



Assessing the Potential of eBird Data to Track Changes in Abundance of Wading Birds in South Florida

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Introduction

- Monitoring changes in species abundance is critical to conservation and understanding progress towards current and potential restoration projects.
- Participatory science platforms – such as eBird – are increasingly gathering large amounts of data. While these data are used for many spatial modelling exercises, it is less certain how well they are able to track trends in abundance through time.
- Our objective was to see whether the relative abundance estimates from eBird, where abundance is per sampling effort, correlates with the absolute peak nesting season data from South Florida Water Management District (SFWMD) Wading Bird Reports.

Question: Can the eBird database provide estimates of bird abundance that are similar to those obtained from standardized professional wading bird nesting colony surveys?

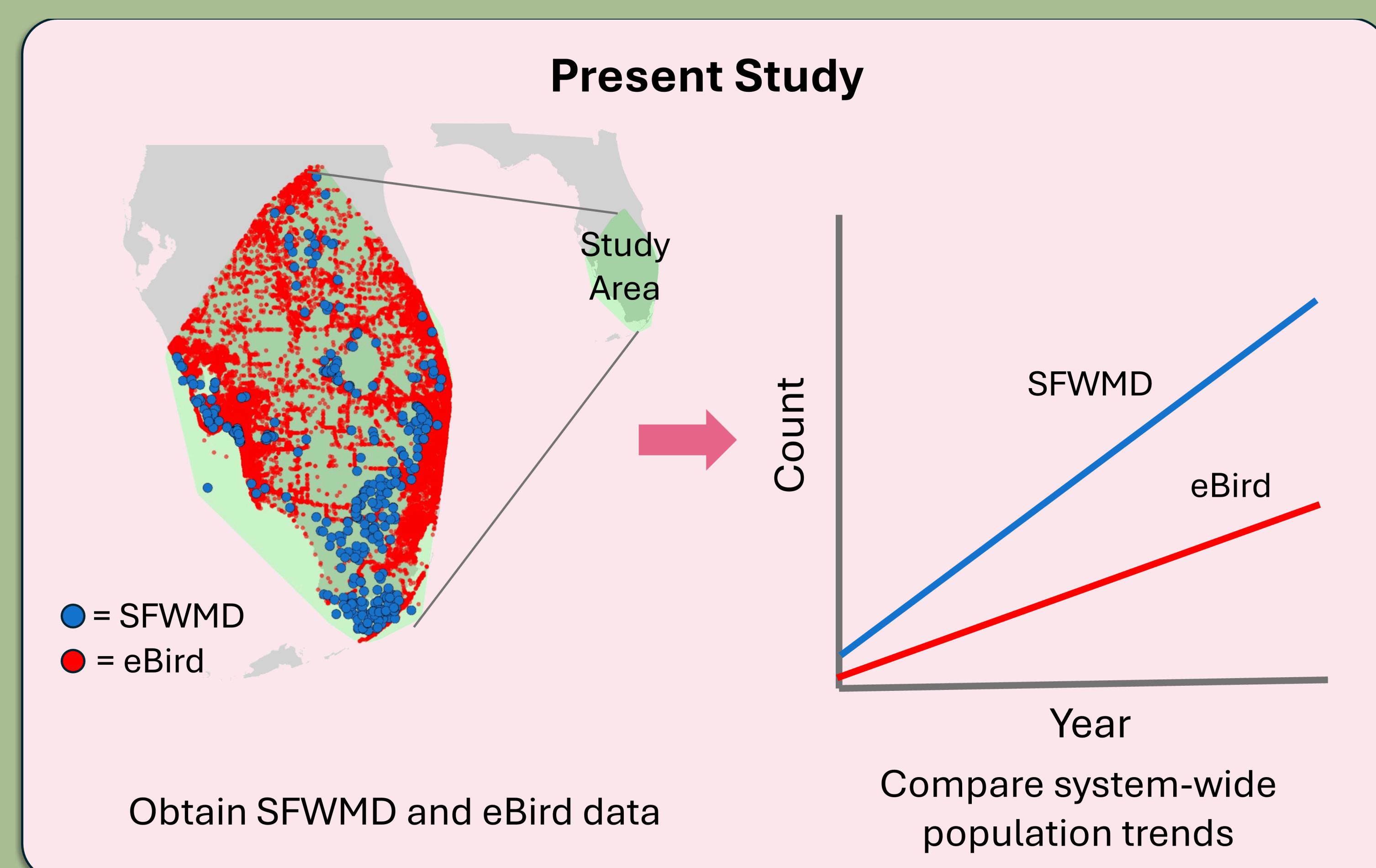


Figure 1. Conceptual figure depicting present methods and planned future research analysis.

