The Everglades National Park

#### A Story in Technicolor

Marjorie Mayorga IDH 4007 Fall Semester 2001

Standing waist-deep in saw grass, a flawless graysky framing an unrealscene where river and reeds become indistinguishable, Karen gazed unimpressed. The sublime nature of this ecological experience bordering so unbelievably close to herown urban existence did not seep into her mind or psyche. Perhaps the seven applications of gel she had put on her hair that morning in order to prevent as much frizziness as possible was impeding the correct reaction, but that's not likely. Much more probable is the inference that Karen was not an outdoors type of person, in fact, only the most serenely beautiful sunsets ever tempted her to hike outside, and the Everglades with its apparently monotonous landscape was not making even a dent of an impression. Not to mention that it was raining, ruthlessly pouring down on her and the rest of her class, making her gel effort of the morning practically useless.

She wasn't even really standing in the saw grass; it felt more like she was imperceptibly sinking into the mucky bottom. Sure, she might imagine that she could move around on the spongy surface but, in truth, she knew that if she remained immobile for more than a minute, the earth would commence to slowly swallow her, drowning her inch by inch. She moved around uncomfortably. Always acutely aware of her lack of balance, ever since a ballet teacher had pointed it out to her, Karen now felt as if her woman-child inadequacies were on full display. Her eyes darted sloppily around to see if anyone noticed her ineptitude in the new terrain and quickly looked down as she realized they were all too enthralled in their own conversations and eloquated experiences of nature to pay any mind to her.

"Isn't this great?", she heard one girl say.

"I can't believe all of this is so close to where I live and I'd never been here before. There really should be more educational awareness programs. I wonder why I was never taken on a field trip to the Everglades? Wouldn't it be challenging if our school became involved with primary schools to...", whether this curly-haired speaker went on a diatribe in response to the first girl's remark or simply for the sake of talking was beyond Karen. She lost interest rather quickly in their conversation and rather unstealthfully moved away from them, refusing to hear the rest of the genuinely exciting questions and remarks. Why did everyone seem to speak in questions and exclamations? She hoped her utterances did not come out as paradoxically contrived and gushing, even though every word from her mouth was always carefully planned and carried out.

Besides, she missed the interest in their words and could only see their lack of geographical grasp. Rather than this insipid terrain, what seemed really amazing to her was the thought that 75,000 years ago this was not as it is. In its place, stood a parcel of a mass of land twice the size of what it is now, 300-400 feet further above sea level with a chilly, semi-dry climate. A miniature limestone Sahara, Karen had thought at the morning lecture, and although not very accurate, the idea was fascinating to her as was the thought that she was standing on territory where mammoths, saber-toothed lions, and elephants had once roamed. How much more engrossing that landscape must've been to witness. Anyway, at least she could've stood on firm, stable ground, however porous.

She shook her head, hoping to end her drenched musings, realizing that her ideas were more potent in this environment and that knowledge made her want to leave all the more. Suddenly, as if a silent prayer had been answered, she heard the airboat driver say, "I think its time we all head back to the boat and find us some alligators".

Karen had never thought she'd feel such relief at the mention of finding alligators, and from the mouth of such a thickly accented man, too, but if that entailed getting back on the boat, she'd happily look for one herself. With that, she clumsily climbed back on.

Fighting back the chills caused by the combination of rain, a Sawgrass bath, and the wind stirred up by the air-boat propeller blades, Karen found it hard to see anything all that interesting in the couple of alligators they managed to see. Swimming right up to their boat, due to marshmallow feedings she heard murmured in back of her, the alligators looked dangerously docile. For a few seconds, Karen believed she could go in with them, but only for about three. Everyone stood up for a better look and Karen did the same so as to not seem a recluse, but she found something unnerving in the magnified image of their amber-tinted, vacuous eyes that yet seemed to have something to say, although she wouldn't have put it that way. She sat back down and after a minute so did everyone else and they moved on.

Continuing on their wet journey, they spotted a few birds. Their gray and white feathers, however, did little to awaken Karen from the daydreams that the fluidly stolid landscaped had spawned. Past, present, and future blended subconsciously in front of her as they passed scene after scene of ingeniously crafted ecology, and for the last half of the boat ride, Karen felt neither wet nor cold. Pragmatically, she thought musing would be the best way to pass the time quickly.

Nearing the end of their ride, the boat stopped and the airboat driver strained to stare into a bush of some sort. Its name was probably given, but Karen paid no attention. A family of purple gallinules was supposed to be sheltering there from the rain. Someone, then began to call out to them and slowly, they cameout. They seemed to be perfectly accustomed to humans gawking at them. To Karen, their purple and blue hued heads and breasts were a breath of fresh air. They seemed possessed of so much color. Even the babies, whose brown and gray feathers were only just beginning to transform themselves were seeped in a melodious palette.

They also reminded her of something. A family outing perhaps, a bird lesson from a father she thought she remembered once having, a painting she once drew in purple and blue crayons that triumphantly stayed on her mom's office desk for years - she wasn't sure. Like an old photo album, images popped out at her that she couldn't glue into a coherent whole; too much black-and-white for her Technicolor upbringing. And so with these Technicolor birds who reminded her of something blandly but engrossingly incomplete, as they lived in a black-and-white system whose charm escaped Karen, or so she thought. With this final sight, the airboat left the spot and retreated to where they had begun, and Karen had to struggle not to look back.

