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*Seasonal habitat use of wildlife in relation to water, vegetation, and urbanization along a human-modified river corridor*

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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, plant productivity, 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, especially in arid regions where resource availability varies drastically across seasons. Our objective was to evaluate how gradients of plant productivity and urbanization influenced habitat use for 14 wildlife species (e.g., bobcat, cottontail rabbit, coyote, gray fox, javelina, mountain lion, mule deer, raccoon, etc.) across the hot-dry, hot-wet, and cool-wet seasons. We deployed 43 motion-activated wildlife cameras along the Salt River corridor in the Phoenix Valley, Arizona from 2020 – 2022. We estimated seasonal habitat use of wildlife using Royle-Nichols relative habitat use models. As predicted, most wildlife species exhibited a positive relationship with plant productivity and a negative relationship with urbanization. However, some species exhibited their highest habitat use at intermediate levels of urbanization. Counter to predictions, most wildlife species did not appear to shift their response to urbanization across seasons. Ultimately, this research provides insights as to how mammals and ground-dwelling birds seasonally respond to natural and anthropogenic landscape characteristics along river corridors, which has important implications for restoring and conserving river systems in urbanized areas.

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Julia R. Hernandez, Katherine C.B. Weiss, and Jesse S. Lewis. Seasonal habitat use of wildlife in relation to water, vegetation, and urbanization along a human-modified river corridor.

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