



Investigating the correlation between avian biodiversity during migration and overwintering in urban greenspaces

Levi Hoskins^{1,2} and Corey T. Callaghan^{1,2}

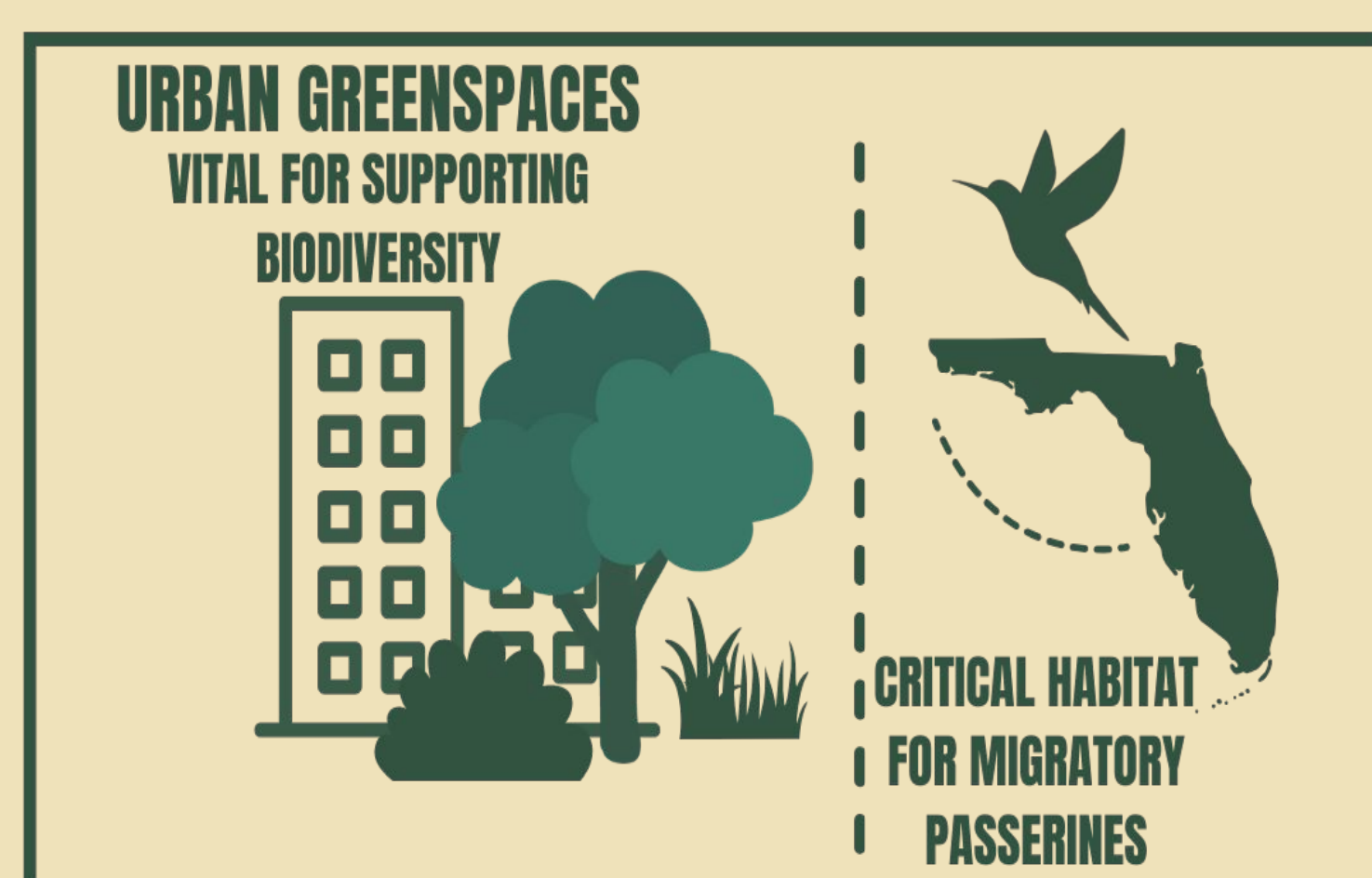
¹ University of Florida School of Natural Resources and Environment, University of Florida

