

Foraging Success of American Robins (*Turdus migratorius*) in Pasture Conditions

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INTRODUCTION

- American robin (*Turdus migratorius*) is an abundant and wide-ranging North American bird. Primarily feeds on terrestrial invertebrates, influenced on seasonality they will also forage for fruits and foliage (Vanderhoff et al. 2020 Wheelwright, T. N. 1986)
- American robins can be found utilizing natural, developed and urbanized landscapes (Vanderhoff et al. 2020).
- This study investigated foraging behaviors of American Robins in areas of livestock pasture conditions, specifically looking at percent success.
- H1: Robins foraging in overgrazed pasture conditions would have greater ground visibility and therefore have higher rates of successful strikes than those foraging moderately grazed pasture.
- H2: Male and female birds would have different rates of success

METHODS

- 2 plots 50m x 30m
 - % ground cover estimated, average of 10 random 1m² quadrant samples.
- Surveyed from 12 February 2023 to 30 March 2023
- 45min/survey X 33 total surveys= 24.75 total hours
- Random focal samples** for 5mins or until bird flew off, < 1min not included in analysis
- Incidence recording** for critical behavior, number of strikes
 - Successful attempt**=strike, prey caught, visual rapid beak opening and closing
 - Unsuccessful attempt**=strike, no prey caught, no beak movement

