Ecology, Behavior, and Reproduction of Invasive Egyptian Geese (*Alopochen aegyptiaca*) in Texas

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Background

- Egyptian Geese are native to Africa, with a population of greater than 500,000 individuals
- In addition, they are successfully established throughout Europe, where they are considered a nuisance and pose ecological and economic effects
- In North America, Egyptian Geese have populations in Texas, Florida, New England, and California among other regions
- Potential ecological and economic effects include aggression toward native species, hybridization, eutrophication, agricultural damage, and aircraft strikes

Methods

- A questionnaire was designed to collect information from citizen science observers about behavior, habitat, location, and reproduction of Egyptian Geese
- The questionnaire was distributed to birders via internet list-servs, birdwatching festivals, birdwatching clubs, and word-of-mouth
- Citizen science data were proofed through checking of photographs and ground truthing
- The data were tabularized in order to conduct analyses
- The results represent data that were submitted from June 2008 – March 2016
- Citizen Science data were supplemented through weekly observation (by DMB & KMC) of a bonded adult pair of EGGO for a period of two years (1/2014 – 2/2016) at McGovern Lake in Hermann Park (Houston, Harris Co., Tx)

Selected References

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Results

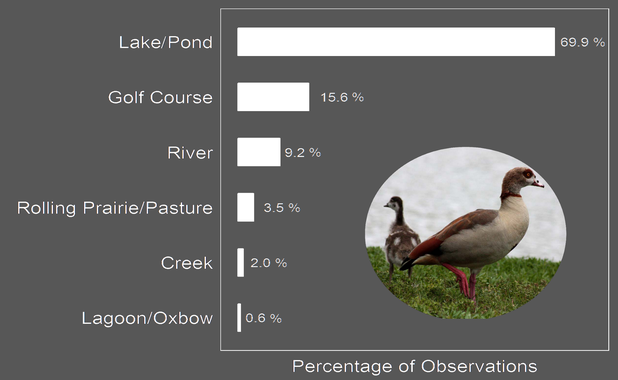


Figure 1. The percentage of habitats used by Egyptian Geese in Texas. Lake and pond were combined as the distinction was relative.

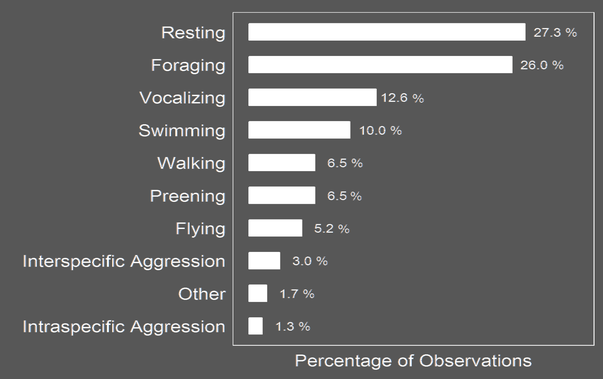


Figure 2. The most common behaviors of Egyptian Geese in Texas.

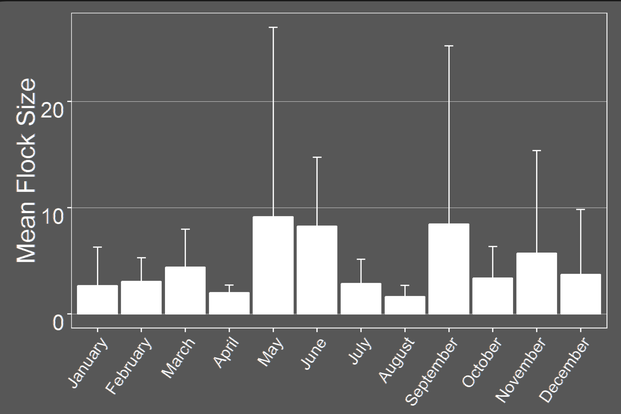
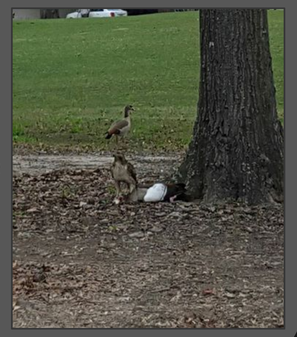


Figure 3. Mean flock size of Egyptian Geese in Texas per month, pooled across all years. Error bars represent standard deviation.

Additional Results

- Recorded most often on land (57.6%) as opposed to water (37.7%), although in many cases the geese were initially observed on land but retreated to water
- Utilized supplemental feeding in 12% of reports. They were also recorded eating grass (n = 3), aquatic vegetation (n = 1), and an Almond Verbena (*Verbena virgate*) tree's seeds (n = 1)
- Commonly occur (24%) with other waterfowl species with few cases of agonistic behavior. Although one case of forced copulation and another of hybridization with a domestic duck
- Permanent residents, with short-distance movements common throughout the year.
- Breeding occurs January to July (peaking March to May), with nests on the ground (n = 3) and in trees (n = 2), and number of goslings ranging 2 – 11
- Goslings attain 50% adult size after the first month, nearly full grown at two months, and disperse from the natal site at a little more than two months of age
- Two records of vehicle mortality, and two hawk attacks – one of which was fatal from a Red-tailed Hawk (*Buteo jamaicensis*)



Discussion and Implications

- Geese in Texas are generalist in nature, displaying a wide diet and habitat breadth
- We received one detailed report of hybridization of Egyptian Goose with a domestic duck, opening up the possibility for hybridization with native species
- Given the close proximity and reliance of Egyptian Geese on humans, it is likely that there are few limiting factors to the Egyptian Geese population in Texas
- We recommend close monitoring of the population size and potential negative impacts of the Egyptian Goose population in Texas