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Jennifer Burleson IDH 4007 Fall Semester 2001

# Finding my place in nature; An essay on human superiority, animal rights and overpopulation

Caught up in the modern day scheme of things, I haven't felt connected to nature in some time. I always considered myself a lover of nature and the outdoors. But driving west on US 41, as I passed the turnpike and headed into the everglades, I began to think about the last time I had been so removed from the everyday hustle and bustle. I have been having internal conflict as of late, and it seems this trip illuminated some facets of this inner unrest. It has always been easier for me to put my thoughts on paper. This is the attempt of this essay, to externalize this internal conflict. As I do this, I am hoping to better understand myself.

One such debate I have with myself is whether human life is to be held above other life, and if such a concept is even possible. The second of my internal conflicts is animal rights. Do or should animals have rights? Finally, and most important, what is my responsibility or place in the grand scheme of things? This includes my decision to be a responsible human being, and whether I should have children or adopt. These ideas, not mutually exclusive, tie together and overlap in a common theme of my current internal thought processes.

It seems to be my understanding that western religion or Christianity holds the belief that animals were put here on Earth for us humans. Human beings are held above all else. This is the justification for things like animal research, and the draining of the everglades for human habitation. I personally would put most members of my human family above my pet dog, if it came down to a choice. But my question is, are our lives more valuable than other life in the grand scheme of things? Or are all living things, being in a common ecosystem, interdependent? Finally, what kind of life will there be if we continue our current path of destroying these habitats, *our* habitat?

When I pulled into Coopertown, I noticed I was the first person to arrive. This gave me a chance to look around a little. Coopertown is a tourist trap. It includes a quaint restaurant which offers gator tail and airboat rides, the latter being the reason for our trip. As I walked past the restaurant and toward the dock where the airboats depart, I came to a hut with a counter where you inquire about the airboat rides. There were some small aquariums seated upon the counter. One contained baby alligators, and the other held some curious baby turtles. As I looked into the different tanks, I saw several species of turtles I had never seen before which

raised my curiosity. It was at that moment I came upon a disturbing sight. In one of the bigger tanks, was what appeared to me, an adolescent age alligator. On first sight it was obvious that the tank was too small for this beautiful creature. I looked into his magnificent eye, as he swam to no avail into the glass over and over. A sad and alarming feeling came over me. I felt like releasing this alligator from his prison immediately. I just felt and still feel it is wrong to have him in there, and that I should do something about it. Which leads me to my conflict. Who am I to tell these people to release this alligator? Is it wrong to have him in there in the first place? Should I try to do something about it, and what should I do? Many people feel that animals do not have souls. Even if this is the case, they still have a nervous system and therefore can feel. Do I think animals should have rights? Of course I do. I feel animals should have the right, just like people to pursue happiness, which basically means living their natural animal lives. I have since contacted the Everglades Field Office of the National Wildlife Federation concerning this gator and his small prison.

When I was in elementary school, in science class, my science book showed two photos. One of an obese child eating, and next to it was a picture displaying a very thin starving child. This chapter discussed waste as well as the idea of overpopulation. From what my college biology professor explained to me, the food chain is supposed to look like a triangle with the smallest animals the most abundant on the bottom and the larger animals the fewer, toward the top. He explained that we humans, being overpopulated, have upset the food chain and the natural order of things. What I want to know is, of all of these quests to save this or that animal or place, isn't the bottom line just too many humans? In our age of political correctness, I guess no one wants to bring up the topic of overpopulation, especially if it means telling people not to have children. For many, including a friend of mine when discussing this topic, feel it is our God-given right to reproduce. This is the basis of my conflict. I am almost thirty and have been having strong biological urges to have a child myself. I think about my responsibility to the planet. I think about places like the everglades and feel there has got to be some kind of a compromise. Maybe between my partner and I, we could have one child and adopt some, thereby reducing our population by half. Or we might have no children and adopt many. My point being that the problem of human overpopulation is underlying most of our environmental problems. It needs to be addressed and at least discussed, if there are to be any considerable advances in the restoration and preservation of our planet.



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#### WAR IN PEACE

Marissa Ivy Kingham IDH 4007 Fall Semester 2001

On a hot, sunny day in South Florida, amidst the natural beauty of the Florida Everglades, the only thing that mattered to me was nature. I was enjoying my surroundings as I watched a Great Blue Heron perched in one tree and an Anhinga perched in another. Surrounded by a variety of flora including palm trees, spatterdock, and my favorite - the strangler fig, these birds were also enjoying their surroundings. Nothing else in the world existed. We were at peace.

Given the day of this experience, it would be hard for most of the world to imagine a scene so serene. There was no discussion of the "Attack on America", no presidential press conferences and most importantly, nothing to remind us that the future was uncertain in this country. For awhile I had completely forgotten about the circumstances that had consumed me for the previous ten days.

But even in the midst of the great outdoors, a place with no electricity, plumbing, or telephones, there was no escape. I was walking on Anhinga Trail when I heard the reminder of the civilized world in the sky. As graceful as any flying bird endemic to the Everglades, an F-16 flew right over our heads. But unlike any living creature its sole purpose was to destroy - in order to impose one mans will on another.

My first reaction was chilling. I was immediately reminded of the scene in the movie Pearl Harbor, when the military planes flew over the heads of children playing baseball. It was surreal. I became acutely aware that there is no escape from reality; even when you are trying.

