Friends of the Environment: Wet Prairie

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Problem Statement: What effect has the canal system had on the Cape Sable Seaside Sparrow, a dominant resident of the wet prairie?

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 each of the local habitats.

Community Characteristics

Soil:	acidic, nutrient-deficient, saturated soils, sandy loams with clay subsoils
Hydrology:	water level fluctuation
Historic Area:	158,000 acres
Current Area:	745 acres or 0.6 percent
Major areas:	Kissimmee Prairie Preserve State Park (Osceola County), Florida Gulf Coast University's campus
Elevation:	Native lowland grassland occurring on level ground
Topography:	Herbaceous community found on continuously wet soil
Dominant plants:	Dense wiregrass, sundews, butterworts, toothache grass, coastal plain yellow-eyedgrass, coastal sweet pepperbush
Common fauna:	Amphibian and reptile species, such as green tree frog, mud turtle, pygmy rattlesnake, American alligator
Invasive:	Reed canary grass, glossy buckhorn
Threats:	Threats to the diversity and community structure, hydrologic alteration

Background

A Wet Prairie community is found saturated, however not inundated with water. Soils are on somewhat flat or gentle slopes, which are located between lower lying depressions, such as marshes, shrub bogs, or dome swamps, in Florida. Wet prairies are typically dominated by emergent plants, including grasses such as dense wiregrass in the drier portions.

Historically, wet prairies were distributed and stretched 158,000 acres across the eastern and western portions of the Everglades. Over time, this natural habitat has slowly diminished into a total of only 745 acres. Wet Prairies are are the most common marsh type. They can be found throughout Florida and their range extends from Texas to North Carolina.

Ecology

Wet prairies are dominated by Florida's herbaceous plants which generally emerge from shallow waters. Wet prairies are both tolerant to flooding, and drying out. Natural fires actually occur in wet prairies from surrounding pinelands, when they are dry enough to carry the fire. Wet prairies filter pollutants from agricultural runoff, as well as evapotranspiration which condense into rainfall, comparable to the amount that condenses from open bodies of water.

The Cape Sable Seaside Sparrow (*Ammodramus maritimus mirabilis*), found in the wet prairies of Everglades National Park, is a small bird about 13 centimeters in length. This ground nesting bird inhabits prairies on the interior of Southern Florida. These prairies remain dry most of the year, but will flood seasonally. The nesting season extends from February to August and ends quickly when the prairie becomes flooded.

Threats

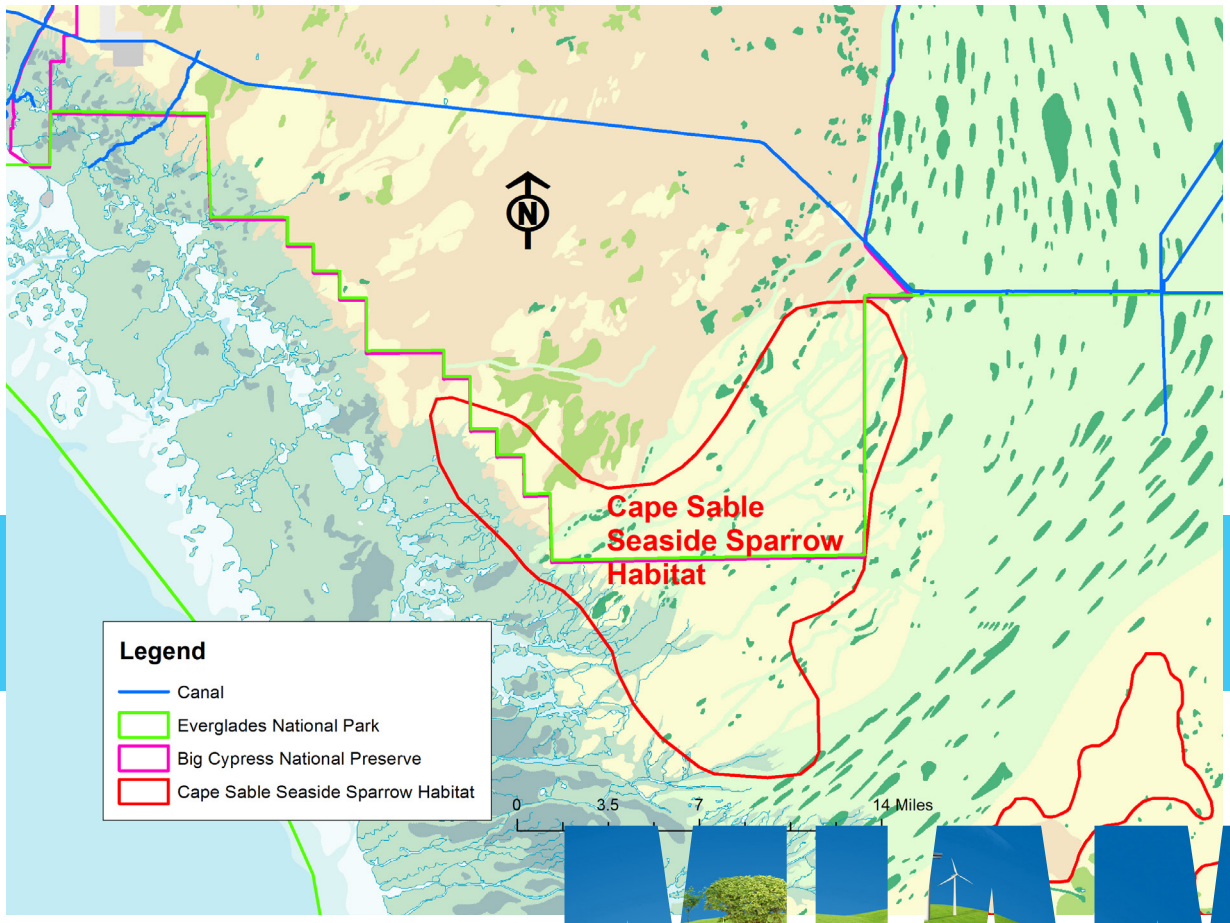
Slight physical alterations to the soil surface, can permanently alter the hydrology in wet prairies. Florida had 20 million wetland acres of which about 46% have been destroyed already. The destruction of wet prairies continues to increase by an additional 26,000 acres per year.

Human beings have had a huge effect on wet prairies through changing the natural water flow of the land, and soil rutting, which is due to heavy equipment damage. Disturbances such as these can have a significant effect on the prairie and can even result in a change of plant and animal species found there. The water flow has been significantly altered through the many attempts to drain South Florida using the canal system. This drainage has caused a shift from freshwater vegetation to a more brackish water environment containing, mangroves and salt tolerant plants. This has destroyed the Cape Sable Seaside Sparrows habitat in numerous areas. Hurricanes have also had a significant impact on these birds over the years from simply killing many individuals in a population to also changing the dominant plant species in the area.

Results & Conclusion

The "Friends of the Environment" Group visited Everglades National Park- Main campus and Everglades National Park- Shark Valley to learn more about wet prairies and the Cape Sable Seaside Sparrow. On the tram tour at Shark Valley, we learned about this subspecies of sparrow and how their habitat is being altered and destroyed. We talked about how, as an individual, we can each make a difference by not littering or polluting the water and how we need to educate others on the importance of preserving wet prairies to save the Cape Sable Seaside Sparrow.

Left to Right: American Alligator, Cape Sable Seaside Sparrow, American White Ibis



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