STUDY AREA

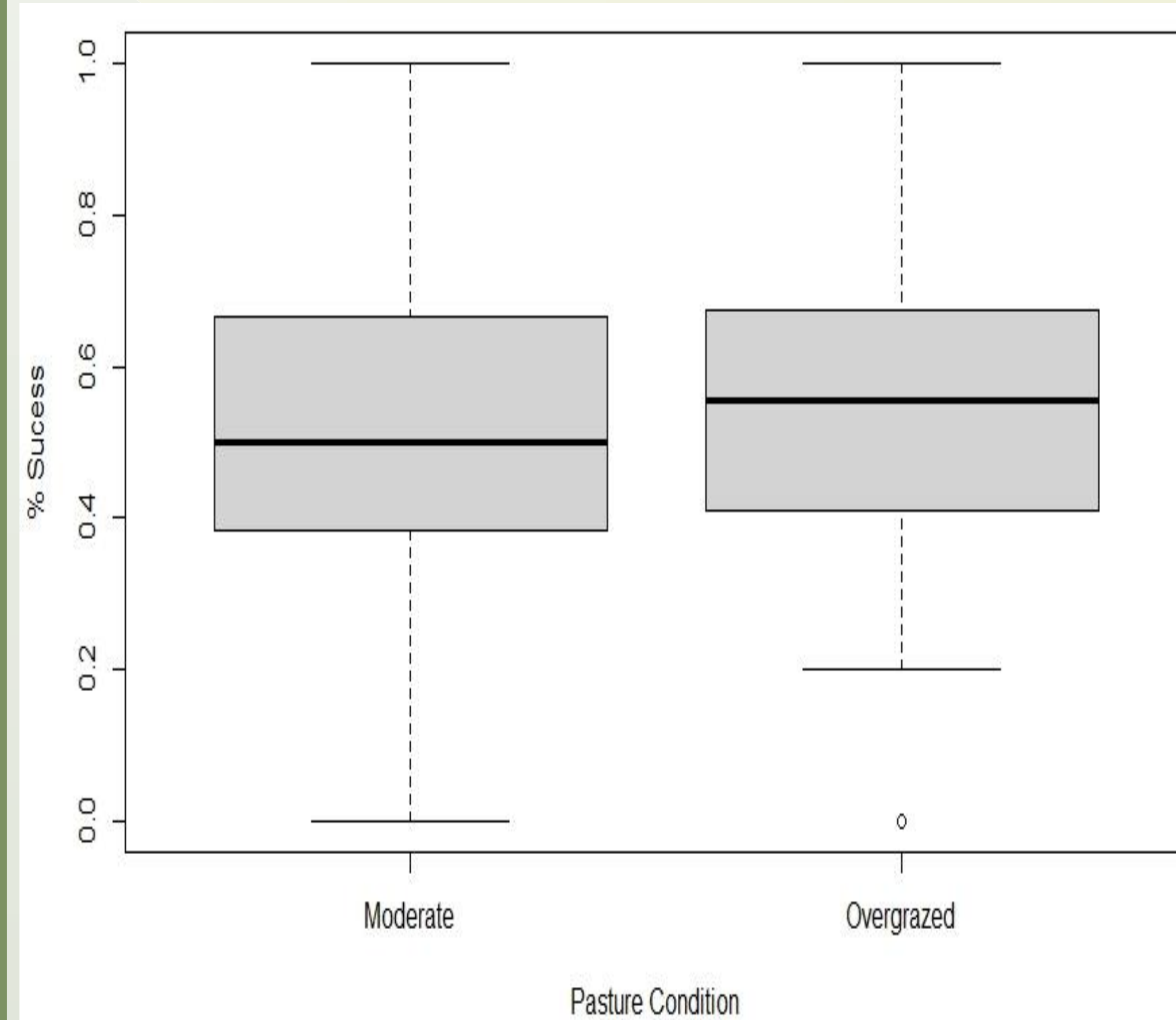


O= overgrazed plot
M= moderately grazed plot

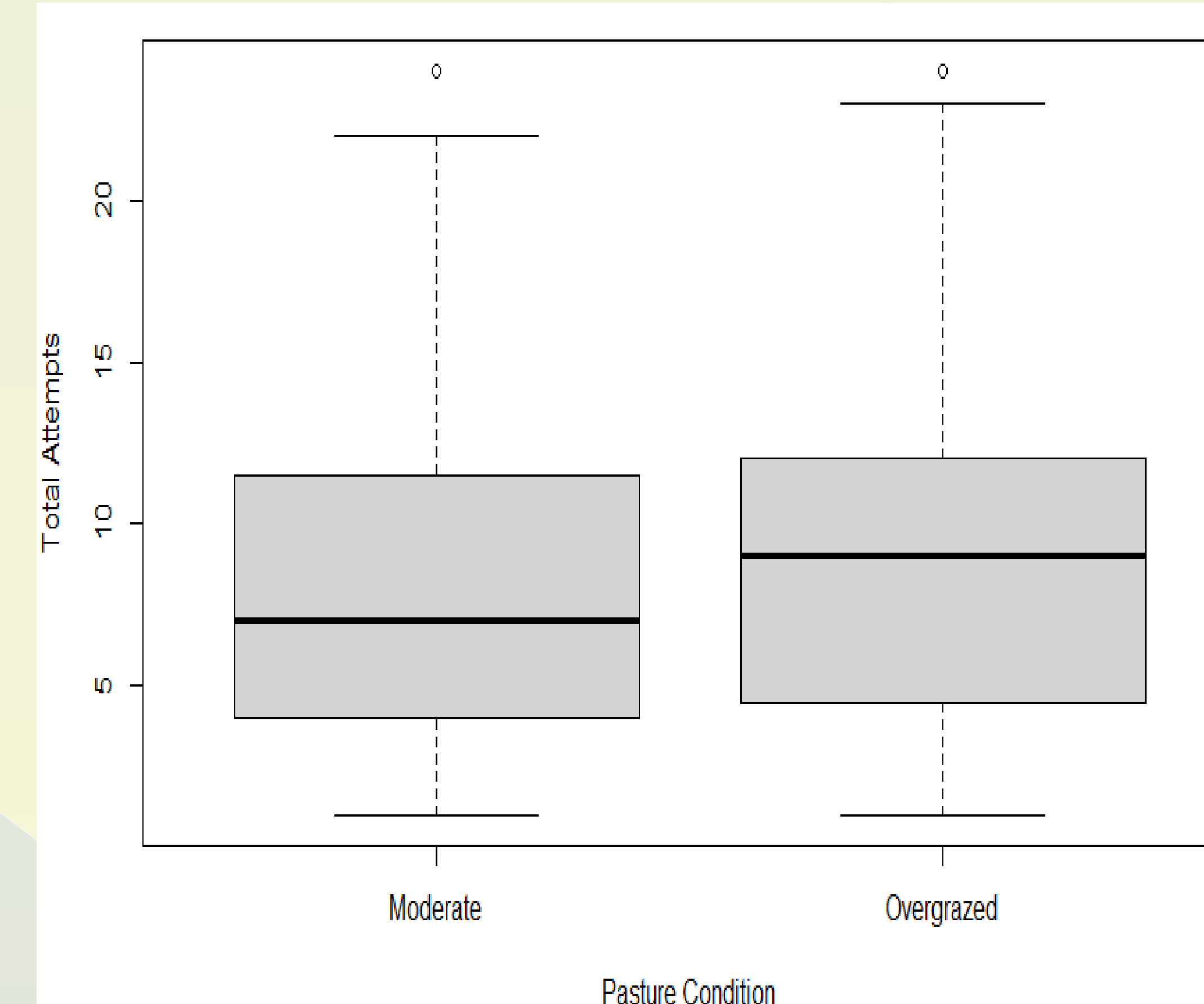


Josh Engle The Field Museum, Zoology, Division of Birds
Figure 1 Foraging American robin (*Turdus Migratorius*)