So what was I to make of this? Has our world come to the point when military policing is necessary for safety? And then you have to wonder, who's really safe? Sure, we are protecting our country, at least the part most people are concerned with. But are fighter jets good for the environment of the Everglades? Must we fly our commercial planes at low altitude directly overhead in order to save a few dollars in fuel? Are we so short of land that we have to encroach on our national treasure to support shopping malls and used car lots. If we must be at war with terrorism and our own civility, can't we choose our battle grounds with more care and compassion?

There seems to be no room for war in peace or peace in war. The two are mutually exclusive and attempting to make them fit together would be analogous to killing for peace or screwing for chastity. The fact that the Everglades are in the middle of nowhere is a weak argument for the thousands of life forms that call nowhere home.

I cringe at the thought of this beautiful habitat as a vast wasteland; a dried up swamp. I cry for the loss of beauty and tranquility. I don't want to mourn for this epoch of natural splendor; I want to celebrate it.

And what of the problems of man? I am a patriotic American. I love my country. I want to feel safe in my home and when I leave it. But would I be safer without me beloved Everglades. Would mankind be better off without this wondrous rain machine? Would the interruption of the water supply to South Florida be good for anyone, or anything? There must be some things that stand above man's desire to conquer. Somewhere in both our moral and intellectual consciousness, we must know that there are natural wonders greater than ourselves.

When we prevail in this war on terrorism, as I'm sure we will, what will be the bounty of our victory? Will

the fight have been worth it if we have no suitable wetlands to support or homes, our churches, or our schools?

Let the great Herons fly! Let the Eagles soar! Leave the alligators at the top of this wondrous food chain. There is no room for war in this place of peace. And if we forget this - our children shall indeed inherit the wind.

So, as I walked through Everglades National Park on a hot, sunny Florida afternoon, I experienced internal conflict of a supernatural kind. And I still wonder what to do. The "Attack on America" is not only about the people, it is about the whole world and all that lives within it. It is about the peacefulness of nature and the chaotic man-made world around it. There is no room for war in peace.

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#### My Walk with Nature

Giselle Sanchez IDH 4007 November 2, 2001 Journal #3

In Zora Neale Hurston's Their Eyes Were Watching God, Janie noticed while living in the Everglades that some of the Indians started leaving the town and heading east. She also noticed that the animals started to scatter as well. Janie asked one of the Indians why they were leaving and he said that there was a hurricane approaching. The park ranger that guided us on the slough slog informed the class that this is a fact. The animals as well as the sawgrass know when hurricanes are approaching. The Indians these days know when a hurricane is approaching as well. Yet, these days they most likely find out from the weather channel reports on their big-screen TV's in their casinos instead of analyzing whether or not the sawgrass is blooming! It would have been interesting to have had class this Friday to see for ourselves if the blooming of sawgrass is indeed a fact now that Hurricane Michelle is approaching.

Last Friday there was an abundance of animal life throughout our slough slog since there was no hurricane threatening our coast. Two deer sprinted across the road as we were driving through the tollbooth and I scared Jose Antonio half to death as I screamed upon seeing them. He jumped up in his seat thinking I had crashed into something and was relieved to see that I was only enthusiastically pointing out a couple of deer to him. A mob of black vultures formed a roadblock on our way to the slog. I was delighted to see numerous cricket frogs, both green and brown. We could have held an apple snail bobbing contest with all the apple snails floating on the surface. I constantly had to untangle myself from spider webs that the colorful crab spiders spun between the sawgrass. Dozens of swallows sped across the sky. Anoles firmly grasped onto their sawgrass as we stampeded through their habitat. Crayfish swam circles around my feet each time the ranger stopped to point something out for us. Mosquito fish nibbled at my fingers as I sat on a submerged cypress having our book discussion. Plus, I'm sure that for every animal that I saw there were probably a hundred more I missed. Would things still look the same this Friday? Or have the animals started evading Hurricane Michelle?

Hurricanes can extremely alter the environment of the Everglades. According to our textbook, Discover a Watershed, "in recent decades, three severe storms-the Labor Day Hurricane of 1935, Hurricane Donna in 1960, and Hurricane Andrew in 1992-completely altered the character of vegetation in parts of the Everglades watershed, especially among the coastal mangroves from Long Sound to the Ten Thousand Islands" (Robinson 39). The effects of hurricanes are not all negative. "In all three species (red, black, and white mangroves), maturation of seeds coincides with the peak of hurricane season" (Robinson 43). The strong winds of hurricanes help to carry seeds to different environments. That is the main reason why the sawgrass blooms before a hurricane hits, to spread its seeds. But since hurricanes are not very common in November I wonder if Hurricane Michelle will have any positive effects at all on the Everglades. During our canoeing adventure at Nine Mile Pond, I did not notice many seeds on the red mangroves. Is Hurricane Michelle too late for the sawgrass to bloom as well?

It is being stated on the news that drainage has already begun in preparation for the hurricane. "The collective effects of wind-generated waves, tides, and storm surge causes flooding. If heavy, precipitation aggravates flood conditions- a storm can generate 10 to 20 inches of rain in a single day" (Robinson 44). Since we value our lives more than saving the Everglades, we choose to drain them. Hurston's story climaxed when her protagonist, Janie, experienced a hurricane in which Lake Okeechobee overflowed. A hurricane like this was a reality in 1928 when a "storm blew all the water out of Lake Okeechobee, burying more than 2,000 people in an avalanche of mud and debris" (Robinson 46). Then in 1930 Herbert Hoover

Dike was constructed for flood protection around the lake. Man is more threatening to the Everglades survival than hurricanes. Man resorts to drainage to save his life. There are various stormwater pollutants that have serious effects on our waters. For example, pesticides from croplands, mosquito control and lawns cause a loss of aquatic microflora/fauna, sea grass mortality, altered aquatic populations, loss of recreational potential, and a reduction of sport/commercial fisheries. The Everglades suffer whether or not the hurricane hits.

