

# Observing the Migration Patterns of New England Waterfowl

NRCA Student: Liya Simon<sup>1</sup>

Community Partner: Glen Somogie<sup>2</sup>

<sup>1</sup>New England Jewish Academy <sup>2</sup>Bent of the River Audubon Center, Audubon CT

## INTRODUCTION

When I began this project in October of 2020, I planned to observe, record, and analyze the migration patterns of local waterfowl at the Guilford Salt Meadows sanctuary along the East River. Armed with a pair of binoculars, a camera, and a canoe, I did my best to observe as many birds as possible during my weekly visits. The most common species I identified were the snowy egret, the great blue heron, the American black duck (as pictured on the right), and the hooded merganser (pictured below). I noted patterns of behavior, and when sightings of each bird seemed to rise and fall. In January, after most waterfowl had left the area and I transitioned into the data analysis part of my project, I added data from the service *EBird* to my own to form patterns. *Ebird* is an organization that collects sightings of birds around the world and organizes them into “hotspots.” I uploaded my own sightings and, after the end of December, collected all data regarding the kinds of waterfowl that I was studying that was reported from September through December in the area surrounding the Guilford Salt Meadows wildlife sanctuary.



Fig. 2 Hooded Merganser via BirdNote<sup>4</sup>

## MATERIALS AND METHODS

I visited the Audubon Salt Meadow Sanctuary once per week from October 11, 2020 through December 6, 2021, varying time of day between 11:00 am and 17:00 pm, and staying for about two hours on average. I used a canoe provided by Audubon to search for birds on the East River that passes through the salt meadow and searched for birds with a pair of Cabela’s “Alaskan Guide” binoculars and a Canon EOS Digital Rebel 300D camera, both provided by my grandfather. On days when I could not find a second person to row the canoe, I wore a pair of knee-high rubber boots, waited until low tide, and walked out to the river across the reeds. It was essential to get close to the river in order to spot the ducks, mergansers, and Greater Yellowlegs, but while watching the herons and egrets, I waited on a small floating dock with my binoculars and waited for them to fly across the marsh. On the advice of my community partner, I divided a map of the marsh into sections with which to better log the locations in which each bird was spotted.



Fig. 1 American Black Duck by Michael Furtman<sup>3</sup>



## RESULTS

I found that the best way to represent my findings was in the form of a graph:

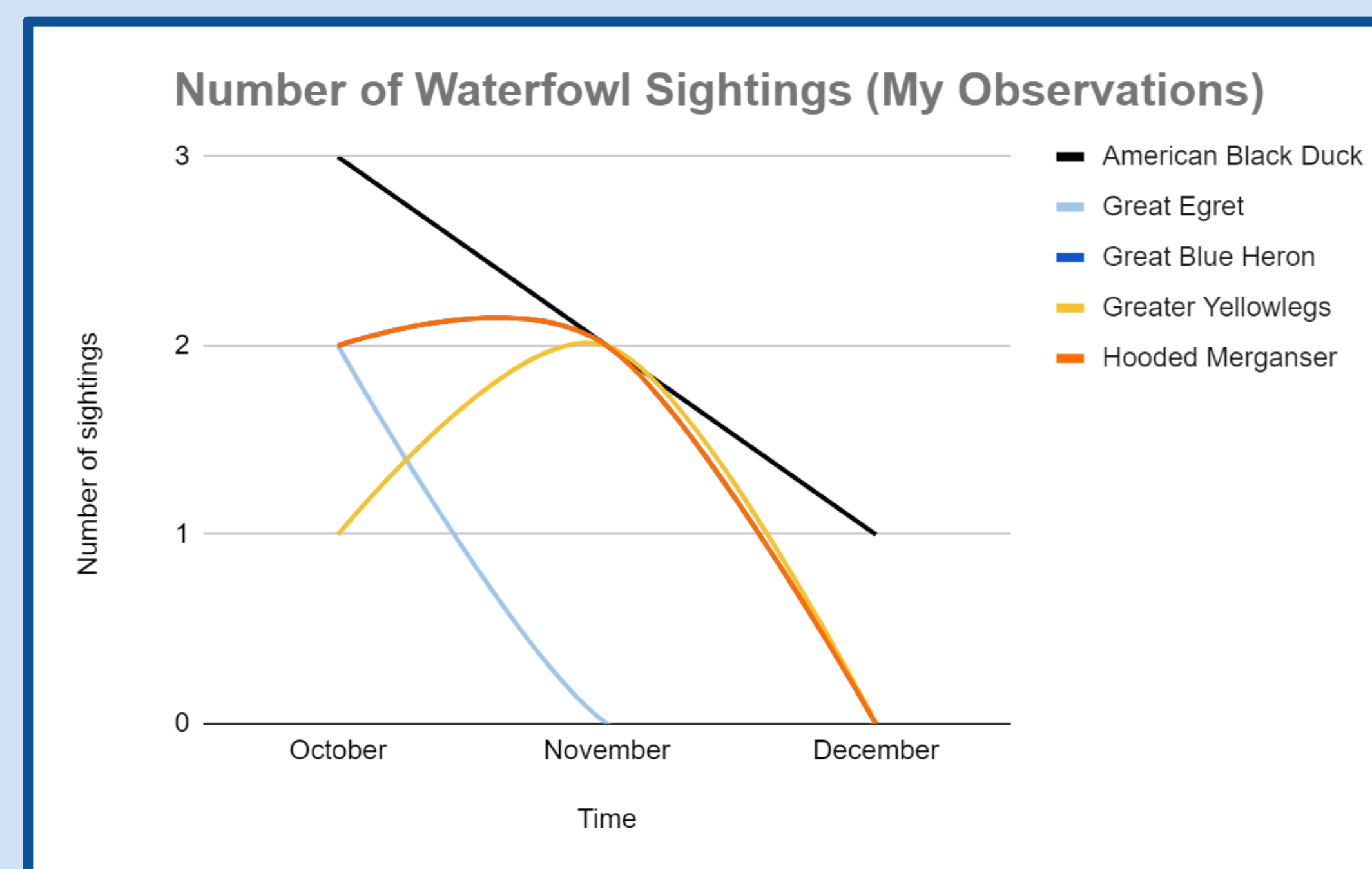


Fig. 4 (above): Graph of my own observations at the Guilford Salt Marsh Sanctuary

Please note that I visited the sanctuary four times each month in October and November, so these numbers are out of four; however, in December, I only visited once, so this is out of a possible one sighting. I also included observations of hooded mergansers (fig. 2) because they were one of my most regularly sighted species, but no sightings were reported to Ebird in the area during the time period of my observation. Therefore the following graph (on the top right side of the poster), which includes both my data and data collected from Ebird, does not include any data regarding hooded mergansers, but does include two regularly observed species from Ebird that I did not personally see: the mallard duck and the double-crested cormorant.

