Crosby Sanctuary Tree Survey

Identification of Native and Nonnative Tree Species in Orange Park Florida

Project Summary

- In partnership with the Duval Audubon Society, our goal was to create a project that involved the identification of the plants within their 510-acre property known as the Crosby Sanctuary. A basic plant survey was performed on the ~1.5 miles of trails that run through the property. In addition, an updated online map was created containing the location and species of each plant surveyed. Due to the timeline the project sampling was limited to plants over 25 feet in height and within 25 inches from the trail, restricting most of the sampling to trees. Over 280 trees were marked virtually and identified during the duration of this project.

Methods

- Criteria Established for Survey: >25 feet in height and within 25 inches from trail, determined with the help of Pete Johnson, the Sanctuary Director.
- Information Recorded From Each Tree: Photo, side of trail, distance from neighboring trees, method of identification, and species name (once identified).
- Methods used for identifying each tree varied, due to the time of the year when the survey took place. Many trees had shed their leaves, requiring some to be identified simply from their bark.
- After identification native and nonnative information was recorded.

Results

Genus	Species	Percentage
Quercus	Laurel & Water Oak	35%
Pinus	Slash Pine	28%
Liquidambar	Sweetgum	17%
Taxodium	Bald & Pond Cypress	10%
Acer	Red Maple	9%
Myrica	Wax Myrtle	1%
Sabal	Cabbage Palm	<1%
Gleditsia	Honey Locust	<1%
Laurus	Swamp & Red Bay	<1%

Figure 1. The table displays each genera identified from the Crosby Sanctuary survey with their corresponding plant species and percentages.

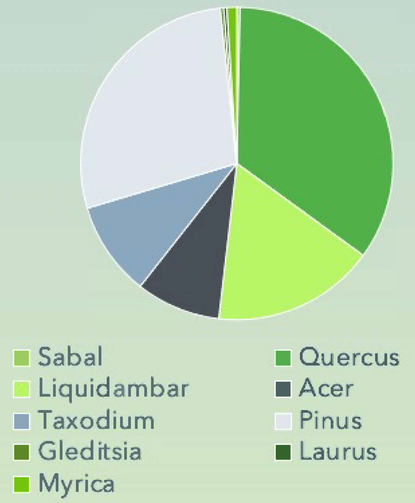


Figure 2. The above graph depicts the percentage of each tree genus found within the survey.

Conclusions

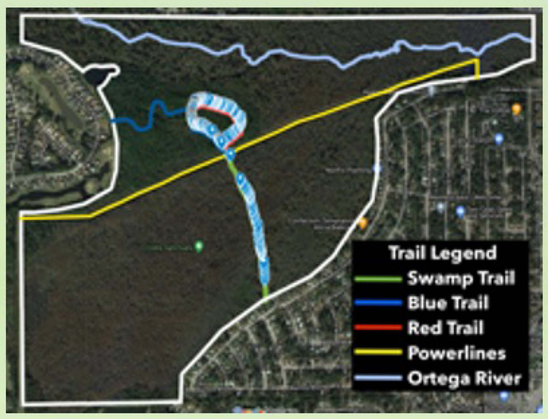
- Less than 1% of the trees sampled were nonnative to Florida (Honey Locust).
- Due to the survey's inclusion of only plants >25ft many nonnative vines, shrubs, and foliage were not accounted for, providing an opportunity for a future project.
- Swamp and Red Bays that were surveyed displayed signs of having Laurel Wilt Disease (RAB-LW), caused by the Red Ambrosia Beetle, which is native to Asia.
- This beetle is a vector for the fungus Raffaellea lauricola, which can harm trees in the Laurel family.

Figure 3. Pictured on the left are three trees displaying stages of RAB-LW infection. The tree on the right is dead, with many small white marks on its bark (fungus). The middle tree is showing some fungus but is not dead yet. The left has not yet shown signs of infection.

Creation of Online Map

- The pre-existing map of the Crosby Sanctuary contains trails, rivers, and power line locations.
- After identification, the location of each tree with its corresponding species name was added to the online map.
- The updated Crosby Sanctuary map contains the pre-existing trails, identified trees, and other various features that are within the property.
- The map was created using Google Maps software. And is accessible to anyone with the following link: https://tinyurl.com/4vsfyu6b

Pre-Existing Map



Updated Online Map

Acknowledgements

- Special thanks to Duval Audubon Society for allowing this project to take place at the Crosby Sanctuary, even though it is not yet open to the public.
- Specifically, I would like to thank Carol Bailey-White for showing me the Crosby Sanctuary and always being willing to provide help in anyway. In addition, I would like to thank Pete Johnson for determining the specifics of the survey and impacting the entire project.

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