

Six billion one hundred million humans now inhabit the globe. The United Nations estimates the human race to reach possibly 10 billion in population by 2050.

*How much of an impact or ecological footprint each individual leaves per capita (considering that there is less than five acres of productive land and water available per person worldwide for sustainable living), depends on whether that individual is from an industrial nation, which is between approximately 15 and 30 acres of impact, or a developing country, which is between approximately two and six acres of impact.*

*It has been calculated that we are exceeding the Earth's regenerated capacity, as human kind now uses one third more resources (National Geographic).*

*This paper will explore one dimension in which mankind is taking individual responsibility to conserve some of the Earth's precious natural resources. Environmental education of local areas throughout the world is an avenue sought through ecotourism by local environmentalists to entice people to understand and subsequently care enough about one's local natural environment to join in the efforts and play a role, to whatever degree, in the phantasmagoric dream of conservation.*

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*To Claude who introduced me to my deep love for the South  
Florida environment and who taught me everything I know about  
birds*

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## ACKNOWLEDGEMENTS

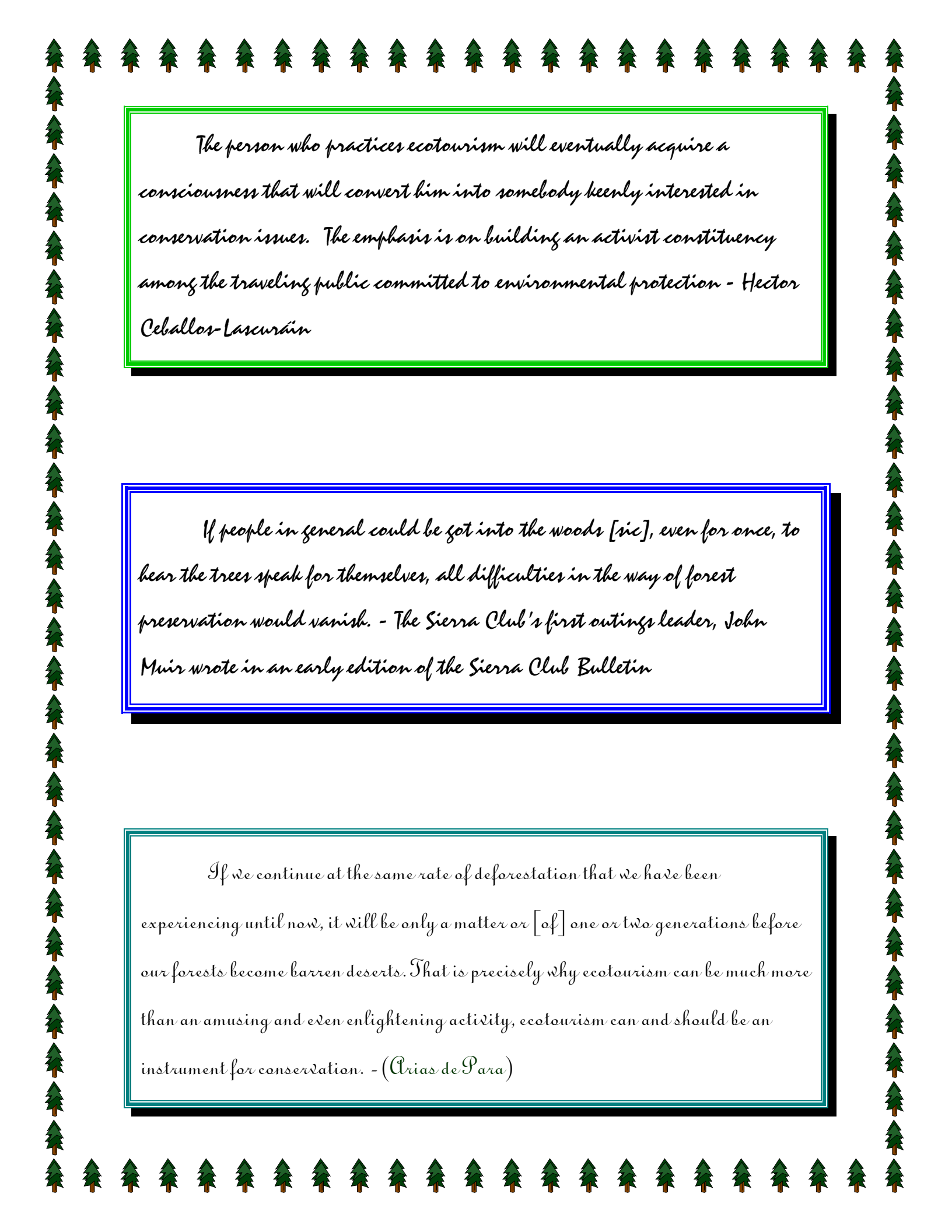
After several months of research and interviews, I would like to give a special thank you to those who took so much time out of their very busy schedules to talk with and assist me in my endeavor to pass on the word about how ecotourism can have a profound effect on conservation. These people have deeply inspired me in my efforts to do whatever I can to preserve my tiny, but unique corner of the world, South Florida. All went far beyond the call of duty. Their dedication to conservation should be a model to us all.

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*The person who practices ecotourism will eventually acquire a consciousness that will convert him into somebody keenly interested in conservation issues. The emphasis is on building an activist constituency among the traveling public committed to environmental protection - Hector Ceballos-Lascurain*

*If people in general could be got into the woods [sic], even for once, to hear the trees speak for themselves, all difficulties in the way of forest preservation would vanish. - The Sierra Club's first outings leader, John Muir wrote in an early edition of the Sierra Club Bulletin*

*If we continue at the same rate of deforestation that we have been experiencing until now, it will be only a matter of [of] one or two generations before our forests become barren deserts. That is precisely why ecotourism can be much more than an amusing and even enlightening activity, ecotourism can and should be an instrument for conservation. - (Arias de Para)*

## INTRODUCTION

Inhabitants of the Earth can be divided into two categories: Environmentalists<sup>1</sup> and non-environmentalists. Today's challenge for the Environmentalists is to convert all others for the purpose of natural conservation. One cannot accomplish this without understanding how the transformation takes place. All Environmentalists were once non-environmentalists. What happens to cause the crossover is not recondite. Some experience with or information received about the natural environment creates a genuine concern to conserve the Earth out of respect for future generations. Environmentalists have adopted the attitude of an old Amish proverb that states that we have not inherited the land from our fathers, but that we are borrowing it from our children.

