



Wildlife-vehicle Collisions on Highway 299 East

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Introduction

- Hotspots are sections of the road that have high wildlife-vehicle collisions (Santos et. al. 2015).
- I hypothesized that there were areas along highway 299E that are hotspots for wildlife-vehicle collisions with lane changes and elevation.
- I predicted that if the roads have more lanes and if the elevation was low, there will be more roadkill.

Objectives

- Understand where roadkill hotspots are on highway 299 E
 - How many animals were killed from wildlife-vehicle collisions
- Identify the most common wildlife to be killed from wildlife-vehicle collisions
 - Determine if the number of lanes and elevation changes have an affect on roadkill

Methods

- Highway 299 East to Burney Vista Point.
- Garmin eTrex 10 GPS to plot waypoints
- Galphi 3-Channel 1080P dash camera
 - Counted wildlife that were mammals or avian and tried to identify wildlife to family.
 - Counted what the most common wildlife were involved in wildlife-vehicle collisions
- Chi-squared test to understand the distribution of wildlife-vehicle collisions and the correlation with outside factors.

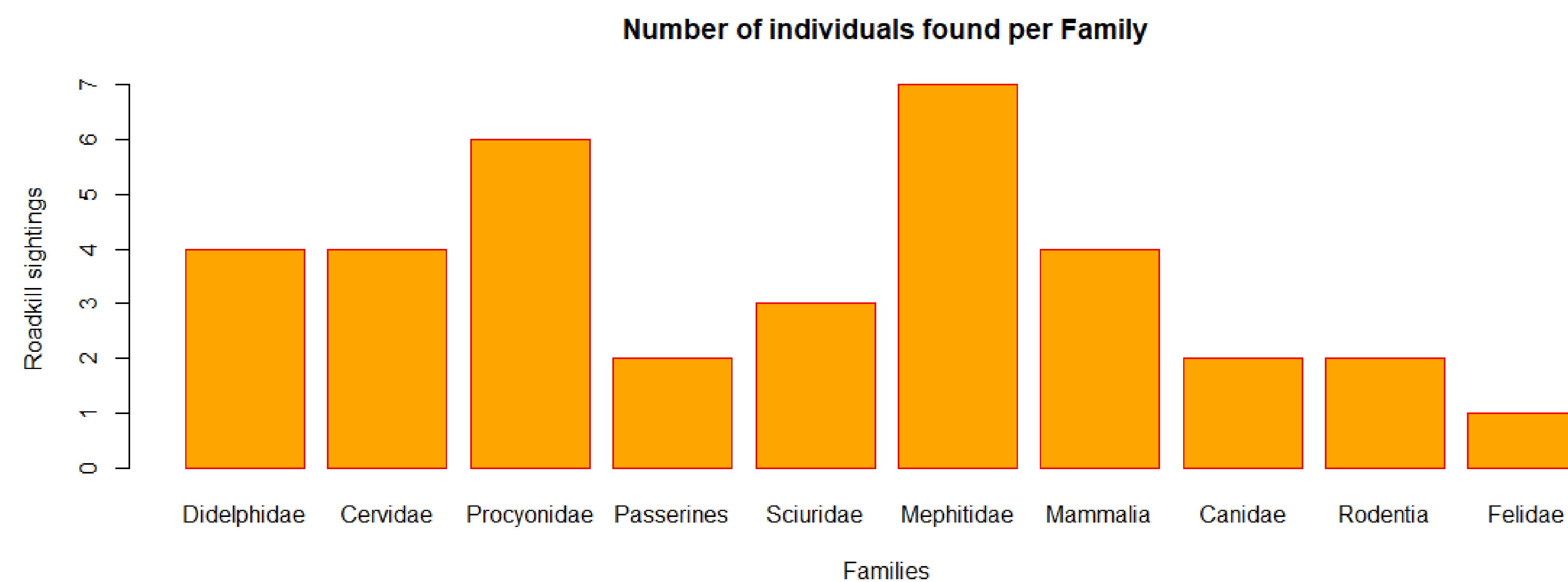


Figure 1: Number of individuals found per family between March 4, 2023 – March 29, 2023

