

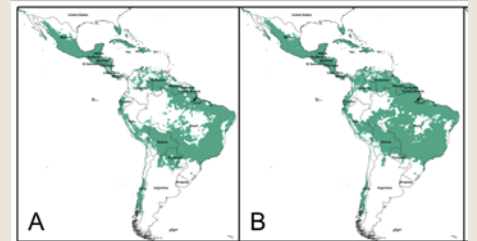
# DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY

## Climate, Invasive Species, and Land Use as Drivers of Biodiversity Distribution

**Dr. Monica Papeş, Oklahoma State University**

My research interests span diverse biological phenomena but focus on a synthetic understanding of why species are distributed where they are. I am fascinated by the spatial dimensions of biodiversity from broad patterns of species richness and endemism, to fine scales, where spatial location of individuals is the focus.

My talk will illustrate this range of research directions. At one end of the spectrum, I will discuss identifying tropical emergent trees through the use of hyperspectral satellite imagery in highly diverse lowland forests of Peru. At coarser scale, I will illustrate the use of ecological niche modeling techniques to investigating factors that determine invasive species potential distributions, with a case study of aquatic invasive species in Wisconsin lakes. Further broadening the scale, I will discuss the link between climatic conditions and distribution and morphology of species, using *Arabidopsis kamchatica* as a case study. Finally, at continental scales, I will focus on forecasting species' potential distributions under changing climates, exemplified through a disease ecology study that examined the risk of rabies in cattle in the Americas. I will close with a brief summary of ongoing investigations and the importance of large spatial databases in my work.



**Research Talk, Thursday, March 3, 4:30 pm, Alumni Memorial Building Room 27**