Research interests: The overall goal of my research is to understand the mechanisms through which human-induced environmental change affects the persistence of wildlife populations. Using observation from the field and experimental studies along with various ecological techniques such as radiotelemetry, respirometry, dendrochronology, quantitative genetics, and GIS, I investigate relationships among stressed ecosystems, individual fitness, adaptation, and overall population viability.

At Winthrop, I investigates (1) whether human-altered habitat patches (e.g., dominance of non-native plants) or landscapes (e.g., increased urbanization), non-lethal human disturbances (e.g., dog walking), and human-caused mortality (e.g., traffic) changes behavior and life history traits of wildlife plants and animals, (2) whether and how these anthropogenic stressors interact with climate and weather variability to affect wildlife populations, (3) to what extent changes in behavior and life history traits reflects phenotypic plasticity and evolutionary changes, and (4) how these trait changes affect population fecundity and the likelihood of population persistence.

In short, my research aims to further our understanding of wildlife response to anthropogenic environmental change by addressing two major challenges in applied ecology: 1) understanding impacts of multiple co-occurring stressors and underlying mechanisms of these impacts and 2) uncovering the consequences of human-induced evolution on the persistence of affected populations.