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Bat Occurrence and Diversity in Urban, Suburban, and Rural Locations around Nashville, Tennessee

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As urbanization increases, awareness of the effects of urbanization is crucial for the preservation of wildlife. Many species have adapted to urban areas while others are less successful in locations with a large extent of human impacts, such as noise and light pollution. Bats can be bioindicators for the impact of urbanization on wildlife. During this study, bat echolocation was recorded using an Echo Meter Touch 2 starting around sunset for an hour, once a week, during late September and October 2023. Bat species were confirmed using Kaleidoscope Pro Analysis Software. Environmental variables that could affect the presence of bats were recorded at each location, including noise and light pollution levels. Urban areas had a greater occurrence of bats. Examining the occurrence and species diversity of bats in sites with different levels of urbanization can indicate how urbanization impacts wildlife and strategies that can be taken to preserve species richness in developed areas.