Hernandez, J.R. [1] and J.S. Lewis[1].
Wildlife occupancy in relation to water, vegetation, and urbanization along the Salt River corridor, AZ
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River corridors are structurally and functionally complex systems that provide resources, habitat, and travel ways for wildlife species. Many river systems have been altered by water diversion for human use, resulting in decreased water availability, vegetative cover, and biodiversity. Further, river corridors in human-dominated landscapes experience compounding effects of extensive land-use change, such as urbanization, that impacts wildlife through changes in resource availability, habitat loss, and habitat fragmentation. However, relatively little is known about how wildlife populations respond to altered river systems and landscapes in arid ecoregions. In this study, we investigate how abiotic, biotic, and anthropogenic factors influence occupancy and daily activity patterns for a suite of wildlife species (e.g., cottontail rabbits, raccoon, gray fox, coyote, javelina, mule deer, bobcat, mountain lion, etc.) native to the Sonoran Desert. We placed 43 motion-activated wildlife cameras along the lower Salt River corridor in the Phoenix Valley, Arizona to capture the gradient of urbanization, vegetation, water availability, and human activity. We predict that for most wildlife species, their occupancy will decrease with increasing urbanization and increase with increasing water availability and vegetation cover. Additionally, we predict that seasonal differences in resource availability will impact species occupancy. Overall, this research will provide novel information about how wildlife respond to a suite of factors across a major river corridor, which can provide land managers with important information about how to restore and conserve river systems and wildlife species across ecological gradients.

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This research best fits in with CAP V IRT *Adapting to City Life*, as well as *Ecosystem Structure and Functioning*.