

Core 4: The Everglades

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16 November 2007

## The Everglades

Marjory Stoneman Douglas once said, “There are no other Everglades in the world... one of the unique regions of the earth...nothing anywhere else is like them” (5). She described the Everglades to be a beautiful, massive place that is still a simple area full of life. Douglas’ book, The Everglades: River of Grass, took the real natural beauty of the Everglades and let others know about it. At one point in life, she was able to describe the Everglades flawlessly. That was until people decided that it was not needed anymore and started to build right on top of it.

Before people started to live and construct on the land, the Everglades covered the entire Southern part of Florida. This included Lake Okeechobee southward (Lodge 3). Now, the area known as the Everglades National Park covers the part of Florida that is just west of Miami stretching to the West Coast of Florida just before Everglades City. The Everglades stretches north to Big Cypress National Preserve, which is in the middle of the state covering an area west of Ft. Lauderdale and miles inward from Naples (Toops 1). All of the area around the Everglades and Big Cypress used to be covered in swamp land. Now with the population at eighteen million, the area that used to be that swamp became homes and businesses.

Those who have studied the Everglades, have given different meanings to its name. In the book, The Everglades Handbook, Thomas E. Lodge says that the name was accidental. He broke the name of Everglades into the words ever, which he said meant river, and glades, meaning an open area covered in grass. Marjory Stoneman Douglas used the infamous definition of “it is a river of grass” to mean Everglades. Yet, the first name given was by the Miccosukee Indians. They called the Everglades Pa hay okee, meaning grassy water (Lodge 9). Yet whatever the meaning behind the name of the Everglades really is, is not as important as the facts like it’s deterioration, that those like Lodge and Douglas spent years studying about.

Not only is the Everglades naturally beautiful with its landscape full of saw grass and water, but it is also a large ecosystem that houses hundreds of different animal species. From alligators to fish to wading birds, the Everglades is a habitat to them all. There are certain animals that play a crucial role in the ecosystem of the Everglades known as keystone species. Some of the keystone species include alligators, some small invertebrates and marine fish.

Invertebrates are part of the food chain that feed many of the animals in the Everglades. Marine and estuary fish are also a large part of the food chain, feeding hundreds of different kinds of wading birds. Although some baby alligators feed many of the larger animals, they play an even more important role for the Everglades. Female alligators dig what are known as alligator holes, which are similar to a pond. Many wading birds use the holes as a type of refuge. Also, the holes play a big role when it comes to the two seasons (wet and dry) in the Everglades. Aquatic animals take the holes as a place to live during the dry season (136).

Unfortunately, many different species of animals have become endangered over the past years. One of the most popular on the list is the Florida Panther. As of 1997, there were only about 50 of those panthers left in the wild (142). They were all confined to the southern part of Florida. Other animals that have been named on the endangered species list are the wood stork, the snail kite and the Cape Sable seaside sparrow. All of these are types of wading birds (161). Because the Everglades went from covering half of Florida to just a portion of it, species like the panthers and the birds lost pieces of what was their habitat and food. This led them to becoming endangered species.

Not only does the Everglades house hundreds of different species of animals, but it is also a home to hundreds of different species of plants. Many researchers would call sections of the Everglades tree islands because they are covered with thousands of different trees. Included in

those tree islands are Red and Sweet bay, Coastal-plain willow and Cypress trees. Other areas of the Everglades are known as pine flatwoods because of the Slash pine that cover them. Those areas are very important to the Everglades because they are habitats for many of the animals. The Everglades is known for its swampy area. Some of those areas are full of Mangrove trees, giving them the name Mangrove Swamps. Red, Black and White Mangroves cover those areas (39).

As mentioned above there are certain animals, as well as plants, that are very important to the ecosystem of the Everglades. There are different plants in the Everglades that can show whether or not the water surrounding them is healthy. One of those indicator species are known as cattails. At one point there were very low phosphorus levels in the water of the Everglades. But that number has changed significantly over the last few years. Due to things such as agricultural runoff, phosphorus levels have increased tremendously. Cattails grow throughout saw grass (Davis 357). They are an indicator of high phosphorus levels. In contrast, saw grass is an indicator of fairly healthy water in the Everglades.

Although a great portion of the plants in the Everglades are native to the area, many have been introduced to it. Over the years, plants known as invasive exotic species have taken over the area that was once filled with native species. The problem with invasive species is while in competition with each other, the invasive ones tend to be stronger, which in turn kills off the native ones. Two of the most popular invasive exotic species are Melaleuca and Brazilian Pepper trees. They were introduced in the 1800s, but did not start to really become a problem until around 1950 (D'Antonio et al. 703). Now there are management efforts to try get rid of the invasive species. Some of the efforts have helped, but others for the Brazilian Pepper and Melaleuca are still not under control.

The Everglades is not only a habitat for numerous plants and animals, it is also vital to

humans in Florida as well. Human survival is based on water that we get from the Everglades. Water from rainstorms seeps into the ground and makes its way down into the aquifers underground. Aquifers are bedrocks under the earth's terrain that hold water. That water is pumped out and purified to make drinking water for Florida's population. One of the aquifers close to the Orlando area is the Upper Floridan aquifer. Seventy-five percent of the groundwater from the Orlando area goes into the Upper Floridan aquifer (Murray et al. 11).

Before the restoration of the Everglades was started, agriculture was a very big part of human life. The sugar industry out of the Everglades was booming at one time. Agriculture near and on the Everglades was very big because of the good soil and water conditions of the area. Now, it is known that agricultural runoff is causing a big problem. Yet, at one point humans were greatly benefited by farming near and on the Everglades (Anderson et al. 235).