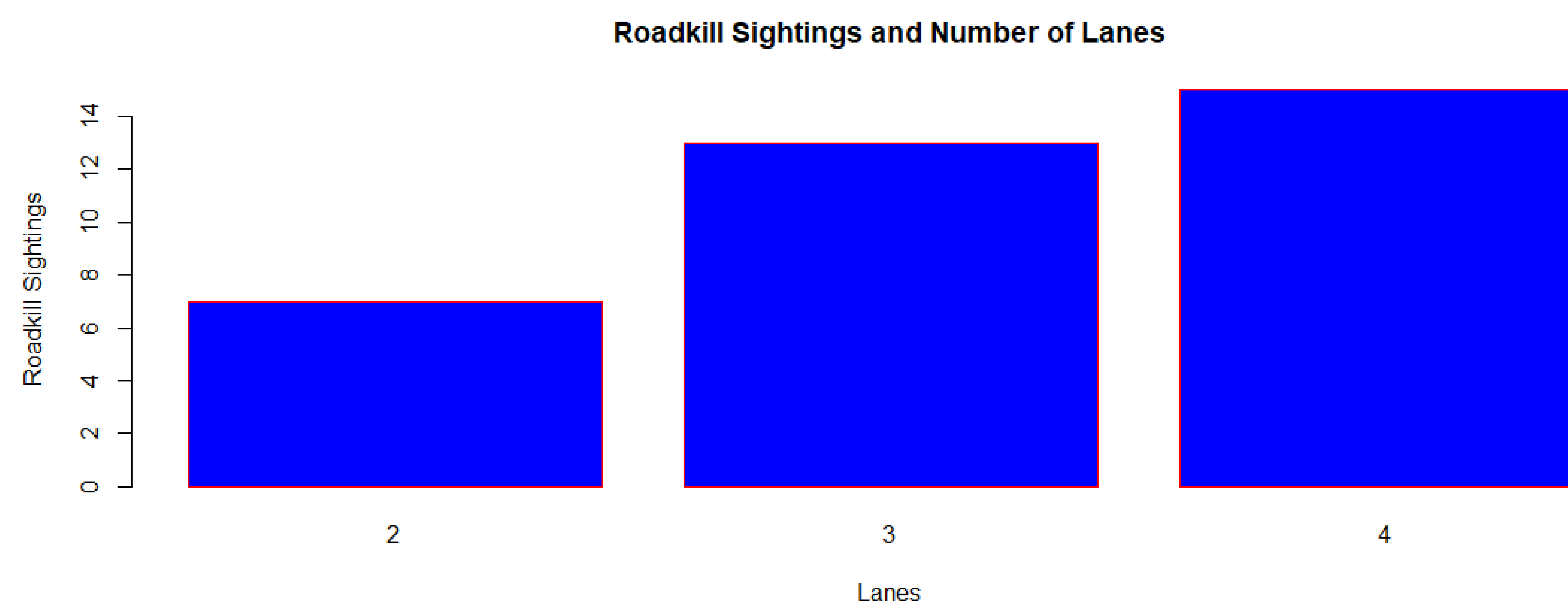


Figure 2: Roadkill sightings and the number of lanes between March 4, 2023 – March 29, 2023

