

MY COMMUNITY, OUR EARTH

MIAMI

Friends of the Environment: Hardwood Hammocks

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Problem Statement: The tropical hardwood hammocks are being destroyed through many means. What can we do to help save the ones that remain?

Background

This project was to create the “Friends of the Environment” group, students ranging from 5 to 18 years old and adults, and to teach them about the natural habitats that exist around us, in South Florida. Also, by learning about these environments, this would encourage each person to be advocates for these habitats and become environmental stewards in general. The students visited a variety of local parks and sites around South Florida to learn about local habitats.



Community Characteristics

Soil:	Primarily composed of organic material that has accumulated directly on top of limestone bedrock.
Hydrology:	Moist but rarely inundated with water
Current Area:	15,000 acres
Major areas:	South Florida and the Florida Keys
Elevation:	Only a few feet in elevation. Slightly higher in elevation than mangroves, marshes, wet prairies and cypress forests
Topography:	Limestone bedrock
Dominant plants:	Gumbo limbo, strangler fig, live oak, red maple, iron wood, poisonwood, pigeon plum, lancewood
Common fauna:	Whitetailed deer, opossum, cotton rat, cotton mouse, raccoons, several species of bats, multiple species of warblers, green anole, green tree frog and Florida tree snail
Invasive:	Brazilian pepper, latherleaf, para grass, Schefflera, fire ants and wild hogs
Threats:	Clearing for housing and urban development, clearing for agriculture areas, invasive plant and animal species, changes to historic water flow, and groundwater withdrawal.

Tropical hardwood hammocks are areas of hardwood forest found only in South Florida and the Florida Keys. These forests are relatively young as they only began about 8000 years ago when sea levels fell and exposed coral reefs. These coral reefs died and left behind shelves of limestone bedrock, which eventually became covered with vegetation. Over thousands of years, both tropical and temperate species mixed to create the hardwood hammocks we know today. The hammock is characterized by a dense canopy of low growing hardwood trees. Many of the species found in these tropical hammocks originated in the Caribbean Islands and are not found anywhere farther north. Late in the 1800's and into the 1900's these forests were logged for the timber such as maghony, which was used for furniture making and in the production of charcoal.

Ecology

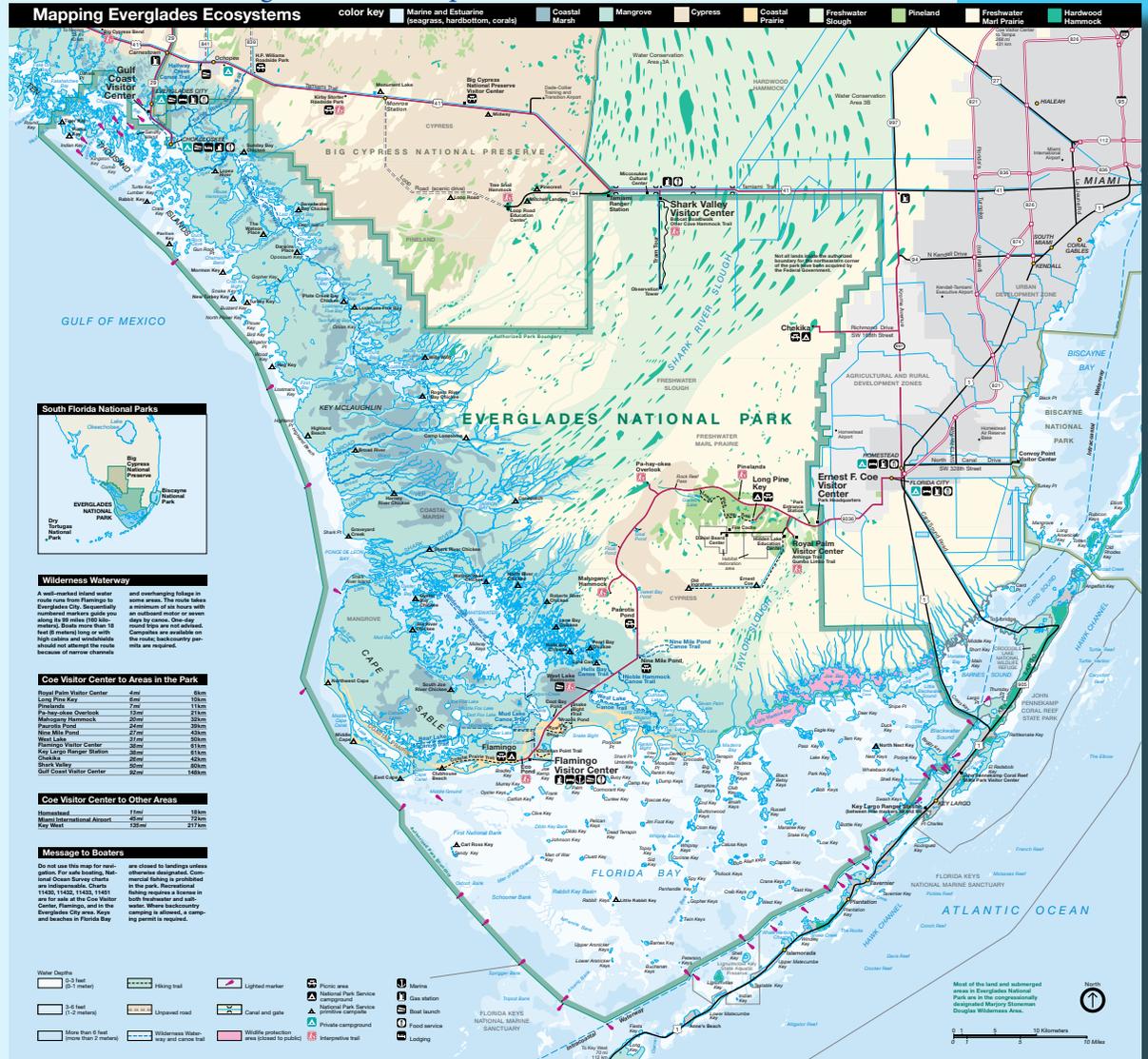
Tropical hardwood hammocks are dense strands of broadleaf trees, which include hardwood trees and areas of dense vegetation. Such vegetation may include shrubs, palms, ferns and epiphytes. Hammocks grow on land that is slightly higher in elevation than mangrove forests, marshes, wet prairies,