Materials and Methods

- 1) 10 years' worth of data (2014-2023) was collected from SFWMD wading bird reports and compared to eBird observations.
- 2) Spatial scale was defined from SFWMD sites and used to extract eBird data for wading birds in the same geolocations.
- 3) The average maximum observations of each species per year were determined for both eBird and SFWMD data
- 4) R used to plot SFWMD and eBird data, emphasizing 4 key species (Great Blue Heron (*Ardea herodias*), Great Egret (*Ardea alba*), White Ibis (*Eudocimus albus*), and Roseate Spoonbill (*Platalea ajaja*))



Preliminary Data

eBird

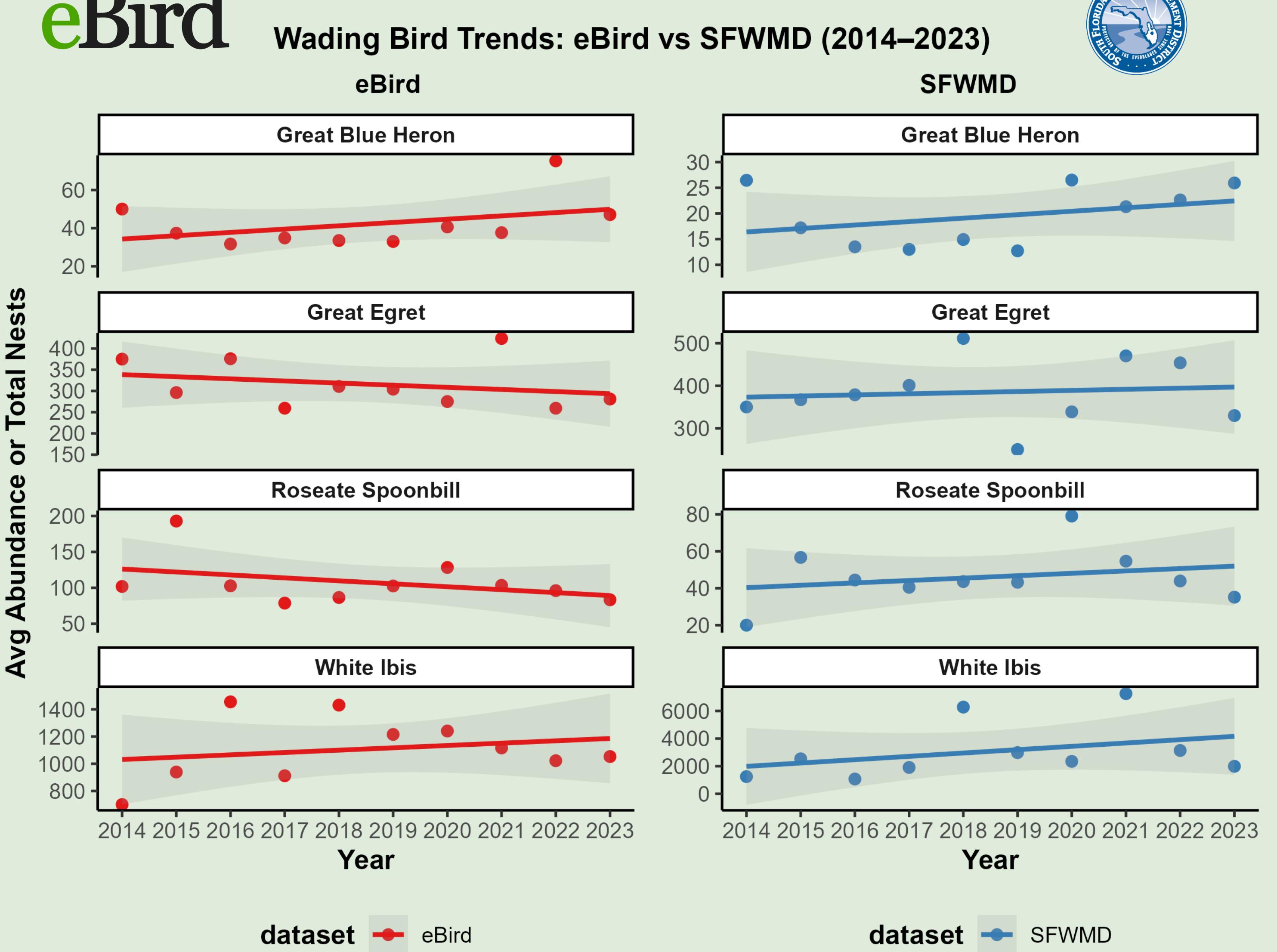


Figure 2. eBird average maximum observations of each species per year for both eBird and SFWMD data.

Conclusions and Next Steps

- Medium correlation. More analyses with the data can and should be done to appropriately assess whether eBird could provide estimates of bird abundances similar to standardized wading bird nesting colony surveys.
- There may be some usefulness in thinking about how eBird data can track population trends of wading birds through time.
- Next steps include conducting a raster analysis to determine spatial grain and the metric of relative abundance used.