracy, Renewables & Community Resilience

Jennie Stephens, Dean's Professor of Sustainability Science & Policy, Northeastern University

Energy democracy is an emergent social movement advancing renewable energy transitions by resisting the dominant fossil-fuel based energy agenda while reclaiming and democratically restructuring energy policy. By focusing on the potential for renewable-based energy systems to redistribute economic and political power as well as electric power, the energy democracy movement is shifting energy policy discourse and connecting it with social justice and community resilience.

Jennie C. Stephens is the Dean's Professor of Sustainability Science & Policy at Northeastern University's School of Public Policy & Urban Affairs and the Associate Director of Strategic Research Collaborations at Northeastern's Global Resilience Institute. Her research, teaching, and community engagement focus on social and political aspects of the renewable energy transition, energy democracy, reducing fossil fuel reliance, gender diversity, and strengthening societal resilience by integrating social justice with climate and energy policy. Before joining Northeastern University, she was on the faculty at the University of Vermont and Clark University. She earned her PhD and MS at Caltech in Environmental Science & Engineering and her BA at Harvard in Environmental Science & Public Policy.

February 8, 2018
12:00-1:00pm | Rabb Room, Lincoln Filene Center

Pipeline Economics

Elizabeth Stanton, Environmental economist/Founder, Applied Economics Clinic

Proposals to construct new gas and oil pipelines around the United States have sparked controversy and protest, sometimes with deadly consequences for those seeking to protect environmental resources and cultural artifacts. Economic analysis has an important role to play in determining the pros and cons of pipeline projects, especially when it is used to shed light on which communities will benefit and which will be hurt. This talk will introduce the Applied Economics Clinic, focusing on its work related to pipelines.

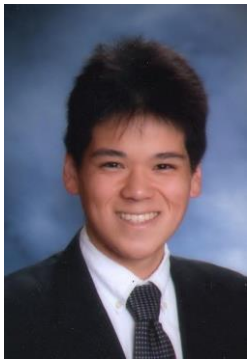
Dr. Elizabeth A. Stanton is the founder and director of the Applied Economics Clinic. She has worked for more than 16 years as an environmental economist, and has authored more than 140 reports, policy studies, white papers, journal articles, and book chapters on topics related to energy, the economy, and the environment. Dr. Stanton leads studies examining environmental regulation, cost-benefit analyses, and the economics of energy efficiency and renewable energy. She has submitted expert testimony and comments in Illinois, Vermont, New Hampshire, Massachusetts, and several federal dockets. Her recent work includes extensive analysis of the EPA's proposed Clean Power Plan, developing testimony on Massachusetts' Global Warming Solutions Act, and analysis of the need for new gas pipelines in New England and the U.S. Southeast.

February 15, 2018
12:00-1:00pm | Rabb Room, Lincoln Filene Center

The Living, Breathing, Hungry Soil:
Modern Agriculture in the Age of Climate Change

Kelsey Sakimoto, Departments of Chemistry and Systems Biology, Harvard University

It comes as no surprise that climate change has already triggered and will continue to present dramatic challenges to modern agriculture. Forward-looking solutions must leverage deeper insight into not only how soil chemistry affects agriculture, but how soil (micro)biology presents both sustainable solutions and challenges. This living collection of soil microorganisms - the soil microbiome - holds untapped potential to not only resist the antagonism of a changing world, but surpass the performance of conventional farming. This talk will focus on our current global practices as well as examine new technologies to feed the world of 2050 and beyond.



Dr. Kelsey K. Sakimoto is a Harvard University Center for the Environment Fellow working on technologies to connect renewable energy with sustainable agriculture. He received his B.S. in Chemical Engineering from Yale University, and his Ph.D. in Chemistry from UC Berkeley. His current postdoctoral work is centered in the laboratories of Daniel Nocera (Chemistry) and Pamela Silver (Systems Biology) at Harvard University/Harvard Medical School.

March 1, 2018
12:00-1:00pm | Rabb Room, Lincoln Filene Center

Standing Rock:
Indigenous Futures in an Age of Apocalyptic Climate Change

Nick Estes, Charles Warren Center for Studies in American History, Harvard University

In our past era of irreversible climate change, visions for a socially just and sustainable future look bleak. Yet, those most affected by environmental catastrophe and resource extraction, Indigenous peoples, enacted a vision of the future embodied in the months-long encampment at Standing Rock to halt the construction of the Dakota Access Pipeline. This talk explores the historical and political context of the camps and their visions of a future that drew from centuries of what I call traditions of Indigenous resistance.

Dr. Nick Estes is Kul Wicasa from the Lower Brule Sioux Tribe and holds a doctorate in American studies from the University of New Mexico. He is currently the American Democracy Fellow at Harvard University's Charles Warren Center for Studies in American History. His forthcoming book, *Our History is the Future: Mni Wiconi and the Struggle for Native Liberation*, which places the Indigeneous-led resistance against the Dakota Access Pipeline in historical context, will be published by Verso in 2019.