² Fort Lauderdale Research and Education Center, Department of Wildlife Ecology and Conservation, University of Florida

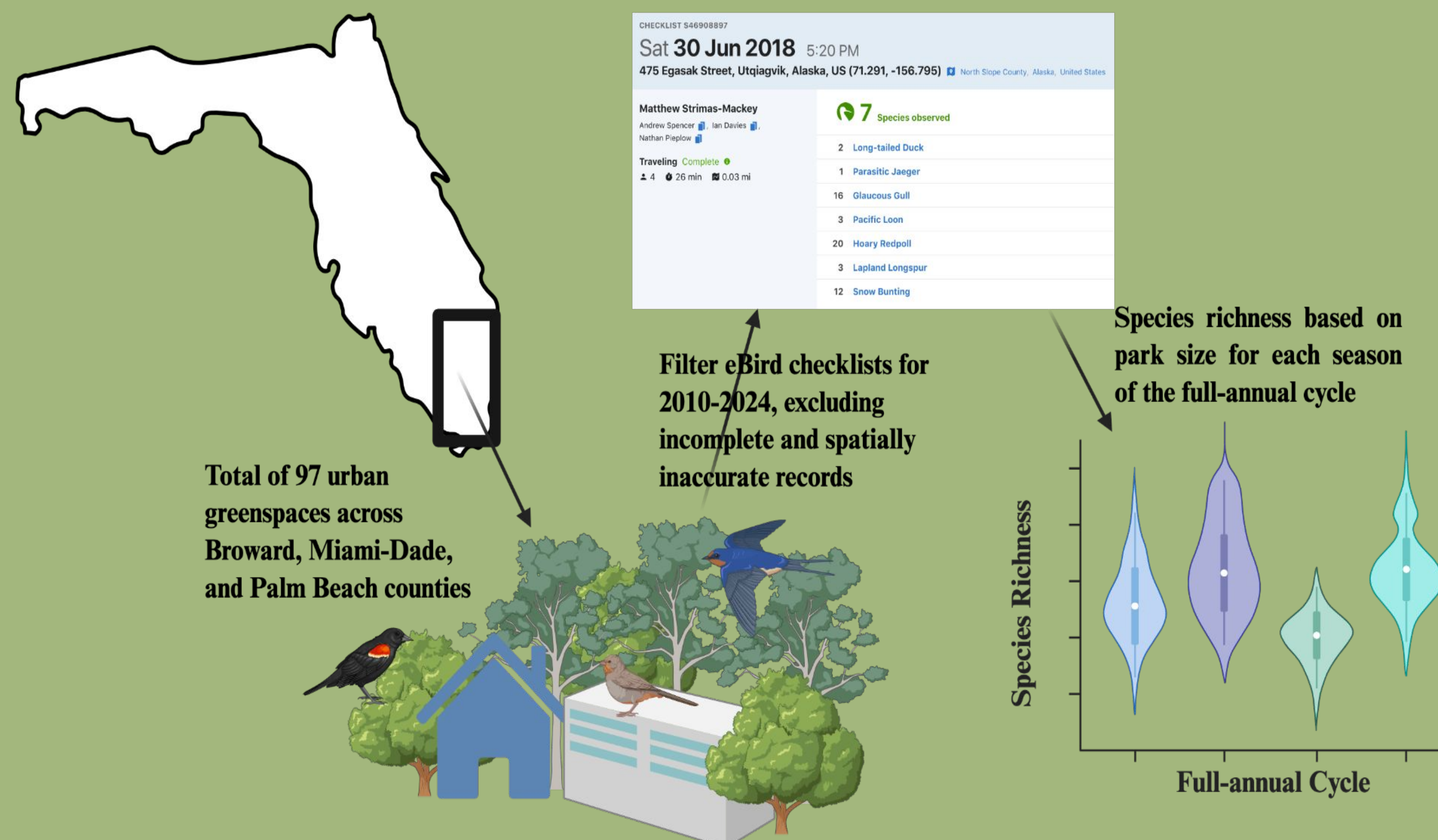


Introduction

- Urban greenspaces support biodiversity with varying degrees of effectiveness via size, connectivity, and habitat complexity.
- This study examines how urban greenspaces in South Florida function as critical habitats for migratory passerines, throughout the full-annual cycle.



