



THE INTERPLAY OF ECOLOGICAL AND EVOLUTIONARY PROCESSES IN SPECIES INVASIONS

SPEAKER: Katrina Dlugosch, UA Ecology & Evolutionary Biology

DATE: Wednesday, November 16

TIME: 3:00-4:00 pm

LOCATION: ENR2 S210 & [Zoom](#)

ABSTRACT:

Species introductions and invasions will involve a dynamic interplay of ecological and evolutionary processes on concurrent timescales. In this talk, I will present our recent work that considers eco-evolutionary influence on species invasions from 1) an historical phylogenetic perspective, 2) a contemporary population genetic perspective, and 3) a forward-looking environmental perspective on human modification of ecological and evolutionary landscapes. Considering deeper evolutionary histories, I will discuss alternative phylogenetic models of species invasions, and the potential for the evolutionary history of an invader to interact with the composition of invaded communities, using a case study of global introductions of birds. Focusing in on contemporary dynamics, I will discuss our work on range expansions within invasions, and their affects on both genetic drift and response to selection in an invasive plant (yellow starthistle, *Centaurea solstitialis*). Finally looking forward, I will discuss invasive species evolution across gradients of human urbanization and the need to incorporate human landscape modification into future studies of eco-evolutionary dynamics in invaders. Taken together, these different perspectives highlight ways in which ecological and evolutionary factors can interact to shape species invasions and their evolutionary outcomes.