That experience or information, no matter what form it comes in, is now the knowledge that will empower the individual to play an important role as an Environmentalist in the conservation of our world. No form of conservation is exiguous. It takes everyone to contribute in any way to attain the goal of conservation. It is irrelevant how the Environmentalist became educated. One does not have to attain a degree in Environmental Science to care about the natural world. Education can come in many forms; one T.V. commercial, one political campaign, one naïve day of volunteering at a nature canter, one's love for a particular animal or special nature place. Environmental education often happens by "accident." One does not necessarily seek out that education. It often falls into one's lap.

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<sup>1</sup> For purposes of this paper "Environmentalists" will be capitalized, because of my strong belief of the importance of such an individual.

We should take optimal advantage of this subtle means of education to convert the non-environmentalist. Ecotourism has the ability to make the transition fun, entertaining, and healthy. It is through environmental education that we can conserve natural areas and ecotourism is the perfect tool for education. Through the use of ecotourism, communities can receive an education about their surrounding natural environment, which will empower individuals to make educated, conscious decisions when voting and partaking in environmental issues, resulting in conservation.

## **DEFINITION AND HISTORY**

Defining ecotourism was, without a doubt, the most challenging job of writing this paper. With the tremendous volume of literature on the topic, not one source could offer a basic, general overall description without lengthy explications of why defining this “concept” is so difficult and without giving numerous examples of other authors’ definitions. Although there is much argument about when the term was developed, there is some agreement on two theories. First, that Mexican environmental sociologist Hector Ceballos-Lascuráin “was the first to coin the phrase in the early 1980’s” (qtd. Fennell, 30). He offers this definition:

Traveling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations (both past and present) found in these areas (Fennell, 30).

The second with some agreement is not as recent a theory. Hetzer used the term in a work he wrote in 1965. His definition is much more complicated and scientific and includes these four pillars:

(1) Minimum environmental impact; (2) minimum impact on – and maximum respect for – host cultures; (3) maximum economic benefits to the host country’s grassroots; and (4) maximum ‘recreational’ satisfaction to participating tourists (Fennell, 31).

Hetzer claims that the term took shape due to the dissatisfaction of the political and societal mishandling of development. Some have gone so far as to make a case that although ecotourism is bulked in with three other separate types of tourism - wildlife, nature, and adventure, it should remain in a category of its own.

Finally, a more updated “official” definition adopted by The Ecotourism Society in 1991 defines ecotourism this way: “Responsible travel to natural areas that conserves the environment and improves the well-being of local people” (qtd. Honey 6). Notice that the common factor in all of these definitions is that there is no mention of the distance required to travel. According to Webster’s Ninth New Collegiate Dictionary, the word “travel” means to go on a trip or tour, to move or undergo transmission from one place to another – again no mention of distance.

For purposes of this paper, the definition offered by Ceballos-Lascuráin will be adopted. With this definition in mind, ecotourism has been around as far back as recent man can remember and probably much, much longer. Plate 1.1 shows a travel brochure for Hawaii dated 1903 quoting Mark Twain, who is famous for his writings about nature. Plate 1.2 depicts a young couple canoeing along a lake mountainside on a travel brochure