The lives of my new friends (the deer, the cricket frogs, the mosquito fish, ...etc.) remain threatened regardless of the hurricane. "Because Everglades plants and animals adapt their lifestyles to the cycles of wet and dry, it is critical that water managers hold and release the resource in accordance with these seasons. Too much water at the wrong time can be as damaging as too little. Deer starve because their food is under water; submerged alligator eggs rot in the nest" (Robinson 127). We already saw how high the water levels were as we slough slogged. We had to walk in circles through the cypress dome in search of dry land and we never did find it. I think I got an idea of what it feels like to be lost at sea for days and hallucinating that dry land was at a distance. Our textbook demonstrates how concern grew for Everglades National Park during the 1960's when "the water management district was criticized for allowing muck fires to burn out of control during the dry times and for drowning deer in human-made floods in wet seasons" (Robinson 123). The deer we saw were most likely along the road because of the high water levels. They were as eager to find high ground to have lunch as we were.

Hopefully, my new friends won't be affected too much by the hurricane if it ends up hitting South Florida. But our generation really has to do something about the Everglades and soon. We don't feel the effects of hurricanes too often, but the plants and animals feel the effects of our presence around them in the Everglades every day. I found an anonymous quote that captured my experience last Friday, "In every walk with nature, one receives far more than he seeks." In my walk with nature I only sought to bring home the stories and experiences of such a unique and wonderful environment but I also brought home something I didn't seek, a guilty conscience. I feel horrible that the human race, which I belong to, has threatened the life of the new friends I made.

Darwin said that evolution depends on the "survival of the fittest." But man has been cheating with his competitors because he may not be the fittest, but he certainly is the greediest. Those who drained the Everglades did not sit in the water while mosquito fish nibbled at their fingers or tried desperately to catch a cricket frog to view its vibrant green color up close. If they did, they wouldn't have dared to destroy such an astounding environment. Since we did not have the brains to figure out that the drainage of the Everglades would end up hurting us as well, we are definitely not the fittest. By being the greediest, we will probably kill off the fittest (which in my opinion is nature because we have no control over nature). We tried to control water and since water is a naturally occurring phenomenon we were ignorant to think we could regulate it. And since water is an ingredient required for our survival we will most likely end up not surviving either unless some drastic changes are made in the very near future.

## Welcome to the Sunschinus State?

Maika Woodmansee

IDH 4007 Journal Entry #1 January 19,2001

Our first fieldtrip in the new semester lead us back to Anhinga Trail. It was much more crowded in the dry season, with wildlife as well as tourists. The animals need water, and the people get to watch them. A recent cold snap had killed many of the exotic cichlid fish, and numerous birds were enjoying the

unexpected feast. Afterwards, we went to the Hole-in-the-Doughnut, where an exotic of another kind can be found, and it is not nearly as easily killed as the cichlids.

Brazilian-pepper (Schinus terebinthifolius), which is also known as Florida-holly even though it is neither from Florida nor a holly, grows there in abundance. This shrub or tree is one of the worst exotic pests that outcompete the native flora. It is a member of the Anacardiaceae family, which makes it a relative of poison ivy and poisonwood. The plant grows up to 13m tall and usually becomes a tangled mass with multiple trunks and branches that crisscross each other. The leaves are pinnate with 3 to 11 leaflets; their margins are sometimes toothed. Although clusters of white flowers can be observed year-round, the most intense flowering season is from September to November, and around Christmas time the shrub usually displays copious amounts of bright red berries.

The plant originally came from the coast of tropical Brazil. There, in addition to growing naturally, it is cultivated as an ornamental, a shade tree, or as a trimmed hedge. Its wood is used in construction or for stakes and posts, and twigs are made into toothpicks. A resinous extract from the bark is used to preserve fishing lines and nets, and decoctions from crushed leaves or bark are taken to relieve ailments from bronchitis to rheumatism.

Contrary to all these medicinal uses stand the facts that many people report respiratory problems when Brazilian-pepper is in bloom, and that its sap or prolonged contact with the wood can cause severe itching, rashes, or even lesions. In Florida, some domestic animals develop severe colicks after eating leaves or fruits, and while robins are crucial in spreading the seeds by eating the berries, several other bird species can die from eating too many of the fruits.

Because it is so widespread here, I had always assumed Brazilian-pepper has been growing in our area for quite some time. However, quite the opposite is the case. The first seeds were given to the USDA by plant explorer Walter T. Swingle in 1898, a mere hundred years ago! The plant was deemed to be well suited as an ornamental, and some seeds or seedlings were given to the Plant Introduction Station in Miami to be further distributed.

While the local people were not too eager about the new plant, plant lover Dr. George Stone made Brazilian-pepper popular along the west coast in the late 1920's. As late as 1944, Dr. Henry Nehrling wrote in Volume I of My Garden in Florida: [Stone] distributed these seedlings freely among his friends and plant lovers, and many were planted out along the city streets. While strolling along one of these thoroughfares the writer was struck by the unique beauty of a fine specimen in full fruit. He collected quite a number of the berries, from which all the specimens in his Naples garden have sprung ... It ought to be in every garden in Florida (qtd. in Morton, 1978, p. 354).

