

**PhD Dissertation**  
**Department of Environmental Science and Policy**  
**College of Science**  
**George Mason University**

**Candidate:** Krista Shires

**Defense Date and Time:** April 10, 2023, 9:00am

**Defense Location:** Exploratory Hall 3301 and virtual

**Title:** Effects of Urbanization on the Distribution, Assemblages, and Health of Wildlife Communities in Washington, D.C.

**Dissertation Director:** Dr. Karen Akerlof

**Committee:** Dr. Travis Gallo (co-chair), Dr. Ellen Rodgers, Dr. David Luther, Dr. Mason Fidino

**ABSTRACT**

Rapid, global-scale urbanization makes research vital to understanding how humans and wildlife can successfully co-exist. I adopt the framework of Ecology in the City, Ecology of the City and Ecology for the city as a guide with which to examine the effects of urbanization on species distribution, assemblages, and health in Washington, D.C. I will 1) Investigate the influence of human voices on species occupancy 2) Assess deer health across an urban gradient using non-invasive techniques 3) Explore the relationship between lead levels in wild rats and humans that live in their vicinity.