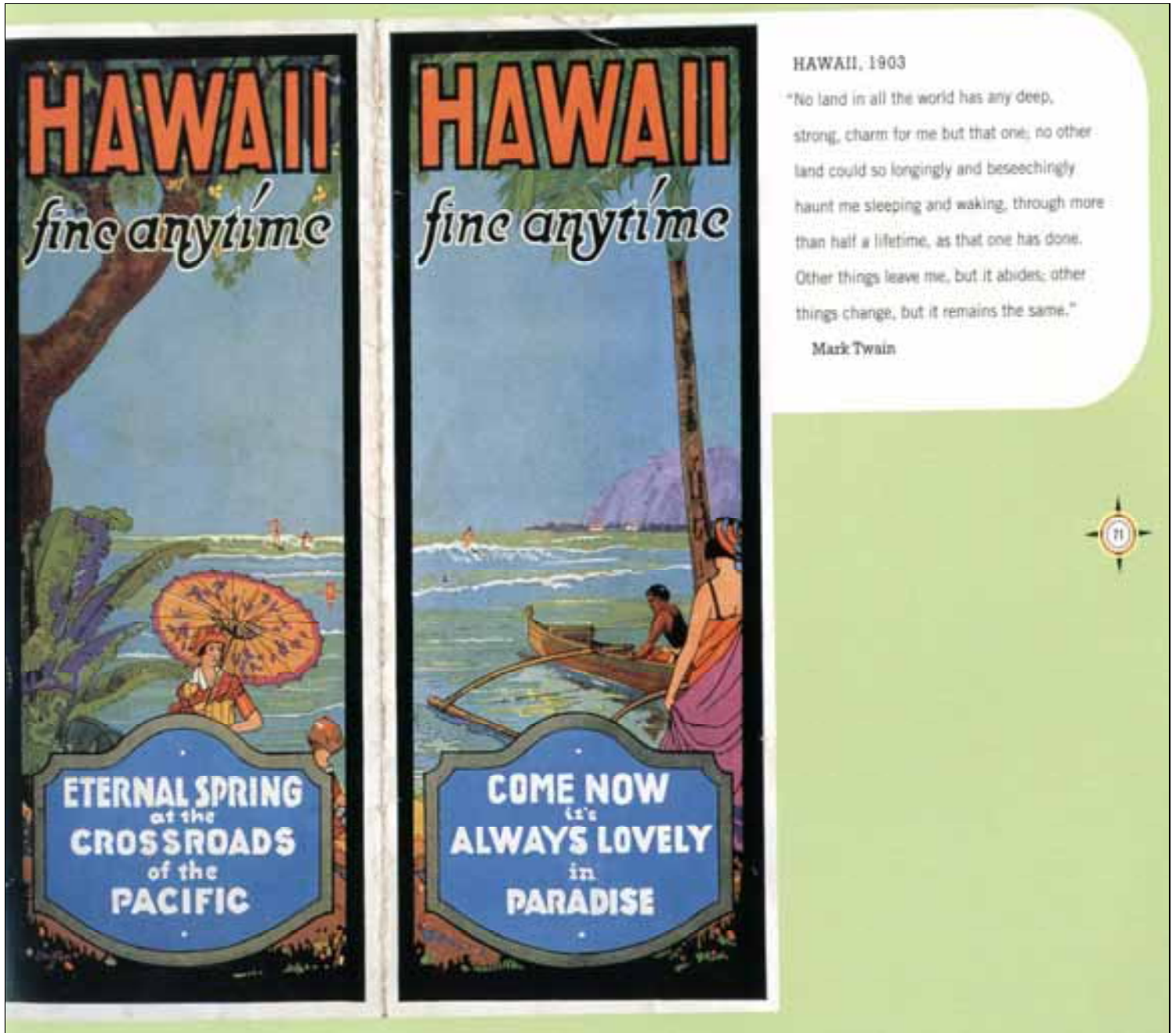


Plate 1.1 Hawaii Travel Brochure

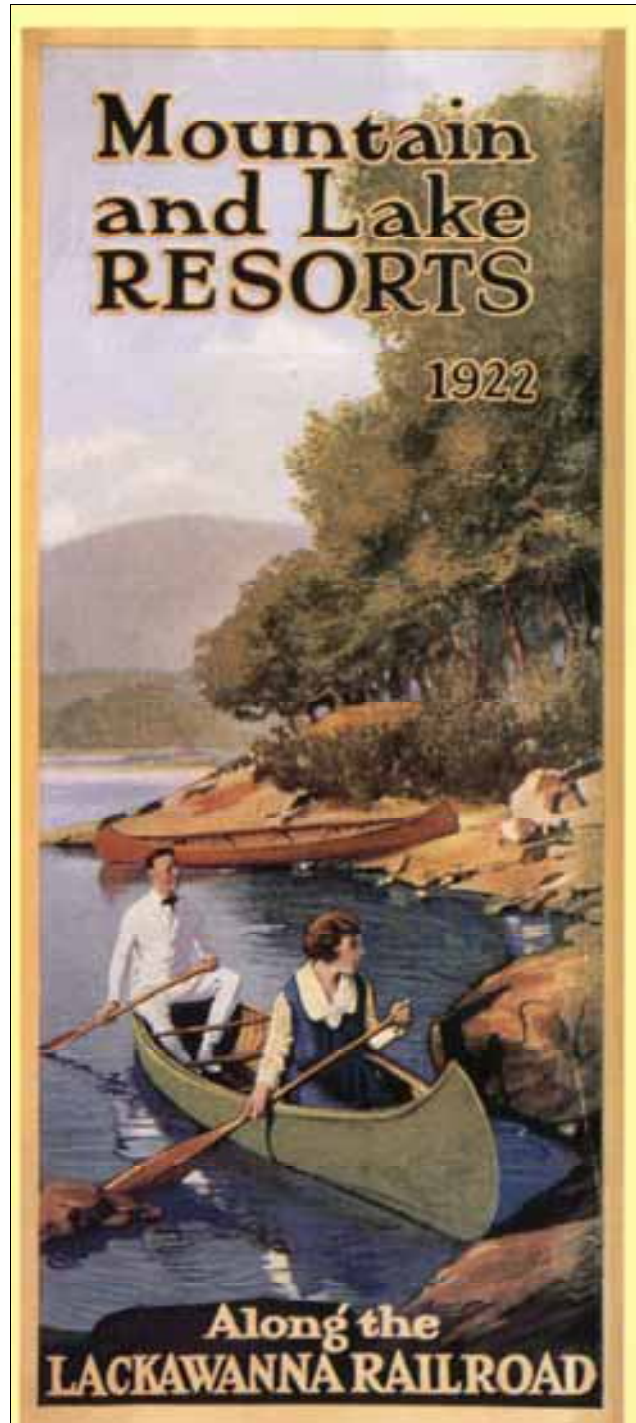
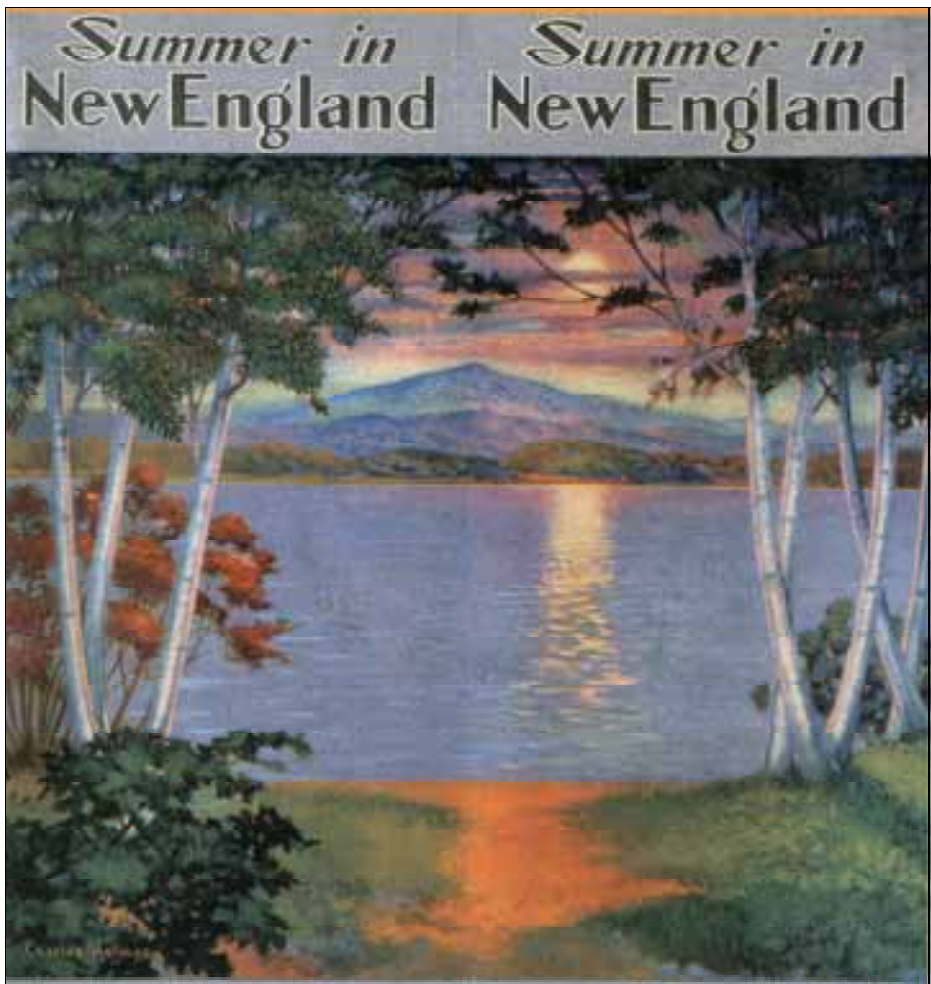


Plate 1.2 Mountain and Lake Resorts



**NEW ENGLAND TOURS, 1918**

"NATURE was in her most versatile mood when she planned New England. No like area in all the world holds so much of charm for the motor tourist. Thousands of miles of broad, white roads take him through country roads of rare scenic beauty, over the majestic Green and White Mountains; along the rocky shores of Maine, through the passive wonderment of the Naugatuck Valley and along the shores of Lake Champlain."