and cypress forest and therefore rarely run the risk of flooding. Also, fires rarely occur in this type of ecosystem. Tropical hardwood hammocks occur along the Florida coastline in South Florida and the Florida Keys where the danger of frost is rare. Tropical hardwood hammocks contains more than 100 species of trees and shrubs and are one of the most diverse ecosystems in South Florida.

Threats

Coastal tropical hardwood hammocks have declined at an alarming rate due to clearing for housing and urban development, clearing for agriculture areas, invasive plant and animal species, changes to historic water flow, and groundwater withdrawal. These threats have had such an impact on the hardwood hammocks in South Florida that they are currently listed as a threatened habitat type in Florida. The ones that remain are scattered throughout South Florida and the Florida Keys and are mainly located in parks and preserves. One of the largest remaining hammocks in Florida, exists within the Deering Estate at Cutler.

Tropical hardwood hammocks are distributed at higher elevations throughout the Everglades. Hammocks are dark green in the map

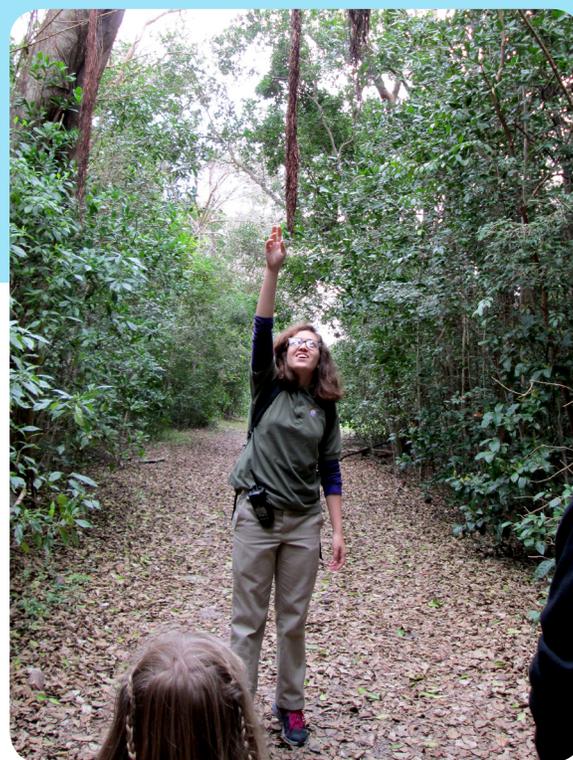


Source: <http://www.nps.gov/ever/playourvisit/maps.htm>

Results & Conclusion

The *Friends of the Environment Group* visited a Coastal Tropical Hardwood Hammock at Deering Estate and Everglades National Park-main campus. At Deering Estate, we took a 2 mile hike to learn more about the tropical hardwood hammock. Along the hike, we learned about the plant and animals species that live in this habitat, such as the Gumbo Limbo tree, strangler fig and Florida tree snail. Brian, a 5 year old, learned that the blue butterfly lives in a poisonous flower. Drew, a 7 year old, learned that the strangler fig will eventually take over and kill the tree it's strangling. Pat, a 62 year old, learned that the term hammock was first used by the early settlers that meant "a shady place". Connor, an 18 year old, learned that the Gumbo Limbo tree can photosynthesize through its bark.

