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### Urban Sprawl and the Ecosystem of Florida

The urbanization and urban sprawl in the State of Florida may eventually engulf the majority of sensitive natural ecological habitats. Many predictions and models regarding the future and possible effects of man's intrusion into an ever-increasing larger portion of the outwardly appearing undisturbed areas surrounding the already populated and inhabited cities have been speculated and created. Since the realization that man has a net negative effect on his immediate environment through roads and the reduction of large tracts of open land into non ecologically balancing edifices, studies have been performed, articles have been written, and documentaries have been filmed. Yet, these media may have had no real affect until there is a collapse of the ecological systems in which these indices of sprawl are enumerated, and cause an unmistakable change in thought.

It is only in the late months that there has been a media frenzy drawn upon from the information which has been available and viable for more than two decades. Scientists and educated persons from all walks of life have been observing, collecting evidence, and collating this evidence. Having been shunned and not taken seriously for so long it appears as though a realization of sorts has begun to emerge from the consumption madness. The question which arises from this apparent realization is this: Why now? Each time there is a nearing vote in the United States of America, many persons will bring forth the ideas and concerns of those who are

in the professions of environmental protection. Most of these concerns are not publically long lived after the votes have been counted, however.

" In 1971 a local resident wrote a book in which he asserted that the steephead ravines are the original Garden of Eden..." (Mohlenbrock). These ravines are archetypical Florida habitat near Apalachicola. The amount of research material and official studies penned by many various official and non official entities throughout Florida, and of all of the states of the Union is overwhelming and often outdated and not current. The areas which have already affected human consumption and impeded the growth are what are noticed and addressed first, not by choice, but because of complaints.

The Water Issue: "Thousands of acres of lakes and wetlands are drying up as the demand for water increases for Florida's growing population." (Leisner, Word). The range of the water shortage problem is vast, and not confined to a single region. Information on the geological makeup of Florida reveals the karst or limestone filter layer which *is* Florida. This layer of porous rock is a huge natural water treatment plant which provides water to all of the residents through springs and wells.

To begin to describe the importance of water is akin to asking what if the sun stopped shining tomorrow. So unequivocally important is water to the agriculture and prosperity of tourism in Florida today. As is known, there is a biological hierarchy in the system of life as is known. There must be water as the solvent of life for any life to form or thrive. It is the all encompassing media in which all biological processes occur. "It (water) produces bountiful harvests of oranges, grapefruit, berries and a medley of winter vegetables." (Leisner & Word) Nowhere within the research is found how water is wasted, or used inappropriately, without

disregard for the consequences. There is no mention of the vast number of lawns, the numerous golf courses, or the wasteful toilettes.

Lakes are drying up. There are persons who spent quite a bit of money for lake front Property, which is now more like a desert. Perhaps stopping waste of water will bring in an era of new water engineering development, and a change in water use habits. As for the reason for the exploded water use, only the more numerous population, which increased the land use per capita accordingly degrading the status of the water use problem complex.

The Habitat Issue: "Urban sprawl continues to destroy Florida's natural habitats and farmland at an accelerated pace " *Sprawl in Florida*. The amount of energy and money which is required to demolish the homes of natural animals compared with the amount required to rehabilitate these once they have been gleaned of all use by those who wish to use the land without due respect is not logical. Creative manipulation could hide the non apparent change and loss until a point is reached when a want will not be appeased in the blink of an eye, being then the cause of a massive and costly inquiry.

The information available on the subject is extremely vast. The loss of habitat may continue as long as crime and other factors drive families from the cities' central areas into quieter suburbs where the proverbial American dream can be realized, causing in turn more sprawl. "Because each American demands so much more energy and food and so many more raw materials than the average global citizen, the collective impact of grazing, plowing, timber harvesting, draining and bulldozing is enormous " (Peters & Noss) Roads divide habitats and render them inactive and inaccessible.

"Native Fauna in the state (FL) are suffering beneath the heels, wheels, asphalt and outboard motors of the dominant mammal - homo sapiens" *Sprawl in Florida*. Larger animals may suffer more population damage and may be more affected than smaller animals owing to their large range and travel capabilities. As sprawl and growth take in the range of these animals, encroachment and extinction are the only two routes which man has actually paved.

Recently the Everglades have come into view of the eye of the authoritative figures and become a topic of debate. The wetlands habitat of South Florida is changing rapidly where humans have taken land for plantation crops, especially sugar cane. According to an article entitled "America's Endangered Ecosystems" in *Defenders*, "More than half of Florida's wetlands have been lost to drainage and development including more than 65 percent of the 3,900 square mile Kissimmee-Okeechobee-Everglades system." Waterfowl and plant habitat has been choked out by human-induced growth of formerly minority species caused by over fertilization. The Everglades is water to South Florida, and therefore, deserves the same factor of importance. The wildlife and plant life are an added resource included with the region.

The Animal Issue: "Urban Sprawl is Threatening Some of the Nation's Most Endangered Wildlife" (Nickens). The list of "68 species" which are threatened or endangered in Florida is long. Nature and evolution have adapted many animals to small confined areas where they are in symbiosis with the other organism around them. If man removes a key variable of the life cycle of an animal, then it is likely that the animals will fail to survive. Humans recognize of an animal to exist and perpetuate themselves, but usually at the leisure of man. All humans may have to sacrifice wants for the good of the animal kingdom.

The Key deer, the wood stork, the bald eagle, sea turtles, all of these species are

facing the challenge of competing for space with humans. Other than reducing living space for animals, they are also indiscriminately killed. "Road-kills are a major source of mortality for a wide variety of herpetofauna,..."(Shwiff, et al.).

It will be left to see whether there will be a renaissance of conservation study in the coming years, as studies require time to publish. Many of the available articles on the subjects of urban sprawl and growth were published more than ten years ago, and I believe that if there were more up-to-date data, that the problem may be even worse than had been prognosticated. When one looks around and notes observations from year to year, it is apparent at certain times, that cycles and patterns have changed in Florida. It would be advantageous to speak with older native Floridians, to ask what is different, and to obtain the observational comparisons of this group of persons. The tangible facts are that ponds and lakes are drying up, more land is used each year, and more animals are displaced or killed with newcomers.

The scientists all predict the trend toward continual land use will increase all of the associated complex problems. "As the state's complex natural systems crumble under the weight of an ever-increasing population many Floridians have come to realize that the tropical paradise they sought is slipping away." (McManus, Brown)

#### Works Cited

Kolankiewicz, Leon, and Roy Beck. "Sprawl in Florida." Sprawl City. 29 Oct. 2000. Floridians for a Sustainable Population. 22 Oct. 2007

<<http://www.sprawlcity.org/studyFL/index.html>>.

Leisner, Pat, and Ron Word. "Polluting Paradise: Florida's Looking High and Dry." News 23 Aug. 1994: 2a.

McManus, R., and M. Braun. "Florida." Sierra Mar. 1992: 68.

Mohlenbrock, Robert H. "Gardens of Eden." Natural History Nov. 1997: 73.

Nickens, T. Edward. "Paved Over and Pushed Out." Natioal Wildlife 01 Sept. 2001: 36-45.

Peters, Robert L., and Reed F. Noss. "America's Endangered Ecosystems." Defenders of Wildlife (1995): 16-27.

Shwiff, Stephanie A., Henry T. Smith, and Et Al . "Bioeconomic Anaylsis of Herpetofauna Road-Kills in a Florida State Park." Ecological Economics 64 (2007): 181-185.