The effect of Hurricanes on the Everglades has been extremely detrimental to its ecosystem. Hurricane Andrew in 1992 destroyed an incredible amount of the trees and pines in the Everglades. Trees were knocked down and vines and pines were broken. Not only were plants destroyed, but there was a massive loss of aquatic animals.

Although hurricanes have such a bad effect on the Everglades they are tied into one project that started years ago that helped us but continually hurt the Everglades. The Army Corps of Engineers started to build canals after the catastrophic floods in the 1940s (Blum et al. 10). The point of the canals were to take in rain water during hurricanes or just thunderstorms. The project of building canals was just one of the first ideas that was thought to help us. Yet, the canals lead to something that was even worse and made a very huge impact of the Everglades' ecosystem.

Along with the canals, the Army Corps began their use of pumps, used to drain the

Everglades. The Army Corps also began to build a system of levees around the Everglades to protect the people around them. They did eventually figure out that the use of the pumps and levees were helping people, but was also hurting the Everglades and its ecosystem (10).

Of all of the different projects that were started in that area, one of the biggest was the start of the Everglades Agricultural Area (EAA) and water conservation areas. The conservation areas were and many still are being used for water supply and flood control. The areas were separated by levees and only left minimal room for animals and their habitats. The EAA was made from the area surrounding the Everglades that were once inhabited by farmers. After the EAA and the levee around Lake Okeechobee were secured, agriculture in the area became very popular. The entire project of the levees, canals, EAA and the other conservation areas was known as the Central and Southern Florida (C&SF) Project for Flood Control and Other Purposes (10).

The entire C&SF project was not completed until decades after the Army Corps started them. Then in 1993, after discovering what a controversy it was, the Corps and the South Florida Water Management District started to “re-examine” the project (13). After really looking into the project, the Corps came up with a new plan. In 1995, the new project was given a six year plan. In those next years, everything that was bad about the first project was supposed to be dealt with. One of the main ideas was to make sure that the ecosystem remained as the focus of the plan. Also, other controversial issues that went along with the first plan, were supposed to be fixed. One of those issues being, humans getting a great deal help while animals were losing their habitats (13).

The years that followed the re-examination came with one plan that is still in affect today. It is called the Comprehensive Everglades Restoration Plan (CERP). Within CERP, there are 68

different projects being done. The goal of CERP is to protect South Florida's ecosystem at the same time as still helping humans in the area with their water needs. This plan was not only made to protect the ecosystem but to restore and preserve it as well (13).

The Army Corps knew of the problems with the project they had originally started in the 50s. The point of CERP was to try to fix those problems. Two of those being unequal water availability in different areas and nutrient enrichment in water. There were many components that went into CERP. The Corps made sure to build new areas for storing water so that with the ones that already existed, it would highly increase capacity (15).

Water quality from the Everglades was and still is very important. In knowing that, the Corps planned on improving it by building areas for preserving water, that could treat runoff from nearby areas, as well as storing it. One very important part of the plan was a result of the last two components mentioned above. With the increase of cleaned, stored water, a new demand for better ways of delivering the water into estuaries and the Everglades came about. The Corps planned to first send water to estuaries to make sure levels were normal and excess water would go into the Everglades (16).

Over the last few centuries, humans and nature have really tampered with the Everglades and left a nasty mark. Yet, now we have realized that and are trying to fix it. We as people, need to care about the Everglades. We should take time to learn about it because when we interfere with the environment it will eventually come back to hurt us. Although it might seem hard to try to help with massive projects such as this, just learning and letting others know can be a bigger help than one might think.

The Everglades is a place of natural beauty surrounded by wildlife and plants. Marjory Stoneman Douglas spent a lifetime studying and discussing it with people. Centuries ago, before

humans started to construct and live on it, the Everglades covered the Southern part of Florida. Now, after years of building and a great new population, the Everglades has been confined to just a considerably smaller portion of Florida. If everyone spent time to study, read and think like Douglas, the Everglades would still be what it used to be and people could once again see what a beautiful place it really is.

## Works Cited

- Anderson, D. L., and P. C Rosendahl. "Development and management of land/water resources: The Everglades, agriculture, and South Florida." Water Resources Bulletin 34 (1998): 235-249.
- Blum, Linda K. et al. Science and the Greater Everglades Ecosystem Restoration. Washington, D.C.: The National Academies Press, 1996.
- D'Antonio, Carla, and Laura A. Meyerson. "Exotic Plant Species as Problems and Solutions in Ecological Restoration: A Synthesis Restoration Ecology." Restoration Ecology 4 (2002): 703-713.
- Davis, Steven M., and John C. Ogden. Everglades: The Ecosystem and Its Restoration. Delray Beach: St. Lucie Press, 1994.
- Douglas, Marjory Stoneman. The Everglades: River of Grass. Sarasota: Pineapple Press, Inc., 1997.
- Lodge, Thomas E. The Everglades Handbook: Understanding the Ecosystem. Delray Beach: St. Lucie Press, 1994.
- Murray, Louis C., and Keith J. Halford. "Simulated effects of projected ground-water withdrawals in the Floridan Aquifer System, Greater Orlando Metropolitan Area, East-Central Florida." Water Resource investigation report 99-4058 (1999): 11.
- Toops, Connie. The Florida Everglades. Stillwater: Voyageur Press, Inc, 1998.
- U.S. Census Bureau State and County Quick Facts. 2006. 13 November 2007  
<[www.census.gov/datamap/www/12.html](http://www.census.gov/datamap/www/12.html)>.