ENVIRONMENTAL CHANGE AND INFECTIOUS DISEASE

A speaker series sponsored by the Bennington College Program on Environment

Infectious disease can be understood as an ecological and evolutionary phenomenon. It is important, in this context, to understand the effects of environmental change -- including, but not limited to, climate change -- on agents of infectious disease and the resulting epidemiological patterns.

All talks will be at 1:00 pm in the CAPA Symposium. There will also be opportunities for informal meetings and discussions with visitors

Dr. Felicia Keesing, Bard College
'Biodiversity loss and infectious diseases: the case of Lyme disease'
10 March 2014

Dr. Keesing and colleagues have done ground-breaking research on the ecological context of the spread of borreliosis -- Lyme disease -- in the eastern U.S., finding that risk of contracting Lyme disease is a function of complex ecological interactions, including the effects of land-use change and development patterns on biodiversity loss. Her lecture will build on the Lyme disease example to suggest that patterns observed for tick-borne diseases are found in a wide variety of other disease systems and to suggest powerful underlying mechanisms, knowledge of which could help us reduce disease transmission worldwide.
https://sites.google.com/site/fkeesinglab/

Dr. Katherine Smith, Brown University
'Global Change and Disease: Lessons from the Macroscope'
17 March 2014

Dr. Smith studies conservation medicine and the biogeography of disease. "Macroecology" -- a discipline within ecology -- strives to understand origins of patterns in nature from a perspective encompassing large spatial scales, long temporal scales, and large data sets. It is difficult to 'scale up" traditional research approaches such as experimental manipulation to investigate factors that operate at higher levels of organization such as populations, communities, or biogeographical regions. Her lecture will explore application of macroecological approaches to study the impacts of anthropogenic forces on human and wildlife infectious disease.
http://www.katherinefsmith.com/

Dr. George Luber, Centers for Disease Control and Prevention and Emory University
'The Health Consequences of a Changing Climate: Findings from the 3rd US National Climate Assessment'

31 March 2014

Dr. Luber, with a degree in medical anthropology, is an epidemiologist, and Associate Director for Climate Change at CDC an an adjunct memor of the Emory University Dept of Environmental Sciences. In addition to managing the Climate Change Program at CDC, Dr. Luber is Co-Chair of the Climate Change and Human Health Interagency Workgroup at the US Global Change Research Program, and a lead author for the IPCC Fifth Assessment Report.
http://envs.emory.edu/home/faculty_staff/adjuncts/luber_george.html

Dr. Karen Lips, University of Maryland
'Amphibian Population Declines: Complex Causes and Consequences for Global Amphibian Biodiversity Loss'
14 April 2014

Unprecedented environmental change, including climate change, is driving massive alterations to the world's flora an fauna. One factor in these changes is the emergence of new infectious diseases of wildlife, forests, food crops, and us. Not all species of wildlife respond equally to these threats, and amphibians appear to be suffering disproportionate biodiversity loss. Dr. Lips' research focuses on why species of amphibians differ in their response to global threats such as emerging infectious disease and global climate change, how those changes affect other parts of the ecosystem, and how we might use this information to prioritize conservation decisions. Her lab uses field studies, experimentation and modeling to study the biology of amphibians at population, community and ecosystem levels as they are affected by disease and climate change.
https://sites.google.com/site/umdlipslab/home