



# Raccoon (*Procyon lotor*) Trash Can Use in Relation to Distance from Dining



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## Introduction

Raccoons are generalist species that inhabit many different habitat types (McKinney 2002). Raccoons can survive in high densities in urban environments because of increased access to anthropogenic food resources (Prange 2003). This increases their chances to spread disease and create conflict with humans. Studying their use of trash cans is necessary to implement any management options.

Raccoons have been observed around the campus of Cal Poly Humboldt, particularly in the trash cans. In this study, I tested how distance from dining resources affects raccoon trash can use. I predicted that trash cans closer to dining would be visited more often than other trash cans.

## Methods

In order to quantify raccoon use of trash cans in relation to distance from dining, I placed camera traps on the top of trash cans around the campus of Cal Poly Humboldt.

- 7 camera traps were set up on trash cans at varying distances from dining resources.
- The cameras were set to capture 3 images every time the camera was triggered.
- Visits were logged along with other variables such as time, day of the week, and trash level.

A linear regression was used to analyze if distance from dining correlated with the number of raccoon visits.

## Results

There were 45 total raccoon visits throughout the study period.

Trash cans further away from dining resources tended to be visited more often.

There was no significant relationship between the number of visits and distance from dining. ( $R^2=0.4907$ ,  $P=0.0796$ ).

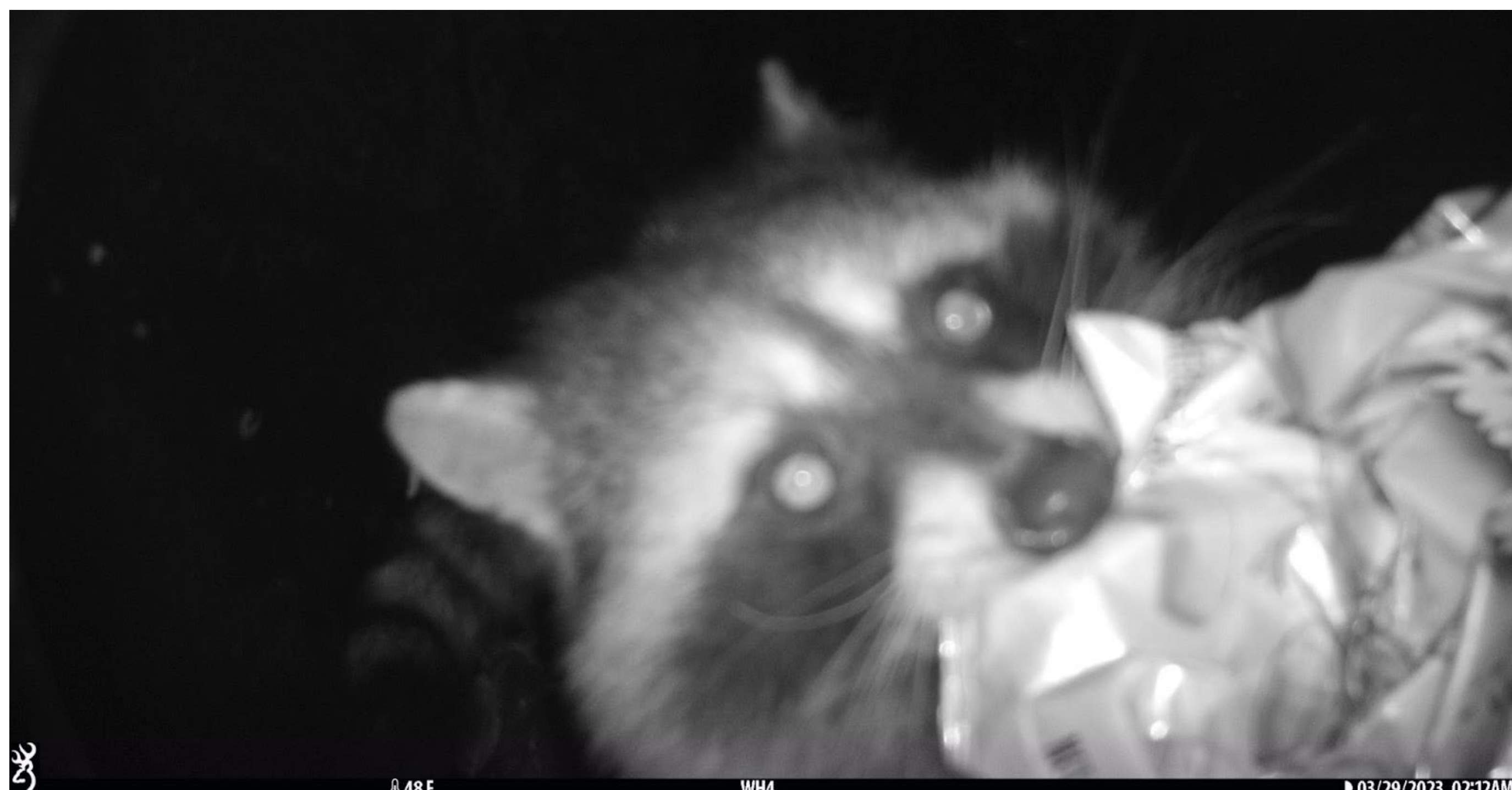


Figure 1. Picture of a raccoon in a trash can near Gist Hall with a Hot Cheeto bag in its mouth.

