

You are cordially invited to attend
Wednesday, October 24, 2018

12:00 - 1:30 pm

133F Erickson Hall

(Light refreshments provided)

Dr. Louise Mead

Education Director, BEACON Center, Michigan State University

Dr. Alexa Warwick

Evolution Education & Outreach Postdoc, BEACON Center, Michigan State University

ConnectedBio curriculum: three-dimensional learning from molecules to populations

Abstract:

Students are often taught evolution isolated from genetic and cellular mechanisms. In reality, a complete understanding of evolution requires knowledge spanning many biological sub-disciplines and levels. To address this issue, the ConnectedBio project team (MSU, Concord Consortium) is developing a set of technology-enhanced lessons for high school biology that meet national science standards. We hypothesize that thoughtfully integrating the practices of science with disciplinary core ideas and crosscutting concepts will support students' development of a network of connected biological concepts that students can use to make sense of evolutionary phenomena. We use the evolutionary phenomena from the previously developed Evo-Ed cases as the basis for the curriculum. Here we present our curriculum development work to date, some initial survey data on student explanations of evolutionary change across levels of biological organization, and plans for evaluating student conceptual models during Spring 2019 curriculum piloting.



Louise Meade is an evolutionary biologist with a broad range of teaching and administrative experience. Louise started her career as a high school science teacher and then earned a Ph.D. in Organismic and Evolutionary Biology from the University of Massachusetts. She spent four years as the Education Project Director for the National Center for Science Education (NCSE), and is currently the Education Director at the BEACON Center for the Study of Evolution in Action



Alexa Warwick is a postdoc in the BEACON Center for the Study of Evolution in Action at MSU. Her research areas include developing and evaluating educational materials to support science teaching and learning at the K-16 levels, primarily focused on evolution education. She also coordinates a variety of outreach and diversity initiatives and conducts research in amphibian ecology, evolution, and conservation. She received her Ph.D. in biology from Florida State University in 2016 and is currently the primary postdoc on an NSF-funded project developing high school biology curriculum.



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