**Plate 1.3** New England Tours

from 1922 promoting mountain and lake resorts. Plate 1.3 captures an alluring, picturesque New England sunset with its colorful trees, lake, and mountains in a 1918 travel brochure. It appears that the tourism departments were promoting these destinations by luring visitors with their enticing natural elements.

It is evident from these three examples that ecotourism is not an inchoate idea. It has been around for many years prior to the term being assigned to the activity. A good explanation may be that ecotourism may have taken its roots through nature tourism when the Sierra Club organized a program called Sierra Club Outing in 1901. The outings involved groups of over 100 people or so, formed to hike the backcountry wilderness of the Sierra Nevada. The general concept itself dates back to ancient Greeks and Romans. The elite would explore exotic locations in Europe and the Mediterranean. Even in Africa, as far back as the mid-19th century, there is evidence of wildlife tourism.

With the onset of modern travel, tourists were given opportunities they had never before imagined. This enabled them to explore beyond their local areas and led to an explosion of nature tourism. By this point, for the most part, ecotourism involved visiting natural areas that were environmentally protected by some set of rules and/or ordinances under the watchful eye of government agencies, conservation and scientific organizations, or private industry. The United State's National Park System reported a rise in visitors of 20 percent between 1980 and 1990, reaching a total of 250 million visitors (Honey, 10). This heavy traffic however, had been taking its toll on the U.S.

parks<sup>2</sup>, resulting in tourists' consideration to traveling abroad. Visitors to Galápagos National Park, for example, rose from 6,800 in 1972 to 62,000 in 1996 (Honey, 104).

During the late 1970's and mid-1980's this particular practice of "nature" tourism evolved into what today we consider ecotourism. The major difference is that this form of tourism is more socially responsible taking into consideration the environmental concepts of responsibility, sustainability, conservation, and low-impact tourism. This is where much of the debate of universally defining ecotourism lies; however, it is also the common thread. Most seem to agree that ecotourism is some form of nature tourism with the consideration of preserving the area visited.

## WHY ECOTOURISM?

So, what is this arcane fascination with mankind and nature? A. Deming, in her book *The edges of the civilized world: tourism and the hunger for wild places* (1996) believes that "people have an insatiable hunger to see more and



more of the planet and to get closer and closer to its natural attractions" (qtd. Fennell, 12). Milgrath, in his book *Envisioning a Sustainable Society* (1989) argues that we have an innate desire to preserve our own individual lives and, because we realize that

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<sup>2</sup> The degradation of large National Parks had begun to become very apparent, as large numbers of visitors had no rules to follow, leaving behind litter, not following designated paths, feeding animals, etc.

preservation of human life is not possible, we pass that idea onto preserving society. R. Nash, in his book *Wilderness and The American Mind* (1982), suggests that there is a spiritual and physiological need filled through this type of tourism. Curiosity is simply human nature. For the same reasons that man has explored space for several decades, he finds himself wanting to explore and understand the earth he walks on in an effort to improve the quality of life, not necessarily for only himself, but for the generations to follow.

It is not a coincidence that this particular type of travel has exploded into such a craze during the past two decades that the degradation of those places visited has become an enormous concern. With the workaholic life style developed in the early eighties by the Baby Boomer generation came lots of stress. After the whirlwind of large corporations with all of its nugatory middle mangers, came “down sizing” or “flattening” of the organizational chart. This seemingly ineluctable trend put hundreds of thousands out of work after they had developed such an exuberant lifestyle, which they could no longer afford to maintain. It was this trend that put life into a more down-to-earth, back to basics perspective for this generation and the one to follow. Escaping now meant a nature trip closer to home instead of a lavish trip to Europe or Disney World.

This trend has resulted in the realization of what we have in our own backyards and that we cannot continue to ignore the negative impact that development and visiting has placed on natural areas. We have accepted that conservation is the key to ensure that our grandchildren are afforded the same experiences that we have for whatever ways they enrich our lives. Ecotourism is the perfect tool for environmental education.

This conservation idea is a sound ringing through out the world. Although some have eluded that ecotourism may be a trend or a fad, many believe that ecotourism can be used as a tool to conserve and protect from ourselves what Mother Nature has so munificently bestowed upon us. A person does not dedicate his life to a fad, as you will see in the following two case studies of ecotourism. The first is one example of probably thousands around the world of how one person can make a difference through his belief that we must preserve natural areas for others to enjoy and will examine an international ecotourism center. The second will investigate a local community development and how it uses a form of ecotourism offering several educational programs to educate it's residents on the natural environment surrounding their homes in order to entice them to use the greenways that surround the development.

# AN INTERNATIONAL CASE STUDY

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## Canopy Tower ecolodge & nature observatory

Soberanía National Park  
Panama



Our mission is to bring people to a comfortable closeness with the rich Panamanian rainforest, and to share our enthusiasm for the birds and wildlife, so they will join with us in working to conserve the spectacular diversity of Nature.

The Canopy Tower, as it is known today, has a long diverse and significant history including the defense of the Panama Canal. In 1965, the United States Air Force built the 50-foot tower to hold a powerful radar system and then in 1969, the Federal Aviation Administration (FAA) began using the site that the tower stood on for air traffic



control and the Panama Canal Commission (PCC), who used the tower for communications. In 1979, the FAA terminated its own permit and deactivated its function; however, the PCC continued operations at the location until 1995. In

1988, the radar tower took on a new role when it was reactivated as “Site One” in the Caribbean Basin Radar Network. Once again, the United States Government took over operations of the tower as part of the network of radar stations to detect airplanes suspected of smuggling drugs from South America. In June of 1995, the U.S. Government closed up shop and the tower then remained vacant.

The vacancy, however was not for long. In November of 1996, the Panamanian Government took hold of the site that sits on Semaphore Hill in the middle of approximately thirty-five acres of the neo-tropical rainforest within Soberanía National Park and turned it into an observation center. Just thirty minutes outside of Panama City, the tower rises at an altitude of nine hundred feet above sea level, allowing the aesthetically pleasing view of the skyline, as well as that of the Pacific entrance to the Panama Canal. After the United States Air Force turned the site back over into Panamanian Government hands in 1995, Panamanian businessman Raúl Arias de Para

signed a concession contract with Autoridad de la Region Interoceanica<sup>3</sup>, and INRENARE (the National Park Authority) on September 16th, 1997, which allowed him to transform the radar tower into an ecotourist center. In January of 2000, after two years of legal and political obstacles, the dream realized by Arias de Para turned the once abandoned and dilapidated radar tower into a breathtaking work of art where “one’s bedroom is at treetop level, no more than 40 feet from the birds (and) in the cool Panamanian dawn you can feel Panamá’s great rainforest awakening around you (while) Blue Cotingas and Green Shrike-Vireos, birds normally glimpsed high in the tops of trees, perch right outside your Canopy Tower room.” Welcome to Canopy Tower Ecolodge and Nature Observatory, a center for the observation and study of the neo-tropical rain forest.