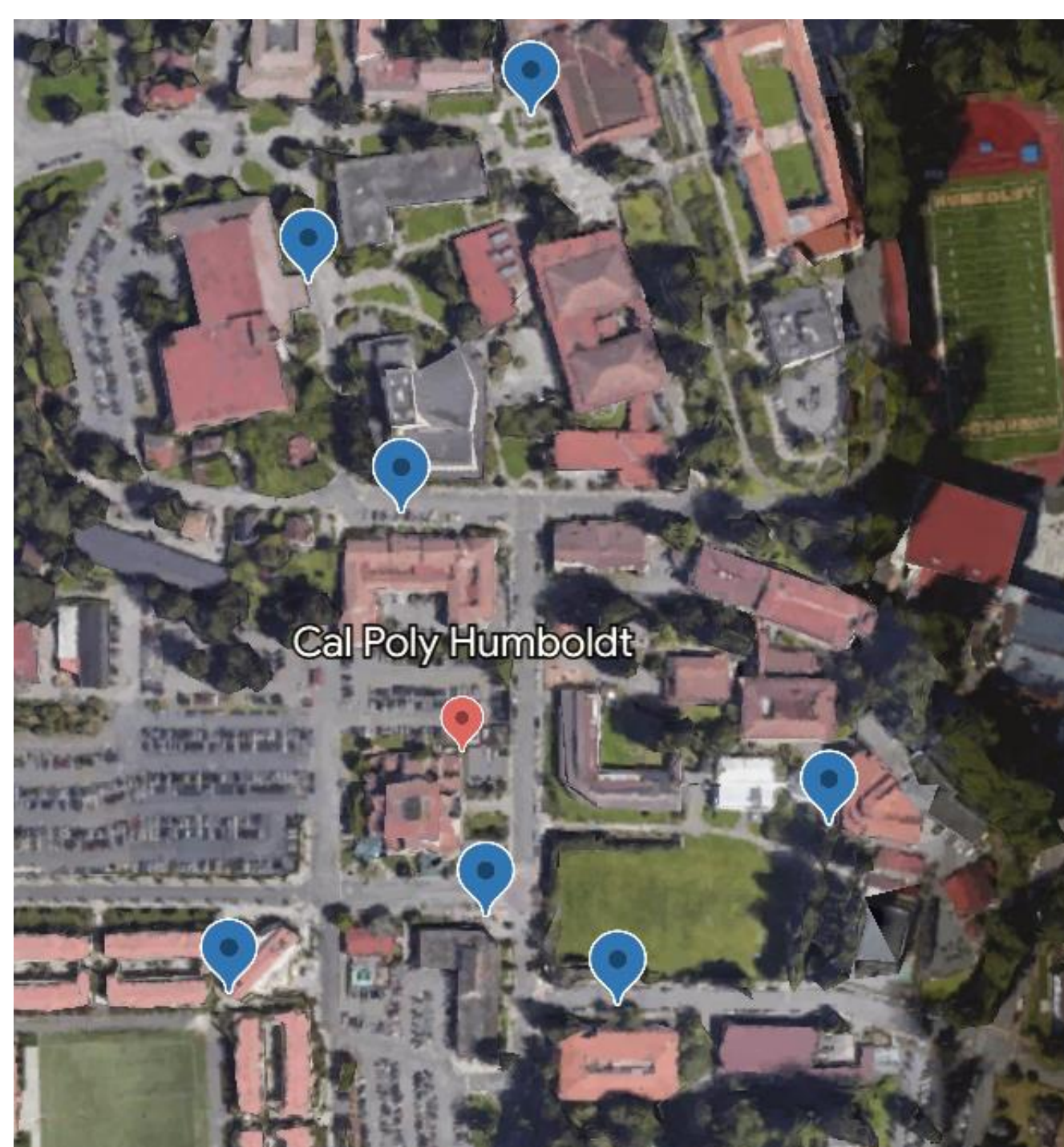


Figure 2. Map of trash can locations used in the study. The blue dots roughly represent where the trash cans were located.