Mr. Nehrling certainly got his wish granted, although it is questionable whether he would actually be happy about it today. Not only did the plant lovers notice that Brazilian-pepper rather quickly outgrows its allotted space and turns into a dense tangle, it has been established that it emits chemicals that inhibit the growth of other plants (Mahendra et al. 1995). Combined with this comes an adaptability that has made the plant present in many habitats in South and Central Florida. On a global scale, it has spread to other parts of Central and South America, the Bahamas, the West Indies, North and South Africa, southern Asia, Mediterranean Europe, and several US states (Langeland & Craddock Burks 1998, p. 55).

The Hole-In-The-Doughnut project is one of the largest attempts by an agency to remove this invasive species. The "Hole" itself was an agricultural area before the Everglades National Park (ENP) was established. Since fertilization and rock plowing had increased the nutrient contents of the fields, they became highly suitable to exotic pest plant invasion while native plants, which prefer lower nutrient levels, would no longer grow there. After the park take-over the fields were left fallow, and within a few decades a dense Brazilian-pepper thicket had developed. Any native plants that "ventured" into it faced some stiff competition for sunlight and stood very little chance to reclaim the land.

This was a major concern for park biologists since such a large area represented an enormous seed source to further spread the Brazilian-pepper into nearby surroundings. Through a few studies, it was established that the best way to eradicate the plants is to remove them and the soil in which they grow,

because even when the plant is killed, the seeds remaining in the soil are certain to sprout right back. Thus, the shrubs are first felled and mulched by machines, then the soil is piled into large mounds, and finally the rock is scraped. This bare rock is then left to itself, and almost miraculously the native flora returns on its own. I was delighted to see how much variety there was in a plot that had been covered by a closed canopy of Brazilian-pepper only seven months ago, and now not a single Schinus plant could be found.

While this method seems to work, it is quite intrusive, and I don't know whether it can be utilized in all habitats. However, while doing research for this paper, I also came across a website that describes a wasp species called Megastigmus transvaalensis, which feeds on the drupes of Brazilian-pepper. The insect probably came to Florida about ten years ago from Reunion or Mauritius via France in Brazilian-pepper fruits sold as spices in exotic food stores. So far, the berries have been found to be its only host in Florida, and the wasp effectively destroys between one and three quarters of the fruits so they can no longer germinate.

Although change is an integral part of Nature, our interference has already grossly distorted it from its original form. I strongly doubt that Brazilian-pepper would be in all the places it can be found if it were not for our worldwide trade. While this plant might have its benefits and uses, I personally prefer the diverse habitats we have not tried to improve or decorate yet. Thus I hope that some of our well-meaning efforts will actually preserve what is left of these areas.

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#### The Resurgence of Life: A Day in the Book of Genesis

Timothy Knapp IDH 4007 Spring Semester 2001

We did many different things in the last Everglades excursion. We went back to Anhinga Trail to see it in its dry season. We heard Everglades Park officials and employees talk to us about employment and volunteer opportunities in the park. We saw some old missile storage facilities that were constructed during the era of the Cuban missile crisis. We also met Dr. Mike Norland, the man in charge of the Hole in the Donut Restoration Project. Later, when I was able to absorb all that I had experienced that day, I felt as if I had witnesses the cycle of life -- Genesis or some small frame of evolution before my eyes.

The "Hole in the Donut" is a project intended to eradicate the Brazilian pepper tree from an area of the Everglades where it has choked out the natural habitat. The Brazilian pepper tree, although very beautiful and aromatic, has thrived too well in the area, and threatens the natural vegetation of the marl prairie. The Brazilian pepper is not native to the Everglades and I am told was probably introduced by birds or humans to the area. The Brazilian pepper trees are remove by destroying them and a few inches of topsoil leaving the bare surface of the Everglades substrat and the limestone. Now with the limestone exposed and some soil remaining, the natural forces of the environment may impregnate and retake these once dense and overrun plots of earth. The engineers are reclaiming the land to the southeast first so that the natural South Florida winds will aide in the germination of native vegetation and prevent return of the pepper tree. Alligator holes have conspicuously been left behind so as to recreate the natural deeper water areas of the marl plains that surround them.

Standing there on top of the raw dregs of the Everglades, I felt as if I was seeing into its naked soul. I felt uncomfortable seeing it this way, especially here in the absolute "coeur" of the Everglades National Park. It was completely absent of life; striped and unclothed before me. Given all that I learned about the Everglades up until now, seeing it peeled and uncovered was awkwark. To the south and east of me were the marl prairie in its natural state, to the north and west were the walls of Brazilian pepper trees, about 12 feet high. I was standing on the front line, where the battle was being waged. It was man against nature for the better of nature. I was standing on fragile soil. This will be a slow war as the workers can only work in the dry season. It will take about ten years to eradicate the pepper tree, it will take longer for the natural habitat to return.

In the past when we went into the marl prairies, I walked and realized that I was a visitor. I knew very little about it so I proceeded with caution, trying not to miss anything. The Everglades always seemed bigger and more grand than me. It was a force to be reckoned with. There is a big difference between the sight of large earth movers on the outskirts of the Everglades, and the sight of them deep in deep in her sanctuary.