Arias de Para did not have as tough a time as one may have envisioned while collaborating with authorities in trying to convince them of his idea of a running private business in a national park. Although Arias de Para states that, “It was it was known that INRENARE did not look with kind eyes towards private concerns going in national parks,” the National Park Authority accepted Arias de Para’s argument that he was only transforming an old military installation into a center for the observation and study of the neo-tropical rain forest to make it suitable for visitors interested in observing the rain forest and its inhabitants, and that in order to complete his project, he would not have to cut even one single tree or use a single bulldozer. Arias de Para also argued “ecotourism, if done correctly, is a sustainable activity that can provide employment without damaging the natural resource.” The National Park Authority had little choice but to give Raúl the

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<sup>3</sup> The agency of the Panamanian Government in charge of allocating the real estate being transferred to Panama by the United States in compliance with the Carter Torrijos Treaties.

green light when the Environmental Impact Study concluded that there were insignificant negative environmental impacts. Arias de Para pointed out that, “In fact, the project will have significant positive impacts, namely: our presence in the area will help to control poachers and the project itself will educate visitors about the need to support conservation efforts world wide.”

Arias de Para was no stranger to the ecotourism concept. In 1994, he and his brothers inherited land from their father in El Valle de Anton, which had been in the family for over eighty years. This land contained a salubrious waterfall once described as “enchanted” and “magical,” but like many alluring natural sites, insouciant visitors, after years of visiting, degraded and extirpated the waterfall area. Arias de Para describes it this way:

Unfortunately, the disorderly tide of visitors with little ecological awareness was ruining the area, throwing thrash and waste matter right and left. Then they started felling 100-year old (trees) and uprooting native plants, giant ferns and delicate orchids. Soon thereafter, they took away all the golden frogs to die of melancholy hundred [sic] of miles away. Lastly, the luxuriant tropical vegetation died, and the sound of water bubbling amid the rocks, the voice of the North Wind and the songs of the birds were displaced by the blaring noise of portable sound equipment. Then peace disappeared and a saddened Mother Nature became silent.

In honor of their father, they undertook the project to bring the waterfall back to life. How ironic that it would be with the idea that they would still share it with everyone. Arias de Para considered it selfish to restore it and not share what he considered land that belongs to future generations, only this time he would take into consideration the concept of “sustained development, an economic activity that does not



deplete the resource it feeds on.” He charged a fee, set some rules, hired help, and used those fees to maintain the area. He boasts that the townspeople are now avid defenders of the waterfall, “...because they have discovered that they can earn a living out of the area as long as they keep it clean and in its natural state.”

It was from this experience that he knew what positive impacts ecotourism would have on the tower area. He spared no expense in developing a place that offers “the best tropical birding you can have, and you should experience it at least once in your life.” Because of the Tower’s prime location, one has the rare opportunity to view three hundred and eighty species of birds and other wildlife directly at eye level of the forest canopy never seen from the ground. The five levels offer different views of the forest. The dome is the centerpiece of the top floor and is used as the main dining area, which is completely surrounded by panoramic windows. The Canopy Tower is designed so that you never even have to leave the comfort of your own bedroom to see exotic and elusive birds! However, should you choose to, there are several other roads, hills, and trails that one may venture onto in the nearby area.

Arias de Para, though never schooled on ecotourism, realized that it is the key in conserving our precious natural areas. He writes:

If we continue at the same rate of deforestation that we have been experiencing until now, it will be only a matter of [of] one or two generations before our forests become barren deserts. That is precisely why ecotourism can be much more than an amusing and even enlightening activity, ecotourism can and should be an instrument for conservation (Arias de Para).

# **A LOCAL CASE STUDY**

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**Jupiter, Florida  
Palm Beach County**

A Walkable Community Development Designed  
To Integrate Natural Florida Ecosystems With  
Human Structures Through Greenways

Taking a look closer to home of an example of how ecotourism can be used as a tool for conservation is a local development in Palm Beach County located in Jupiter, called Abacoa. A two thousand fifty-five-acre master-planned community, Abacoa was built as a sustainable, mixed-use community that combines living, learning, and recreating space for people with habitat for wildlife. The community is built on land that is home to a keystone species of three hundred and sixty endangered gopher tortoises, for which sixty acres have been set aside as a preserve to provide habitat for the tortoise and other wildlife.

Interspersed throughout the walkable community are greenways, which encompass approximately two hundred and sixty acres. The greenways link reserves through corridors of natural communities much like a highway connects cities.



Greenways are an effective means of reconnecting subsystems resulting from urban sprawl back to the original ecosystem. They allow a positive interaction between plants, animals, and humans, while serving as excellent educational avenues to arouse modern man's interest in nature. Abacoa uses these greenways to provide its residents the opportunity to enjoy and study the natural Florida ecosystems without having to leave their own backyards. The greenways allow Abacoa to connect the natural environment to provide its residents with "opportunities and experiences unprecedented among South Florida Developments."

The Abacoa Partnership For Community (APC) is a community support organization designed to develop a “true” community. The organization offers a wide range of services with the “intent to promote a civil society and a responsible citizenry.” “The best way to preserve your natural environment is by creating -- in the community -- an understanding of the role that nature plays in the growth of South Florida” (Abacoa). One wide area of service that the APC offers is education, which is broken down into four categories: lifelong learning, environmental stewardship, community building, and health and wellness. Environmental stewardship has courses that focus on:

- Greenways education
- Species tracking
- Water quality and conservation
- Interface between humans and nature
- Research programs

APC has several programs to offer its residents, which are all open to the public. “Get To Know Your Greenways” is a free education program for middle school students and adults. The program begins with a slide show by Patrick Painter, who helped develop the Abacoa Greenways, followed by an interpretative walk by Joann Davis, Community Planner for 1000 Friends of Florida. “Abacoa Greenways Project” is a guided monthly tour on the community greenways. Each meeting covers a different subject; animals, plants, winter visitors – local and migratory birds, photography, wildflowers, etc. “Shooting Abacoa” is a creative arts club that focuses on photography and creative writing formed in conjunction with DiVosta Homes that meets on the fourth Saturday of each month. Ed Maietta, photographer and poet, provides instruction. Participants’ works are exhibited in neighborhood community centers and published in the Abacoa Community News.