Methods



Next Steps

Habitat data

- Include types of vegetation, distance to closest neighboring greenspace, and tree cover

Urbanization index

- Compare different levels of urbanization across greenspaces to explain patterns observed in Figure 2.



Research Questions

Question 1 - Species-Area Relationship

- Do smaller greenspaces experience higher migratory bird activity during stopover events compared to overwintering?

Question 2 - Full-Annual Cycle

- Does migratory bird usage of urban patches differ between phases of the full-annual cycle?

Breeding



Preliminary Results

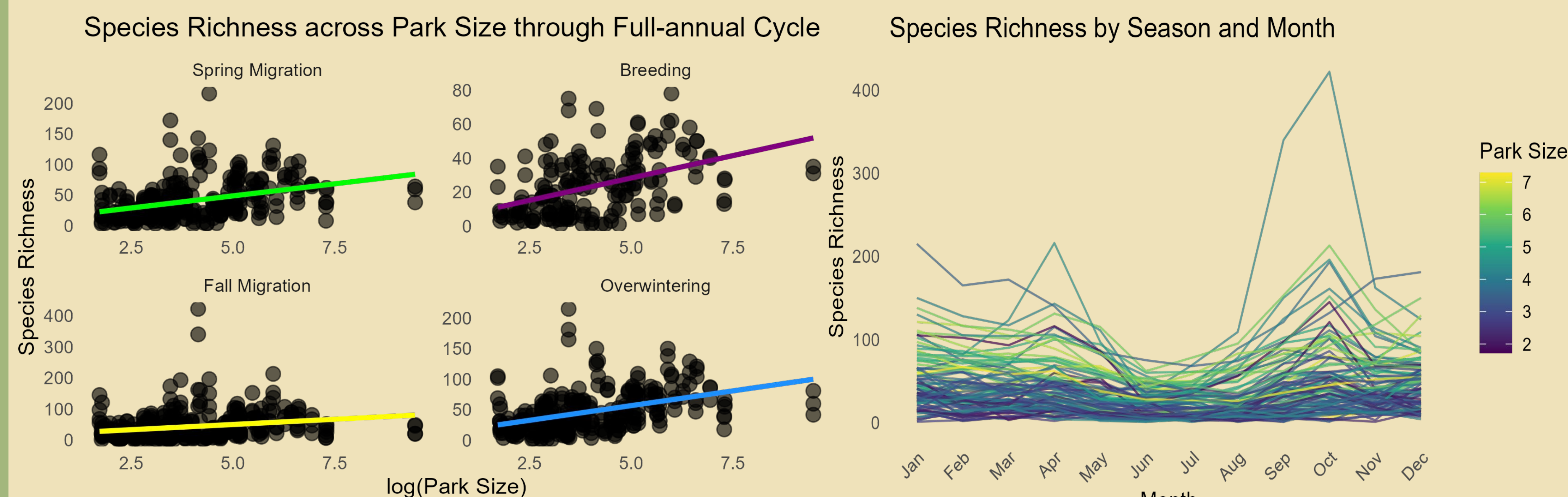


Figure 1: Scatterplot analyzing species richness throughout the full-annual cycle.

Figure 2: Line map of species richness by month per urban greenspace. Park size is $\log(\text{hectares}^2)$.

Implications

- Greenspaces of all sizes support species richness across seasons, but larger greenspaces tend to have the biggest contribution
- Provide guidance on which species or areas need more protection to support birds in urban environments.
- Supports targeted conservation strategies to enhance habitat quality and connectivity for birds in cities