Of course, the object of the project is to give back the natural process of the Everglades. So the cause is good. The state of apparent extinction was only remedied in seeing the former plots that had been successfully reconciled just one year earlier. There was hope that this apparent "destruction" of nature would actually allow an exiled habitat to return. The first site of the earth movers was reminisce of destruction efforts in order to construct large buildings or parking lots.

The irony that I have witnessed is the destruction of a landscape in order to save it; man against nature to protect her. We are saving her from rape and leaving her alone to heal in her own way. We are paying big money contractors to bring their big toys to an overgrown sandbox and destroy all sign of life. This time however the ending will not be reconstruction of large symbols of civilization. Man will not look out on

his work afterwards and smile at his ability to create, he will be content at his ability to free and restore a natural habitat. The finished product closer resembles the return of life after a nuclear fallout. Like the book of Genesis, life seems to come from nowhere. I could have been there during that phase of evolution when life first buds out of dry, vast earth. Dr. Norland played a godlike role in the effort. His superior knowledge of the environment coupled with his ability to "move mountains" made him the perfect man for the job. He is no doubt rewarded generously for his abilities. He is a deconstruction expert who has been given the unique opportunity to give something back to the earth. Hurrah for the educated man!

Similarly, the resurgence of life at Anhinga Trail seemed to resemble a sort of Genesis. The abundance of wildlife resembled a painting in a way that I often imagined the earth long before man -- or during creation if one may. The difference this time was noticeable the moment we drove into the parking lot ... more tourists. The last time we went to Anhinga, there was much more water and vegetation, but far less wildlife. At the very beginning of the trail, where the first time we marveled at a Strangler fig, we hardly even noticed it in the presence of the alligators, a multitude of birds, fish, turtles, and ...oh yeah, the absence of mosquitoes. We formerly relied on the use of binoculars in order to catch a glimpse of the wild. This time, they were hardly necessary as the gators were hanging out only feet from the trail. Everywhere we looked there were sounds and signs of life. Even the sky was dotted with layers of birds. It is easy to comprehend the association to my Genesis theme.

The change of seasons in south Florida bears an affinity to the rebirth in northern states during the spring. Rightfully so since some of the species seen in the Everglades this time of year are tourists too. This is the first time that I have actually witnessed the migration effects, or the change of season effects on south Florida's wildlife. I know it all too well in my native Ohio and Michigan. This time I was able to see where birds go when they migrate and go south for the winter. Some end up here in the Everglades with us. Too bad they can't take more of the mosquitoes with them when they return.

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## The Everglades National Park



#### on a Bicycle has Made Me a More Complete Person

Jeanette Piotrowski
IDH 4007
Journal Entry #3
Spring Semester 2001

Last spring when we were handed our fourth year course options this everglades program appealed to me for more than one uneducated reason. First I thought cool, school every other Friday that will get me out of work for at least two semesters. Then I thought there could be some advantages to this program, I could finally see this enormous swampland with man-eating alligators and ferocious Florida Panthers. But what I ended up finding was something completely different.

Although at times I do admit to moaning and groaning over journals and books, I have found a world I did not think existed. A peaceful and serene ecosystem that is as fragile as the human body, only miles away from the growing metropolis I call home. This has changed my perspective on many issues and has ultimately made me a more complete student. And sure I don't mind riding a bike all day as opposed to working behind a large desk with dim lighting.

It is sad to say that before this course I was not very interested in any environmental issues. Sure I liked nature enough to want to keep it around and I did and do contribute to the humane society, but to be supporter of any particular cause I was not. If you asked me when is earth day or what is wrong with our environment I would logically spew words that personified the problem: pollution, the green house effect, over population, trash. Now these same words mean different things to me, they are not only the problem but also are a part of the solution.

A large contributor to my new mindset is this course. I never thought signing up for field trips to the everglades would change my life in such a way. Actually it is a rarity to walk away from a course with such ambiance, not since my high school English AP class have two professors touched my life on such a personal level. Truthfully riding a bike or canoeing or sloughs slogging have all contributed to this invaluable experience, because I would in no way feel this way without those hands on adventures. As to tell you that many of my fondest college memories have been formed these last two semesters. But in all honestly this could never have happened without the two people who loved the everglades enough to want to share their Fridays teaching a group of rowdy and at times unenthusiastic students. So what started out as a reflection on how this course has ultimately made me a more complete member of our community has turned into a thank you for all your time and patience. You both have added priceless ideals and countless memories to my life.

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#### Thank You and Happy Birthday

Tina Marie Prahl IDH 4007 Journal Entry #3 March 07, 2001

I acquired a tattoo on my 20th birthday. Let us suffice it to say that it was not a planned event. However, the permanent marking that I gained is a tribal symbol that has been significant to me for years. It's essential meaning is to take strength from your past and move into your future (profound, I know, and I wasn't even sober!). Nevertheless, these were the thoughts I had as I sat down to write this final journal entry of the Everglades class experience.

This class has taught me a lot in the way of concrete knowledge; that is, facts, figures, flora and fauna. But there has been so much more empirical knowledge gained which I find to be the most relevant to my reflection here. Has this class changed me? For sure, and in so many ways. It has certainly broadened my educational horizons, as far as honors education is concerned. Not only that, but it has given me the opportunity to travel to Washington D.C. and share my love of this class with other honors students. It has made me a better informed and aware citizen, not only of the South Florida area, but of this country that values its natural wonders (to an extent, but I'll leave the politics out of this one). One can only gain such an appreciation through direct and interactive contact, such as this class has had with the Everglades. I have gained a whole new handful of friends, not only in my classmates but in the instructors as well. It is a kinship based on the experiences we have shared together as a group, as well as personally, during the past two semesters. And to top it off, I finally met a nice guy who happens to be from my home state and who also happens to be one of the law enforcement rangers in Everglades National Park (if you want more details on that one, you'll have to ask!).