“Earth Force Summer Camp” is sponsored in conjunction with Pine Jog Environmental Education Center and the College of Education at Florida Atlantic University. The goal of the summer camp is to promote environmental stewardship, while developing citizens who are able to address public policy issues. Middle-school students from the northern section of Palm Beach County participate. Teachers from Palm Beach County Schools, interns from Pine Jog, and students from Jupiter Community High School’s Academy for Environmental Studies serve as instructors. The students study the ecosystems of their region using Abacoa as their live laboratory. Activities include satellite mapping, the study of exotics, designing habitats attractive to birds, and constructing a virtual tour of the greenways.

The campers have also taken several field trips to places such as the water treatment facility for the Town of Jupiter to learn about reverse osmosis and water treatment, Loxahatchee Nature Center’s Water Catchment Area run by the City of West Palm Beach for a canoe trip to study the snail kite, and to John D. MacArthur State Park for a mangrove estuary walk led by a representative of the Florida Game and Fish Conservation Commission. In addition to these programs, Abacoa/Pine Jog Summer Camp also offers photography lessons for advanced campers.

As a result of the Earth Force Summer Camp program, Jupiter Middle School student Denetra Ghent and fellow campers, as part of the camp’s required civic project, went door-to-door to ask residents if they were interested in recycling. After compiling a list of twenty-five residents who showed interest in the program, they personally delivered all twenty-five recycling bins to the Limestone Creek residents (The Palm

Beach Post, date unknown). In another example of the students taking on such a concern for the greenways, they wrote to Governor Bush urging him to support the state's Greenways program. One student, Derek Kramer, age twelve, wrote, '...we want our county to connect all the green areas. If you would like to tour our Abacoa greenways, I can give you a tour. I would like to get some more plants and ponds for the snakes. We want more greenways' (qtd. in Abacoa).

## THE GREENWAYS SURVEY

Mary Beth Hartman, a junior at Florida Atlantic University's Abacoa campus, conducted a survey during the spring 2001 semester on the use of the Abacoa Greenways. The goal of the survey was to measure use of the greenways, as well as the greenways' level of "affect."<sup>4</sup> Several questions were included in the survey. Ninety percent of the respondents answered yes to having heard of the greenways. Of those 90%, 56% have used the greenways. From that sample, 24% were frequent users. Eighty-two percent of those who have not yet used the greenways plan to do so in the future. Eighty-six percent of the users and non-users felt that educational materials would be helpful in aiding them to get the most out of using the greenways system.

Eighty-two percent felt that the Abacoa Greenway System was very important to them. [It is important to note here that non-user advocates are also essential to greenway support.] Hartman quotes C. Smallwood, *The American City & County*, writing,

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<sup>4</sup> This term is used in Public Opinion and American Politics to refer to the "warm and fuzzy" feeling that something gives to an individual.

advocates believe ‘...open spaces promote community pride, provide an escape from stress, ...and provide refuge and safe travel for wildlife.’

According to Ed Maietta, who in addition to his role as photographic instructor and poet for the Creative Arts Club is the Executive Director for APC, the educational programs run by APC have a very positive effect on the residents. He has personally requested that residents take along a plastic bag to pick up trash during their leisurely walks on the greenways, and since has seen a positive result. Maietta has plans for future programs. One program that he is currently working on in conjunction with Publix, which he plans to call “GreenWalk,” is a nature hike and clean up on the approximately five miles of trails. Publix has volunteered to supply the plastic bags for the garbage and water for the participants.

These educational programs are getting residents of all ages involved in their community by teaching them about their natural surroundings through interactive activities. These are activities that they would otherwise engage in through other avenues or not at all if these particular programs were not offered. Abacoa is taking these interests and placing an “environmental twist” on them resulting in the participants’ education of their natural environment. Although this form of environmental education is taking place in one’s back yard and immediate community surroundings, it is in its own way still a form of ecotourism by definition, without the need to travel very far. Abacoa is a model of community design, which many Florida developers are keeping a close eye on in relation to its success of weaving nature through neighborhoods. Much of that success depends on the community’s attitude toward the idea of directly involving them with their natural surroundings, and that success hinges upon the community’s

understanding and awareness of how vital our natural environment is to our living a salubrious life.

## RESIDENT INTERVIEWS

The following are Abacoa residents who were randomly selected as participants of the anonymous survey conducted by Mary Beth Hartman who were willing to be interviewed about Abacoa, not knowing what questions were going to be asked of them. The object was to understand the effect that the greenways have on their everyday personal life style.

**Mark Ciarfella** says that he considers himself an environmentalist in a “small” form. He states that he took time out of his busy schedule to take the survey, because he “wanted to assist in the greenways project, [because he] believes in the preserving of natural space to improve the quality of life.” Not being fully educated on the ever-changing definition of ecotourism, Ciarfella does, however believe that “ecotourism” must involve a tourist.

When he and his wife were looking to buy a new home, Ciarfella specifically chose Abacao because of the “natural setting and the greenways.” Ciarfella explains, “When I come home at night from work and I go in the pool overlooking the preserve, it gives me such a tranquil feeling. It improves my quality of life.” When asked if he felt more apt to getting involved in environmental issues, because of direct interaction with

nature while using the greenways, Ciarfella responded positively saying that he has since been appointed to the Planning & Zoning Committee in Jupiter, has become involved in the Town Council meetings, and wants to stay active in the fight to protect the natural ecosystems.

**James Lipsit**, a retiree from Pratt & Whitney, has lived in South Florida since 1963 and never before got involved with the environment until he moved to Abacoa two years ago. Lipsit recollects taking a familiarization tour led by a biologist on the greenways. On that tour, he says that he learned about environment and plant and animal life. Lipsit, prior to our interview had never before heard of the term ecotourism.

Lipsit's attraction to Abacoa was not necessarily greenways at first. He says that he moved to Abacoa, because he was a fan of Divosta homes and liked the idea of the front porch and garage in the back of the house and open community with diverse age groups. However, since his introduction to the greenways, Lipsit enjoys serene, peaceful walks with his grandchildren. Lipsit says, "I am proud to be a part of the history of the Abacoa idea," and he now "brags" about it to others.

Lipsit's interest in the environment began to take shape when he received an \$800 ad valorem tax bill. As he investigated what he was contributing \$800 per year to, and learned that part of the dollars went to funding the greenways, he became more interested in the greenways, and says that the result of that research "has tuned me in to [the environment in] this area."