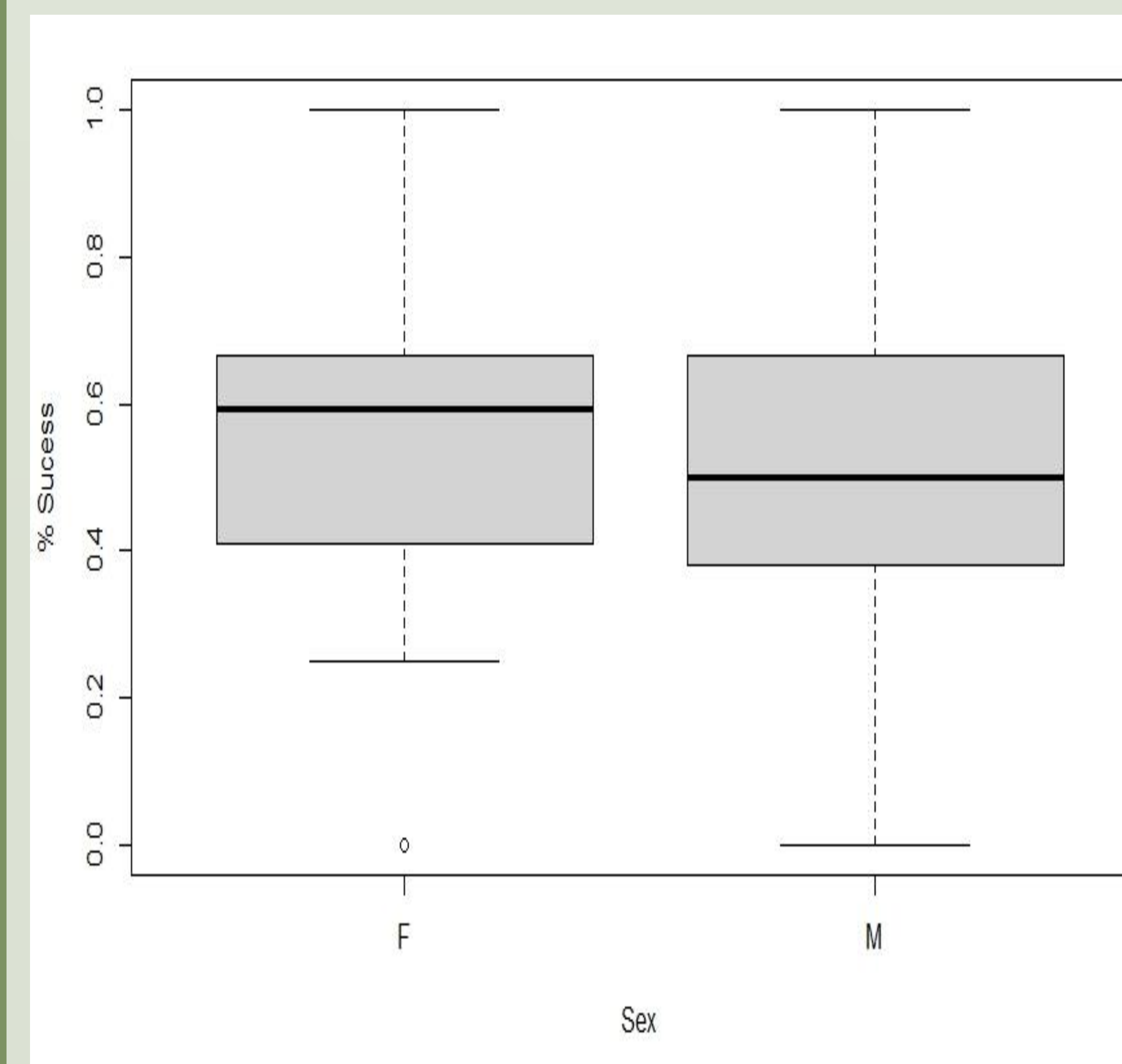
RESULTS



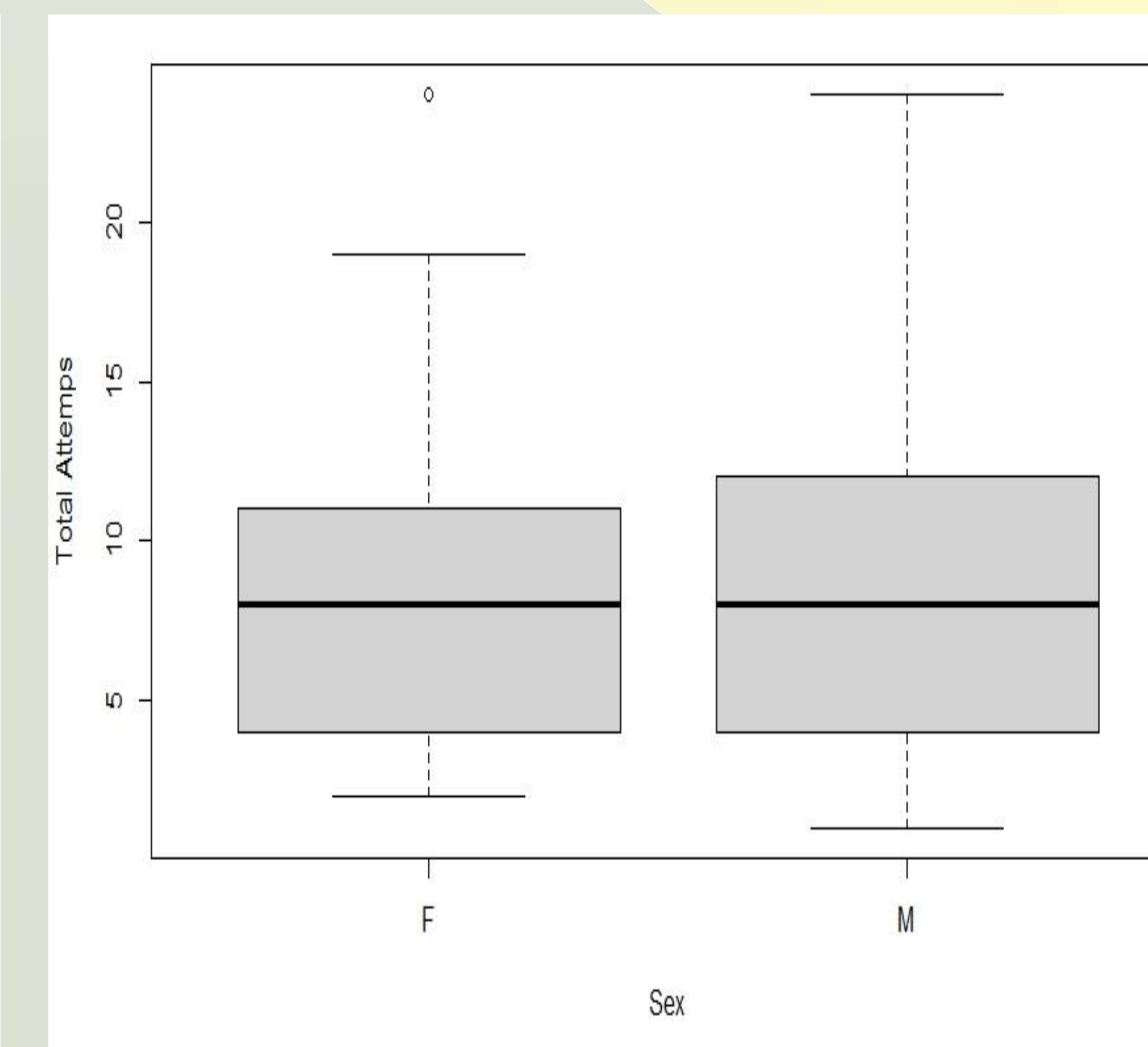
p-value = 0.31
95% Confidence interval= -0.095 0.0303
Moderate graze mean=0.509
Overgraze mean= 0.541



p-value= 0.1265
95% Confidence interval=-2.399 0.299
Moderate graze mean= 7.95
Overgraze mean= 9.00



p-value=0.07588
95% Confidence interval=-0.00647 0.1289
Female mean=0.569
Male mean=0.5078



p-value = 0.5143
95% Confidence interval= -1.944 0.979
Female mean= 8.150
Male mean=8.633

DISCUSSION

- Categorized % ground cover as
 - 14%= Overgrazed (86% no cover)
 - 94%= Moderately grazed
- T-test were used to analysis the data and results did not support hypothesis
 - No stational significant relation of % Success and total attempts as a factor of ground cover.
 - No stational significant relation of % Success and total attempts as a factor of sex.
- These results likely influences by small sampling scheme and increasing number of sites and sampling period may yield more significant results.
- Understanding more about American robin feeding behaviors success as success rate can contribute to terrestrial foraging bird studies.
- Use of ground by foraging birds should be considered and continued to be research regarding use of chemical application in agriculture setting

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REFERENCES

Vanderhoff, N., P. Pyle, M. A. Patten, R. Sallabanks, F. C. James. 2020. American Robin (*Turdus migratorius*), version 1.0. In: Rodewald PG, editor. Birds of North America. Ithaca (NY): Cornell Lab of Ornithology. <https://birdsoftheworld.org/bow/species/amerob/cur/inrtoduction>. Accessed 17 Apr 2023

Wheelwright, T. N. 1986. The diet of American robins: an analysis of U.S. biological survey records. *The Auk* 103:710-725