So where does one go from here? Having gained this knowledge and shared these experiences, what does an honors graduate do with them? Certainly we have shown through class that the tragedy of the Everglades is not a simple problem, nor does it have a simple solution. My ranger friend tells me of daily garbage dumpings and other types of violations within the park that represent only a small portion of the obstacles in the way of the Everglades survival. It appears to me, therefore, that education and communication of the Everglades as a unique and "fragile as glass" ecosystem are key starting points, on both a small and large-scale basis. I am reminded of David McCally's three-part plan for restoration for the Everglades, one of those points being the expulsion of the "river of grass" metaphor. This certainly ties in with proper communication of what exactly the Everglades are and/or will be.

The class title "The Everglades: from beginning to end?" has taken on a whole new meaning from the start of the class back in September to now, at its completion. It has gone from an abstract idea to an informed entity, which is what one hopes a class will do with its material. So, like any life experience, you take it for what it's worth and derive strength and substance and knowledge from it. To Professors Machonis and Graham, thank you for changing my life, and changing the way I see myself and the world around me. It has been a life-altering, if not mind-altering, experience being a part of this seminar. I now move forward with these sentiments and the strength that proper knowledge brings.

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Tina:Thank You & Happy Birthday

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#### ENDANGERED SPECIES OF THE EVERGLADES

- American Crocodile
- Atlantic Ridley Turtle
- · Atlantic Hawksbill Turtle
- Atlantic Leatherback Turtle
- · Green Turtle
- Cape Sable Seaside Sparrow
- Red Cockaded Woodpecker
- Snail Kite
- Wood Stork
- Florida Panther
- Key Largo Wood Rat
- Key Largo Cotton Mouse
- West Indian Manatee
- Garber's Spurge
- Schaus Swallowtail Butterfly

# HOW YOU CAN HELP SAVE OUR EVERGLADES!

- Inform yourself on the status of exotic plants in your area and don't use them in your garden. http://www.fnps.org/dade
- Learn about endangered species and inform the proper authorities of any unauthorized hunting or dealing. http://www.nps.gov/ever/eco
- Volunteer at your local national park. http://nps.gov/ever/jobs
- CONSERVE WATER
- Support environmental friendly legislation.

# IF YOU WOULD LIKE TO VOLUNTEER WITH ENP RESTORATION:

South Florida Restoration Task Force Office of Executive Director C/O FIU, OE 148 Miami FL. 33199 305-348-1662 www.sfrestore.org

#### EVERGLADES RESTORATION



#### EVERGLADES QUICK STATS

- The original Everglades were roughly 4 million acres; they are now a mere 1.5 million.
- Over 25 endangered species depend on the wetlands.
- Wading bird rookeries have declined by 93%
- South Florida's population is expected to grow from 5 million to 12 million in the next 20-25 years.

Provided by Florida International University Created by Tina Marie Pratt & Jeanette Piotrowski

#### A CENTURY OF CHANGE

Since the beginning of the 20 Century the Everglades have gone through three major phases: drainage, flood control, and comprehensive water management.

#### DRAINAGE

1904-1928

Attempts to turn the Everglades into productive farmland resulted in mass sales of land and false ideals, all blinded by the hopes of prosperity.

#### FLOOD CONTROL

1928-1948

Destructive hurricanes promoted a reevaluation of Everglades water management. US Army Corps of Engineers proposes a plan to implement a series of canals that will dispose of millions of gallons of fresh water daily.

## COMPREHENSIVE WATER MANAGEMENT

1948-Present

Creation of Central and South Florida Flood Control District in an effort to centralize authority and understand the physical realities of the Everglades.

#### <u>RESTORATION</u> EFFORTS

Former President Bill Clinton passed a bill that would finance the restoration over the next 30 years. The act provides 50/50 cost sharing of \$7.8 billion dollars between the federal government and the state of Florida.

## KEY ELEMENTS OF THE RESTORATION ARE:

- Removal of 240 miles of canals and levees in an attempt of restore the natural sheet flow of water.
- 61,000 acres have been added to the ENP and 48,000 more will be acquired in an effort to reduce nutrient runoff.
- 90,000 acres have been cleared of Melaleuca trees.
- The first installment of \$1.7 billion dollars will pay for 11 projects and 4 pilot programs.
- Some projects currently underway are:
   Hole in the Donut
   Kissimmee River Restoration
   Everglades Forever Act
   East Everglades-Melaleuca Removal
   Taylor Slough-Sheet Flow Restoration
   Public Education Florida
   Bay-Water Quality Restoration

#### EXOTIC INVASIVES OF SOUTH FLORIDA

South Florida has become an ideal habitat for many exotic plant species but some species are considered to be invasive exotics that harm the natural balance of the ecosystem, especially in the Everglades.