**Dr. William Mech**, resident of Abocoa and Dean of Honors College at FAU on the Jupiter campus, specifically chose Abocoa four years ago because of the greenways. Dr. Mech is, of course, heavily involved in the environment and very active with APC as he participated in the Greenway Guides program in his role as Dean. Dr. Mech, when talking about the greenways, puts it beautifully as he states, “ It takes you away from civilization without having to get into the car a drive a long way.” This is the true essence of ecotourism.

Dr. Mech recently wrote an article for a Jupiter newspaper ([see Appendix](#)) in which he says he “thought back to [his] first impressions of the Jupiter area, one of the richest troves of environmentally related sites in the nation.” He goes on in the article, before listing fourteen day-trips and seven overnight trips, writing “within a drive of ten minutes to two hours we have wonderful parks, preserves, and research stations that people around the world regard as a travel destination.”

## Palm Beach County Environmental Organizations and Programs

There are numerous environmental organizations and programs in Palm Beach County dedicated to the education of its residents. The Audubon Society of the Everglades (ASE) has a very active local chapter in West Palm Beach and is an excellent tool for environmental education. In addition, to publishing a monthly newsletter, they



hold general meetings on the first Tuesday of every month. The public is always welcome. There are several ways in which members and non-members may participate. The ASE is continuously looking for

volunteers for everything from entering scientific data on spreadsheets, to partaking in the Annual Christmas Bird Count, to organizing field trips. Local and international educational field trips are offered throughout the

year. Educational activities such as reptile and amphibian walks, early-morning bird walks, butterfly and wildflower walks, swamp strolls in the Loxahatchee National Wildlife Refuge, and



several different live presentations on topics from fire ecology to visits from live animals are sponsored by ASE during the month.

The Sierra Club has a Florida Chapter, publishing [The Pelican](#) quarterly, as well as a local chapter called the Sierra Club Loxahatchee Group, representing four counties.

They publish the newsletter Turtle Tracks every two months, have an e-mail forum for members, and hold monthly meetings in West Palm Beach. Guest speakers are often the focus of the general meetings, speaking on local conservation issues, usually of a political nature. Educational outings are offered, some local, and some not so local.

The Blowing Rocks Preserve on Jupiter Island is run by The Nature Conservancy and publishes a semi-annual newsletter. The Preserve relies heavily on volunteers serving several different areas, including The Sea Turtle



Program, nursery/restoration, invasive plant removal, bird and butterfly counts, interpretive guides and trail builders, and even administrative assistance. The Preserve has an extensive Conservation Education Program, which operates from the Hawley Education Center. The Center displays changing exhibits of local naturalist artisans and offers programs in conjunction with the exhibits.

In addition to these types of environmental organizations are several nature centers through out the county. Okeehetee Nature Center, known as “the best kept secret in Palm Beach County,” is hidden away in the far back corner of Okeehetee Park on ninety acres of pine flatwoods with two and one-half miles of wandering trails passing through mature forests, small ponds, and marshes. The center is dedicated to promoting and developing an appreciation for the natural environment and has designed an extensive educational program to do so. Live animals, hands-on exhibits, self-guided walks, and naturalist programs are used in conjunction with indoor exhibits to aid in the

interpretation of the pine flatwoods, as well as interpretative signs along the trails and printed nature trail guide handouts with drawings depicting the plants, trees, and wildlife on the preserve along with tips for wildlife viewing. These are effective tools in the education of its visitors.

Several programs have been designed to provide its visitors with a unique opportunity to increase their appreciation and knowledge of South Florida ecosystems. Some of the major programs include school field trips, which are by far the most popular, keeping the Center booked for the entire school year. Group visits are also popular. The animal adoption program allows individuals to sponsor exhibit or educational animals kept at the Center. “Raptor Chapter” is a bird of prey program with animals native to Florida that are not releasable to the wild. The program is held at the Center, as well as off site as an outreach program. “Science for Seniors” is very popular and designed for adults fifty and over with a desire to learn more about the intriguing South Florida environment.



A new marine science program began this past summer. It is offered to Palm Beach County schools as a part of the educational curriculum. “These programs are designed to introduce students to the wonder of marine ecosystems, the processes functioning within them, and the marine organisms depending on them. Within these programs, students will consider the plight of our oceans, man’s connection with the ocean and his attempts to correct some of the problems, study the organisms living in the

ocean while looking at their sometime complex relationships, and much, much more” (qtd. New Marine Science Program).

Pine Jog Environmental Education Center is a one hundred and fifty-acre, privately funded environmental center. It is operated by the College of Education at Florida Atlantic University in southern Palm Beach County. The site is used primarily as an environmental education center for over a quarter million children and adults in Palm Beach County. The Center has school programs for first grade to high school, teacher education workshops, summer day camps, and special events.

The Loxahatchee Preserve Nature Center (LPNC) in north Palm Beach County is run by The City of West Palm Beach Utilities Department. The Center doubles as a classroom and conference room, and offers visitors the opportunity to experience the place where the area’s vital water supply replenishes itself as they stroll the boardwalk through the pristine swamp and marsh. The City has piloted an approach to surface water management by implementing water management innovations, while using water resources as an educational tool. Using this technique, The City looks forward to bringing about both a shift in public perception of natural resources, as well as a change in water usage patterns. The LPNC’s on-going public outreach programs encourage local schools and organizations to use the Center for hands-on environmental education and has an extensive volunteer program. “The City of West Palm Beach believes that an environmentally educated public is our best hope to sustain our natural resources and our quality of life. The LPNC offers an opportunity to develop an understanding of the impacts of human activities on natural systems and how these impacts can be minimized.”



**Plate 1.4** Palm Beach County, FL

These local educational organizations represent just a few examples of dedication to the belief that educating residents is the key to conservation. They certainly have come a long way since the publication of this travel brochure from 1925. Environmental organizations invest millions of dollars and thousands of volunteer hours per year to the theory that we can save our precious ecosystem if we take the time to teach our

neighbors about what we have living in our own back yards. It usually does not take much for people to become sincerely interested once they have been exposed to their natural environment. Environmental organizations must continue their sedulous work in educating local citizens through ecotourism for the future of our environment. Our grandchildren are counting on us.

