

Herpetofaunal Monitoring in the GTM Research Reserve

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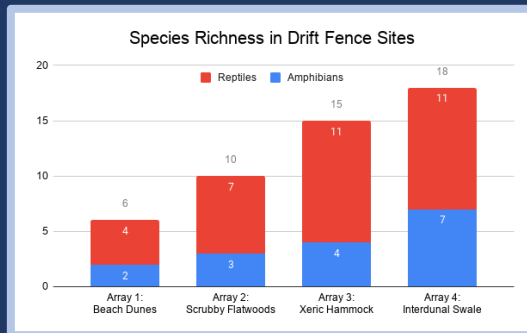
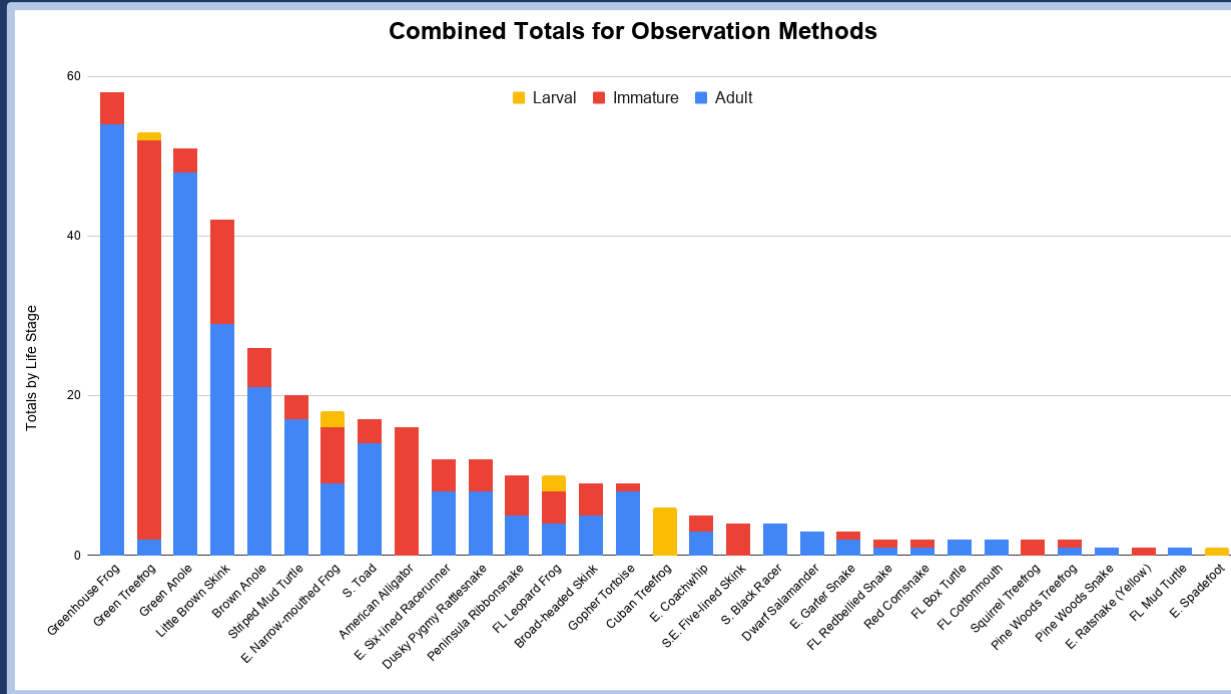
INTRODUCTION

Reptiles and amphibians make up an important part of food webs. As both predators and prey with complex life histories, they are sensitive to environmental changes. These factors allow herpetofauna to serve as an environmental indicator, especially in wetland areas. The GTM Research Reserve's resource management team has begun a long-term reptile and amphibian monitoring project in the Reserve's upland habitats. This project has two main goals: to conduct an initial inventory of all the reptile and amphibian species living within our managed lands while identifying potential indicator species, and to monitor these populations over several years in order to look for change over time. The results of the monitoring program will help inform management practices.

METHODS

1. Drift fence arrays: Four locations in four different habitats including beach dunes, scrubby flatwoods, xeric hammock, and interdunal swale.
2. Dip-netting: Seven wetland locations
3. PVC pipe refugia: Ten locations
4. Visual surveys: To, from, and around each survey site.

Monitoring herpetofaunal populations will inform uplands management practices.



RESULTS

- 409 individuals observed
- 31 Species documented: 21 reptiles, 10 amphibians
- One new species at GTM Research Reserve: Florida Redbellied Snake
- One vouchered species, new county record: Florida Mud Turtle (below)



WHAT CAN WE LEARN FROM THIS?

Questions we can answer after one complete survey year:

- How do current herpetofaunal populations in GTM Research Reserve compare to historic ones?
- Which areas within the reserve serve as breeding habitat?
- Are exotic species present and competing with native species?
- Have striped newts been extirpated from GTM Research Reserve?

Questions we can answer after several years of monitoring:

- Are our land management practices working?
- How have prescribed burns impacted herpetofaunal populations?
- How is climate change impacting herpetofaunal populations?
- How are invasive hogs impacting herpetofaunal populations?