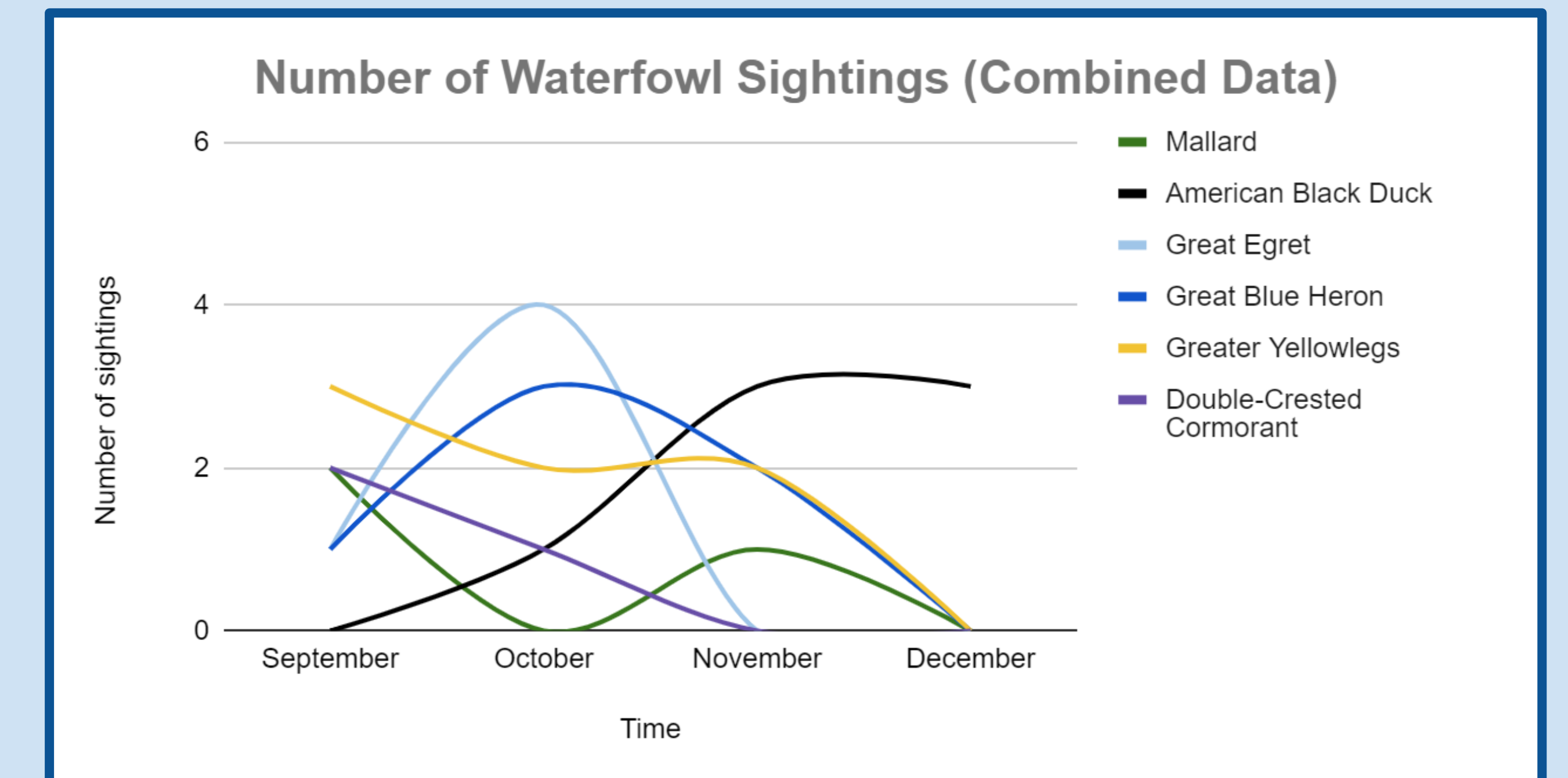


Fig. 5 Graph of my observations and the data collected from Ebird (via Google Sheets)

## CONCLUSION

My data supported that which was from Ebird in some cases and seemed contradictory in others. It seems clear from both graphs that Great Egrets left the area on their migratory path in November, as did Greater Yellowlegs (a kind of small shorebird, similar to a sandpiper). It seems at first glance that my sightings of American Black Ducks dropped off in December, while that was not the case with Ebird data. But in fact, the first graph is misleading because I only visited the salt marsh once in December, meaning I saw American Black Ducks one out of one possible times that month. As such, the second graph is likely a more accurate representation of the species. Both graphs indicate that, with the exception of the American Black Duck, most New England waterfowl depart the region by December.

## ACKNOWLEDGEMENTS

Much thanks to my community partner, Glen Somogie from the Bent of the River Audubon Center, who provided me with a canoe, advice, and some much-needed waterfowl identification. I also could not have come to an accurate conclusion without Ebird, which made it easy to see trends of bird sightings over time. I also would have had little success without the help of my wonderful grandfather, Dennis N. T. Perkins, who lent me the camera, binoculars, and spotting scope that he brought on his trip to Antarctica in 2003. And as always, thanks to my parents— this time for being my canoeing partners.

## REFERENCES

*Ebird* hotspots: East/Neck River Marsh complex, Madison; Guilford Boat Launch; Circle Beach Boat Ramp Road; Grass Island; Ox Marsh.

Graphs created with Google Sheets.

Images:

<sup>3</sup>Furtman, Michael. “American Black duck (*Anas rubripes*) drake flying, Winter setting.” *Ducks, Geese and Swans* by Michael Furtman, <https://www.michaelfurtman.com/Photos/waterfowl/index.htm>

<sup>4</sup>Beyersbergen, Gerry. “Hooded Merganser” *BirdNote*, [birdnote.org/listen/shows/hooded-merganser](http://birdnote.org/listen/shows/hooded-merganser)