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The Florida Coastal Everglades: A Mosaic and Refuge of Water, Land, and People

Underlain by the shallow Biscayne Aquifer, thousands of years of ecosystem development emerged as sea levels fell during the Pleistocene. The shallow estuaries of fresh and marine water were further offshore than today. Marshes extended far out into Florida Bay, later replaced by mangroves, and most recently by seagrass meadows as Holocene sea levels rise. For millennia, seasonal freshwater pulses have moved slowly across this landscape (sometimes called a waterscape), keeping the sea at bay. The Calusa and Tequesta peoples reshaped the landscape in relation to this water cycle. Later, Seminole and Miccosukee peoples, in response to Euro-American encroachment, established flourishing settlements on Everglades tree islands and ridges. The Everglades has always been a place of refuge. Enslaved African Americans fled to South Florida to escape unbelievable suffering and cruelty, finding respite at Cape Florida where the lighthouse served as a beacon to freedom in the Caribbean. Today, it remains the oldest enduring structure in South Florida and a parallel symbol for Black Americans, much as the Miami Freedom Tower is for Cuban Americans. After the Civil War, White Americans came to discover South Florida with its rugged and beautiful expansiveness. Many arrived in South Florida via the sea which explains in part why the interior Everglades remained largely untouched. That was so, until people began to realize that the not-too-infrequent storms and resultant hydrologic pulses of fresh and marine water – which flood from under- as well as over-ground – fill the Everglades with water, connecting land to sea and sea to land. Things changed soon thereafter as the draining of interior wetlands began to shrink the Everglades along with our understanding of it. Then, Marjory Stoneman Douglas, Miami's equivalent of Rachel Carson, began writing and speaking about the beauty and fragility of the Everglades, connecting us to the "River of Grass", and helping usher in a national park to preserve and protect the Everglades for all people and beings. Today, the Everglades is a UNESCO World Heritage Site, a Biosphere Reserve, a Ramsar Wetland of International Importance, a U.S. National Park, and home to the world's largest ecosystem restoration. It is also the water source for 1 in 3 Floridians and a place of rapid change from accelerating sea-level rise, and urban and agricultural development. Yet, it continues to provide refuge to its native species and people, as well as species and people from all over the world. There arguably is no better place for the long-term ecological research of coastal ecology and global change than the Florida Coastal Everglades, where the challenges and opportunities of a reconnected land-water mosaic enable us to understand the capacity of coastal ecosystems and people to adapt, develop, and endure.

The Florida Coastal Everglades Long Term Ecological Research Program acknowledges with gratitude the natural and human history of South Florida, its resources and its people that have collectively enabled and advanced the ***understanding of social-ecological drivers and responses of coastal ecosystem development.***