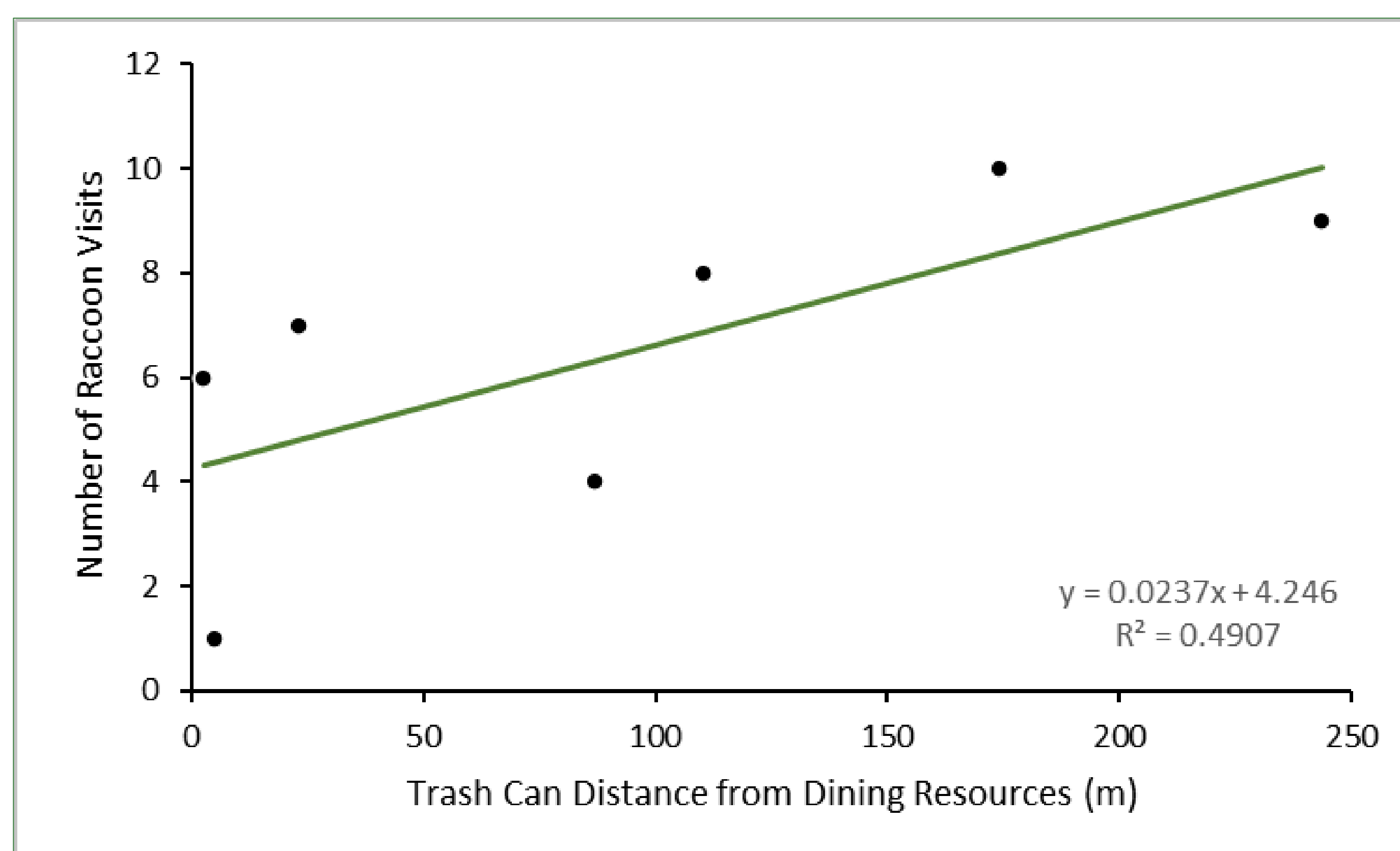


Figure 3. Number of raccoon visits at each trash can and their respective distance from the nearest dining resource ( $R^2=0.4907$ ,  $P=0.0796$ ).

## Discussion

My hypothesis that raccoons would visit trash cans closer to dining resources more often was not supported by my results. In fact, the two most visited trash cans were furthest away from dining resources.

- My results suggest that distance from dining resources does not impact trash can use.
- Raccoons are likely to be successful in finding food no matter where a trash can is located.
- Since the results were close to significant ( $P=0.0796$ ), a larger sample size would be more likely to yield significant results.

It is interesting to note that while the most visited trash cans were the furthest from dining resources, they were closer to forest edges. This may be because they are closer to wooded or refuge areas, which raccoons use more commonly in urban environments (Prange 2003). However, more research is needed to say for certain.

Trash cans with closing lids may be a solution to deter raccoons and other wildlife from entering the bins and eating trash.



Figure 4. Picture of a raccoon sitting in the trash can near Harry Griffith Hall.

## References

1. Prange, S., S. D. Gehrt, and E. P. Wiggers. 2003. Demographic factors contributing to high raccoon densities in urban landscapes. *The Journal of Wildlife Management* 67:324-333.
2. McKinney, M. L. 2002. Urbanization, biodiversity, and conservation. *BioScience* 52:883-890.

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