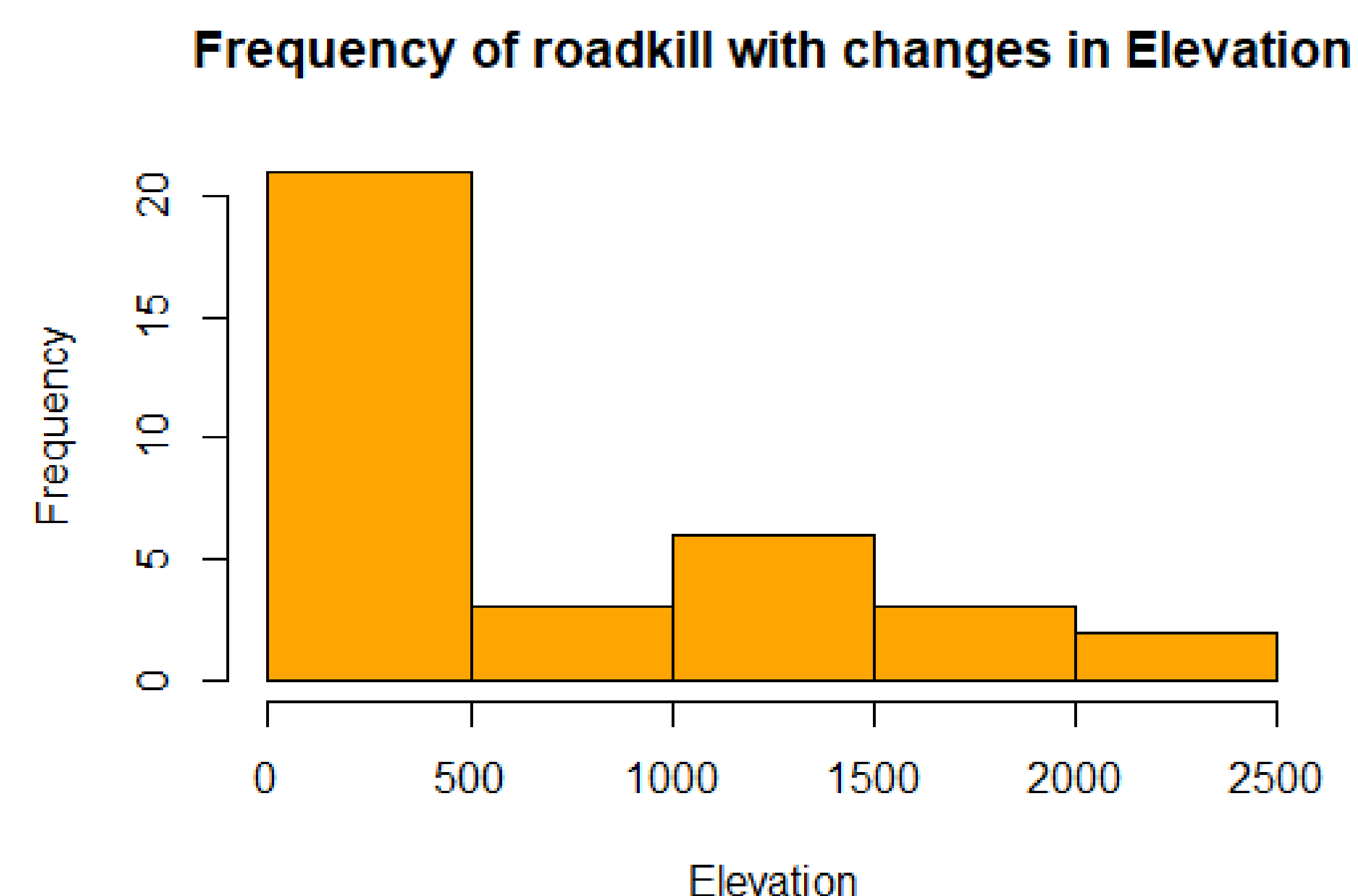


Figure 3: Frequency of roadkill with changes in elevation between March 4, 2023 – March 29, 2023

Results

- The most common roadkill were from family Mephitidae, the second from Procyonidae.
- The frequency of roadkill occurred most in lower elevations.
- Roadkill sightings were the highest when there were four-lanes, while the lowest roadkill sightings were from two-lanes.
- The Chi-squared goodness of fit p-value was .22

Conclusions

- P-value results were insignificant
- Roadkill occurred the most in low elevation and when there were four-lanes.
 - Most common roadkill were from family Mephitidae, the second most common coming from Procyonidae.

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References

Santos, S.M., J.T. Marques, A. Lourenco, D. Medinas, A.M. Barbosa, P. Beja and A. Mira. 2015. Sampling effects on the identification of roadkill hotspots: implications for survey design. *Journal of Environmental Management* 162:87-95.