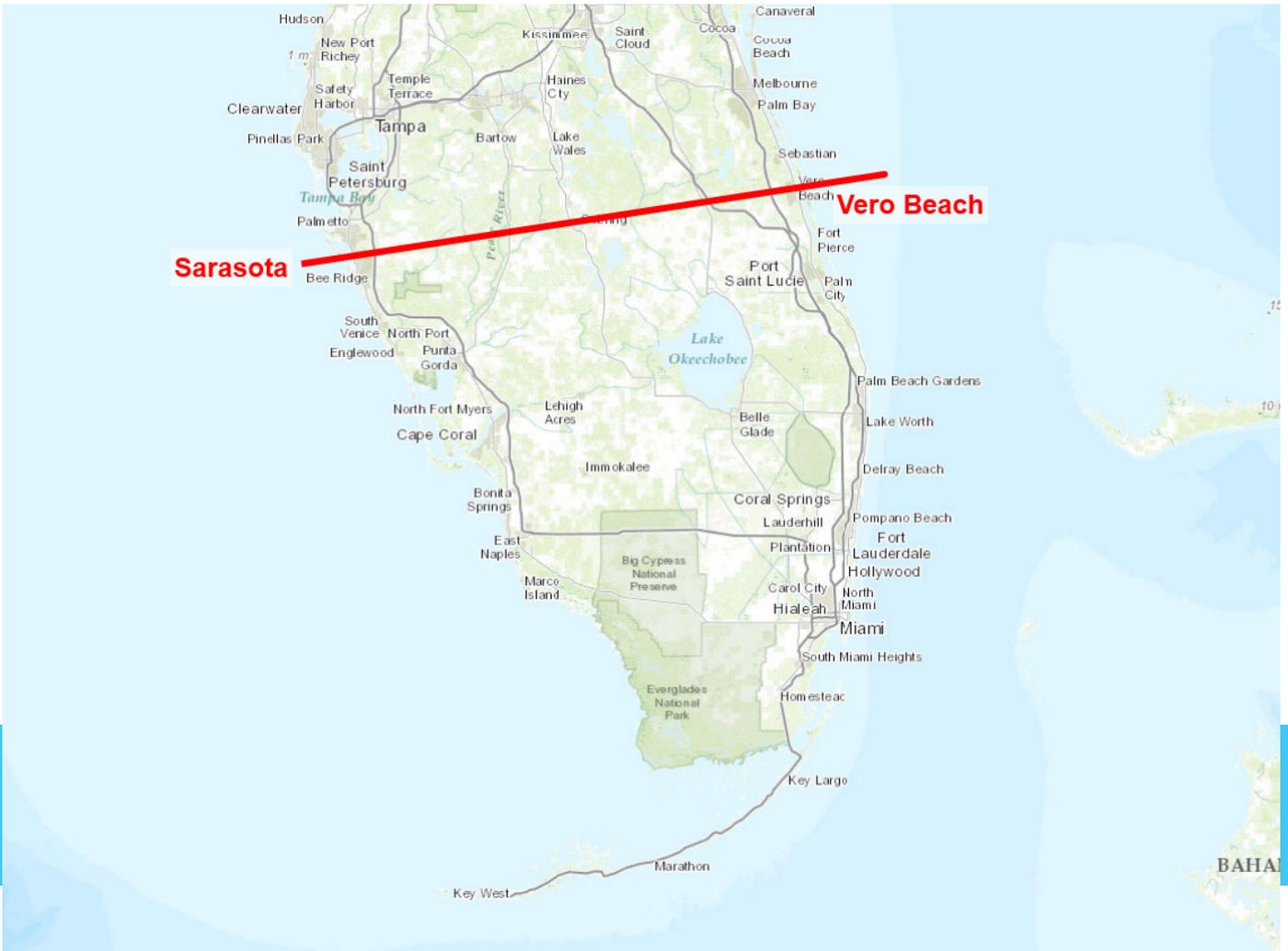




John, a 15 year old, learned that the Tekesta Indians ground up a type of berry and threw them into Biscayne Bay in order to paralyze the fish for a few moments. Brandon, a 7 year old, learned that hardwood hammocks are home to many different types of plant and animal species and that some of these are endangered.

After our trips, we talked about how the Tekesta Indians protected and respected the land and the hardwood hammock they lived in, but now we seem to be doing a lot to destroy it. The majority of the current population is not educated enough about the importance of the tropical hardwood hammock to understand or care about the importance of this threatened habitat and thus do not respect it. We decided we must educate anyone we can, to help everyone know how important this hardwood hammock environment is, before they are destroyed completely.

Tropical hardwood hammocks are distributed on coastal uplands south of Vero Beach in the east and Sarasota on the Gulf coast



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swissstopo and the GIS User Community

