Death in the Fast Lane: Assessing the Variables Surrounding Vehicle Caused Wildlife Mortality

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GOALS
• Quantify roadkill along two routes composed of two primary land cover types
• Identify the variables that affect wildlife mortality

ROADKILL
• Road surfaces segment Earth’s land surface into ~600,000 fragments (Ibisch et al. 2016).
• In terms of anthropogenic mortality, vehicle collisions are second only to legal harvesting for numerous vertebrate species (Hill et al. 2019).
• Approximately 1,000,000 vertebrates are killed daily on U.S roads.
• Collisions involving large mammals cause over 1 billion dollars (USD) in property damage annually in the United States alone.

ROAD ECOLOGY
• Roadkill records have been used to successfully assess animal behavior, population trends, species distributions and disease / contaminant monitoring
• Roads also alter animal behavior in addition to increasing rates of mortality

METHODS
• Survey123 app was used to create a roadkill survey accessible via cell phone
• Participants were able to log roadkill sightings using the app by answering a series of pertinent questions
• Data were collected in the fall of 2023 – subsequently collated with an existing dataset spanning over 700 instances from multiple states

RESULTS
• Species richness similar between routes
• Generally, an increase in speed limit correlated with increased wildlife mortality
• Mammals represented the greatest percentage of mortalities, specifically raccoon, striped skunk, and Virginia opossum
• Mortalities occurred more often in association with low intensity development, cultivated farmland and mixed forest landcover types

CONCLUSIONS