#### THREE HARMFUL SPECIES:

- Brazilian Pepper or Florida Holly:
   A bushy scrub with small red berries that overtakes native species enabling any new growth. Restoration efforts are now underway to eliminate this species from the Everglades National Park, Hole in the Donut Project.
- Melaleuca Tree:
   Tall trees with flaky bark and white flowers.
   They are fast growing and fire resistant making it very difficult to eliminate. They were first planted in an effort to dry out the Everglades due to their unique water absorbing quality. The East Everglades Project is especially designed to clear the eastern edge of the Everglades of Melaleuca.
- Australian Pine:

Tall pines that release chemicals into the air preventing any other species to grow in its surroundings.

IF YOU WOULD LIKE TO LEARN MORE ABOUT THE EVERGLADES VISIT FLORIDA INTERNATIONAL UNIVERSITY'S DIGITAL LIBRARY http://everglades.fiu.edu

## Gator Holes: A Refuge in Time of Need?

by Antonio A Ugando Jr and Kenia Dominguez

Gator holes are a common habitat often found within the everglades, particularly in the fresh water marshes. They serve as a feeding place for the alligator, and also as a refuge place for many other species during the dry season. Since alligators are reptiles, they need to regulate their body temperature and keep their skin moist, and gator holes help them achieve this. Alligators look for solution holes in the bedrock in order to create their "niche". These solution holes are created by the interaction of acid minfall and plant acids with limestone. This interaction occurs specifically between limestone and carbonic acid. As a result, the limestone dissolves and calcium bicarbonate mud is produced as a byproduct. Once an alligator finds a solution hole, they then excavate it, and thus deepen it with their feet and snout They remove the vegetation, and move the mud towards the edges which gives rise to new vegetation

Among the most common vegetation found in these gator holes are the willows, surrounding the edges, and some spatterdocks in the deeper parts, with the center of the holes mostly free of vegetation. Many species benefit from these holes; alligators are not the only ones. Gator holes also serve as a trap for other species that become an easy prey in this relatively small habitat







Plants such as spatterdocks, willows, saw grass, and cattail, usually benefit from the existence of gator holes. They can grow better in the wet environment, which also protects them from the free that occur during the dry season.







Areas that surround gator holes become extremely dry during the dry season. All that is visible sometimes is dead algae and a very dry surface. This demonstrates how critical gator holes are to the survival of other species, particularly aquatic species.





Fish are often the biggest losers in this habitat — serving as food for birds and alligators. But fish are also winners, since the larger species, like the spotted gar, benefit by feeding on the smaller ones.



Alligators benefit from feeding on other species within their "hiche", while other species benefit from having a wet place to live. Luckily for gator hole tenants, alligators only feed once a week



Birds such as great blue heroms, great egrets, and others, also benefit from this kind of habitat, since they feed on the fish that have no other place to go and are now an easy target. Not everything is favorable for the birds; alligators can eventually eat them, and their production of offspring can be affected by the lack of fish to feed on.



# Hoyos de lagartos: Un refugio en tiempo de necesidad

por Antonio A. Ugando Jr y Kenia Dominguez

Estos hoyos o buecos son el bigar habitual donde encontramos a los lagartos en las zonas conocidas como Everglades Estos luecos son el lugar que utilizan para cazar sus presas y constituyen un lugar de refugio para muchas otras especies durante la temporada de seca. Como es conocido, los lagartos son reptiles y como tales ellos necesitan regular la temperatura de sus cuerpos y mantener la piel himeda, lo cual logram en estos hoyos. Los lagartos buscam los hoyos para solucionar sus necesidades, convirtiendo estos en su nicho. Estos hoyos son creados por la interacción de la lluvia ácida y los ácidos de las plantas con la arcilla. Esta interacción ocurre específicamente entre la arcilla y el ácido carbónico. Como resultado, la arcilla acaba por disolverse y se produce bicarbonato de calcio como subproducto. Cuando los lagartos encuentran uno de estos hoyos excavan utilizando las garras y hocico para profundizarlo. Ellos remueven la profundizarlo. vegetación existente y mueven el fango hacia los bordes facilitando así el surgimiento de la mieva vegetación

Entre la vegetación mas comúnmente encontrada en estos hoyos están las plantas o bejucos en los bordes y algunos linios de agua en las partes profundas, con el centro del Inueco mayormente libre de vegetación. No solamente los lagartos simo muchas otras especies se benefician de estos hoyos. Estos lugares también sirven como trampa para otros anumales que se convierten en una presa fácil







Plantas tales como los lirios de agua, bejucos y el rabo de gato usualmente se benefician con la existencia de estos luecos. Este tipo de plantas crece mejor en el ambiente luimedo que a su vez le sirve de protección contra los fuegos durante las temporadas más secas.



Las áreas que rodean estos linecos se convierten en áreas extremadamente secas en tiempos de sequía. En ocasiones, solo se encuentran algas secas sobre una superfície reseca. Esto dennuestra la importancia que tienen estos linecos para la supervivencia de otras especies.









La excepción son los peces los cuales suven como alimento para los pájaros y lagartos, sunque también dentro de los propios peces, pueden haber vencedores ya que los más grandes se comen a los pequeños.



Los lagartos se benefician alimentándose de otras especies dentro de su nicho mientras que otros animales se benefician teniendo un lugar húmedo donde vivir. Para suarte de estos otros animales los lagartos solo se alimentanuna vez por semana



Aves como el Gran Heron azul también se benefician de este tipo de hábitat ya que se alimentan de los peces que no tienen otro bugar a donde ir y se convierten en presa fácil de estas aves. Los lagartos pueden comerse también las aves y su reproducción puede verse afectada por la escasez de peces para alimentarse.