March 8, 2018
12:00-1:00pm | Rabb Room, Lincoln Filene Center

The Ancient West and America's Westward Expansion

Daniel Zizzamia, Ziff Environmental Fellow, Harvard University's Center for the Environment

Historians have long understood the American West as a region shaped by aridity. Yet, by analyzing the novel imaginaries that emerged from the scientific and commercial interaction with fossils and coal in the late nineteenth century, this talk reveals that the discovery of lush and lively paleo-environments from the Cretaceous and Tertiary Periods equally influenced the history of this region.

Dr. Daniel Zizzamia is an environmental historian and historian of science. He is interested in the intersection of history and the earth sciences in environmental politics and natural resource policy. In particular, he is fascinated by how restoration, reclamation, geoengineering, and terraforming projects are conceived and executed. His research, from which his talk is drawn, focuses on the settlement of the American West as it was influenced by the fossils and coal unearthed and used by scientists, settlers, capitalists, the railroads, and Native Americans. His book in progress is entitled *Beneath the Frontier: Fossils, Coal and Remaking the American West, 1800-1920*.

March 15, 2018
12:00-1:00pm | Rabb Room, Lincoln Filene Center

#UniteAgainstSeismic:
Inuit strategies to protect the Arctic marine environment

Noor Johnson, Fletcher School of Law and Diplomacy,Tufts University

Inuit communities in the Canadian Arctic routinely travel, hunt, and fish on the sea ice and seasonally open waters of Baffin Bay. Climate change is bringing new interests and actors to the region, including mining, shipping, and tourism companies and conservation organizations. This talk will explore the contemporary politics of the Arctic marine environment, focusing on the example of Inuit resistance to a seismic testing project that proposed to map the offshore oil and gas resources in Baffin Bay. The case involved an unlikely collaboration between Inuit and Greenpeace, and ultimately made its way to the Supreme Court of Canada. The Supreme Court's ruling in favor of the Inuit hamlet of Clyde River has broad implications for how First Nations, Inuit, and Metis communities in Canada will be consulted about energy projects in the future.

Dr. Noor Johnson is a cultural anthropologist whose research focuses on the politics and practices of environmental knowledge, indigeneity, and governance in the Arctic. She holds a joint research appointment at the Fletcher School of Law and Diplomacy at Tufts University and the National Snow and Ice Data Center at the University of Colorado Boulder. From 2015 – 2016, she was an inaugural Fulbright Arctic Initiative Scholar researching offshore and renewable energy. In addition to her scholarship, Noor has worked with a variety of non-profit organizations on science policy and program development, including the National Geographic Society, the Smithsonian Institution, the Inuit Circumpolar Council, and City Year. Noor has a Ph.D. from McGill University (Cultural Anthropology), where she was a Vanier Canada Graduate Scholar, an M.A. from American University (Public Anthropology), and a B.A. from Brown University (Development Studies).

March 29, 2018
12:00-1:00pm | Rabb Room, Lincoln Filene Center

Going Beyond Aid:
Off-grid Water and Wastewater Systems in the West Bank

Suleiman Halasah, Center for Transboundary Water Management, Arava Institute for Env Studies

Almost half of the world's population lives in rural areas where opportunities for access to large-scale centralized water and sanitation systems is limited. This is due to the high capital cost affiliated with building these networks and the energy required for long distance pumping. Off-grid decentralized wastewater treatment is an alternative solution for these communities and became one of the main targets for development agencies. However, many of these development projects fail soon after their completion by the donor/development agencies. In the Palestinian Territories, both the political and economic conditions prevent the installation of proper centralized wastewater treatment, together with the dependency on financial support for wastewater infrastructure projects from international donors. This talk will discuss a model for long-term sustainability of off-grid wastewater management solutions in the West Bank.

Suleiman Halasah is the co-founder Global Sun Partners, a renewable energy company that works on building solar energy PV power plants in several countries in the world. He established Integrated GREEN Solutions (i.GREENs) which aims to improve the environmental awareness and introduce green solutions in Jordan and the Middle East. He has worked for the Jordan Valley Authority in the Jordanian Ministry of Water and Irrigation and has served as a panel member on the topic of water security and climate change at the UN Department of Public Information/NGO Conference in New York in 2007. Mr. Halasah has BSc in electrical engineering the University of Jordan, and a MSc. from Ben Gurion University.

April 5, 2018
12:00-1:00pm | Rabb Room, Lincoln Filene Center

Bound to the Fire:
How Virginia's Enslaved Cooks Helped Invent American Cuisine

Kelley Fanto Deetz, Research Associate, James River Institute for Archaeology and Visiting Assistant Professor, Randolph College

This talk will discuss archaeological evidence, cookbooks, plantation records, and folklore to present a nuanced study of the lives of enslaved plantation cooks from colonial times through emancipation and beyond. Dr. Fanto Deetz will talk about how these men and women were literally "bound to the fire" as they lived and worked in the sweltering and often fetid conditions of plantation house kitchens. She will also discuss how these highly skilled cooks drew upon skills and ingredients brought with them from their African homelands to create complex, labor-intensive dishes such as oyster stew, gumbo, and fried fish and how their white owners overwhelmingly received the credit for their creations.

Dr. Kelley Fanto Deetz is a Research Associate at the James River Institute for Archaeology and Visiting Assistant Professor at Randolph College. She holds a B.A. in Black Studies from The College of William and Mary, and a M.A. and Ph.D. in African American Studies from U.C. Berkeley. She specializes in early African Diaspora culture and archaeology, slavery, visual and material culture, and public history. She has worked as a historical consultant for television, museums, and for the film *The Birth of a Nation*. Deetz partnered with National Geographic to produce the documentary film *Rise Up: The Legacy of Nat Turner* (National Geographic Channel), and authored the cover story for the National Geographic History Magazine entitled *Nat Turner's Bones: Reclaiming an American Rebel.* Her book *Bound to the Fire: How Virginia's Enslaved Cooks Helped Invent American Cuisine* was released in November.

April 12, 2018
12:00-1:00pm | Rabb Room, Lincoln Filene Center

Immigrant occupational health in Somerville through the lens of Environmental Justice

David Gute, Civil and Environmental Engineering, Tufts University

David M. Gute is a Professor of Civil and Environmental Engineering at Tufts University. He holds a joint appointment with the Department of Public Health and Community Medicine at the Tufts University School of Medicine as well as at the Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy. He directs a M.S./Ph.D. program in Environmental Health and has served as the Academic Director of the Tufts in Talloires program located in the Haute Savoie, France.

Prior to joining the Tufts faculty Dr. Gute served as an Assistant Commissioner responsible for personal and environmental disease risk factor reductions with the Massachusetts Department of Public Health and as an Epidemiologist with the Rhode Island Department of Health. He has served as a consultant for a number of organizations including the World Health Organization and AcademyHealth. He is interested and committed to offering environmental and public health training in a variety of settings including international venues, having lead and co-directed training programs in Brazil and the Philippines. Dr. Gute received his Ph.D. and M.P.H. from Yale University. Dr. Gute is a Fellow of the American College of Epidemiology.

April 19, 2018
12:00-1:00pm | Rabb Room, Lincoln Filene Center

The Road to Food Waste is Paved with Good Intentions

Norbert Wilson, Food Policy and Applied Nutrition, Tufts University

In the U.S., estimates suggest that we waste upwards of 40% of food along the supply chain, with the bulk of that waste at the hands of consumers. What triggers this waste? We find that date labels such as “Use by” and “Best by” may shape future valuation of waste but not the actual premediated waste rate. In another experiment, we find that respondents predict that they will waste less food compared to past experiences but intentions fail to match past experiences. One path to reduce consumer food waste is to address discrepancies caused by external and internal cues.

Dr. Norbert Wilson is a Professor of Food Policy in the Friedman School of Nutrition Science and Policy. His research centers on food choice, especially among individuals living with low incomes, and food waste. Concerning food waste, Norbert uses experimental economics to explore how date labels influence future food waste. Additionally, he has worked on food safety and quality issues in international trade and domestic food systems. Norbert earned his doctorate in 1999 in Agricultural and Resource Economics from the University of California, Davis. He earned his MSc. in Agricultural Economics from Wye College, University of London, UK in 1994. He was a Rotary International Fellow while in the UK. In 1993, Norbert earned a BSA in Agricultural Economics from the University of Georgia.

April 26, 2018
12:00-1:00pm | Rabb Room, Lincoln Filene Center

Environmental Justice in the City of Chelsea

Judith Garcia, City of Chelsea Councilor

As the City Councilor of District 5, Judith Garcia is the first Honduran American woman to serve on the Chelsea City Council. She has been recognized as Top 10 Latinas Think Big Innovators to Watch in 2016 by the Huffington Post and as one of El Mundo Boston's 30 Under 30 influential leaders. Most recently, she received an official Proclamation from the New York State Senate for her relentless commitment to helping the growing Honduran diaspora. In recognition of her exceptional leadership and devoted service, El Centro de MARIAS awarded her Leader of The Year 2017. In addition, she was recognized nationally by Eva Longoria's Latino Victory Project**,** where tribute is paid to the achievements of Latinos who are pioneers in their fields.

She attended Wheaton College where she received a BA in Urban Studies. During her years at Wheaton, she was a strong advocate of women's rights and took part in many initiatives against gender based violence. While pursuing her degree, she interned at Chelsea's Planning and Development department where she focused on improving housing conditions for residents. She also worked with the Trash Task Force to help recreate a sustainable method to dispose of trash and enforce a recycling program in Chelsea.

In 2015, at the age of 23, Judith decided to run for office at Chelsea's City Council. She garnered 60% of the vote and increased voter turnout by 101%. Her victory garnered local, national, and international recognition.