## ECONOMICS

Financial statistics on the economic impact that ecotourism has in Palm Beach County has been difficult to acquire. Currently, there is no one place to reference such statistics. J. Charles Lehmann, Executive Director of the Palm Beach County Tourist Development Council says that the only way to get figures would be to survey the various eco businesses for their sales and number of visitors. What is known however, is that according to "The Environmental Yellow Pages of Florida," there are approximately 4000 environmental organizations/agencies, etc. that have a "presence" in South Florida. Also, according to Dr. Robert Barry of Palm Beach Community College's Environmental Institute, approximately thirty percent of Florida tourist visitation is those folks "interested in pursuing" nature-based tourism opportunities in Florida. With these kinds of figures, one can only imagine the amount of impact the ecotourism has in Palm Beach County.

Keep in mind that the task of measuring the financial impact would be difficult when it comes to situations as in the local case study, Abacoa. It seems virtually impossible to place a dollar amount on the impact that the greenways have on an individual's life. However, with its success hinging on other developers' decision to use Abacoa as a model for future projects, there would seem to be many financial benefits that developers stand to gain, as well as the local area's economy.

When taking into consideration the international case study, Canopy Tower Ecology & Nature Observatory, there are several ways that finances come into play – all positive. What was once an eyesore has been turned into something to marvel at, and because of that, tourists are pouring in to be educated and entertained while pumping big money into a poor economy, local people are employed, and the money is being used to care for an endangered neo-tropical rain forest. Answering the question of how does one place a dollar amount on saving the environment is one that all economists agree will probably never be answered. It may be worth billions of dollars to one person and totally worthless to another.

To help gain some sort of a prospective of financial impact, consider the following. The White House Conference on Tourism in October 1995 indicated the following with respect to the non-consumptive use of birds in the United States:

Number of participants	\$25 million
Retail Sales	\$5 billion
Wages and salaries	\$4 billion
Full and part-time jobs	191,000
Tax revenues:	
State sales	\$306 million
State income	\$74 million
Federal income	\$516 million
Total economic output	\$16 billion (Fennell, 48)

## CONCLUSION

As human kind is exceeding the Earth's regenerated capacity, we must take the issue of preservation very seriously if we want our grandchildren to see the plants and animals that we are currently so privileged to share this precious Earth with. Although there are so many major environmental issues that we as a world united in the cause for conservation are confronted with, we must consider the small efforts of each and every individual the most powerful vehicle en route to conserving our planet of life.

This paper has explored the idea of environmental education of local areas throughout the world as an avenue sought through ecotourism by local governments to entice people to understand, and subsequently care enough about one's local natural environment to join in the efforts and play a role, to whatever degree in conservation. It is through environmental education that we can conserve natural areas and ecotourism is the perfect tool for education. Through the use of ecotourism, communities can receive an education about their surrounding natural environment, which will empower individuals to make educated, conscious decisions when voting and partaking in environmental issues, resulting in conservation.

The idea of conservation is like a massive glacier. If we are to achieve the common desired outcome of breaking down the glacier and eventually melting it away, we must all pitch in with our own little hammer and chisel until the cumulative efforts bring us to our goal. The goal of conserving the world's natural environment may seem overwhelming, however it is an attainable goal if each individual plays a role in every day life. Ecotourism is the tool to melt the glacier of conservation.

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## **APPENDIX**

By: Dr. William Mech

We have seen in environmentally focused stories recently, that the melting of glaciers from the Andes in Peru to Antarctica portends a rise in sea level that is particularly disturbing to south Florida. A related effect will be the considerable change in plant and animal populations near the shore. The news also reports that the current drought, one of the most severe on record, not only jeopardizes many species but also affects our yards and farms. As dependent as we are on air conditioners, the power shortages in California have caught our attention in a way few other events have outside the recent presidential election.

I was struck by these observations in recent conversations when a colleague, Jim Wetterer, was planning to lead one of his regular study tours to a world-class environmental research station at La Selva, Costa Rica. I thought back to my first impressions of the Jupiter area, one of the richest troves of environmentally related sites in the nation.

Three years ago, Jim had prepared a list of environmental field trips. I have updated it with web site addresses and brief descriptions taken from these web sites. While we can easily continue to add to this list, fourteen of these are day-trips and seven are overnight trips that will easily keep family, friends and visitors occupied for a long time.

We can see that within a drive of 10 minutes to two hours we have wonderful parks, preserves, and research stations that people around the world regard as a travel destination. Here is that list.

## Environmental Sites near Jupiter

### Day trips

1. Florida Center for Environmental Studies, Palm Beach Gardens, 10 minutes.

[www.ces.fau.edu](http://www.ces.fau.edu).

The Florida Center for Environmental Studies represents the ten state universities and four major private universities. The center acts as a facilitator and coordinator of research and training related to the environment and as a locus for environmental information. Grounding its activities in the Florida sub-tropical environment, its mandate encompasses global tropical and sub-tropical environments especially the issues and problems of water dominated ecosystems.

2. Loxahatchee Preserve Nature Center, West Palm Beach, 689-3336, 15 minutes.

[wpb.org/utilities/naturecenter.htm](http://wpb.org/utilities/naturecenter.htm).

This relates to the need to improve water conservation efforts and to protect the quality of this natural resource as well. City staff and administrators have long recognized the intrinsic value of the Water Catchment Area as a source of drinking water, as a wetland with all its associated benefits, and as a wildlife habitat. The City considers it crucial to expose its residents and visitors to this natural area, in the hope of gaining public support for continued and expanded protection and enhancement.

3. Dreyer Park Zoo, West Palm Beach 533-0887, 40 minutes. Daily 9-5

Lectures on their activities - conservation, research, education.

4. Blowing Rocks Preserve, Hobe Sound, 744-6668, 20 minutes. Daily 9-5.

[www.tnc.org/infield/State/Florida/preserve/pp2.html](http://www.tnc.org/infield/State/Florida/preserve/pp2.html).

Run by the Nature Conservancy, Blowing Rocks Preserve is a magnificent barrier island sanctuary, sheltering four distinct plant communities. Its mile-long beach is one of the most productive sea turtle nesting sites on the Atlantic Coast. Through the "turtle watch" program, you can witness a loggerhead lay her eggs in the warm sand and return to the ocean. And in the winter, you may catch a glimpse of West Indian manatees feeding on seagrass.

5. Lion Country Safari, West Palm Beach 793-1084. 30 minutes.

[www.lioncountry safari.com](http://www.lioncountry safari.com)

America's first drive-through "cageless" zoo, Lion Country Safari has been a leader in conservation since 1967. It provides a habitat in which many threatened and endangered species live and reproduce.

6. Mounts Botanical Garden, West Palm Beach 233-1749, 40 minutes.

[www.flamuseums.org/fam/flamuseums/pages/317.htm](http://www.flamuseums.org/fam/flamuseums/pages/317.htm)

The Mounts Botanical Garden is dedicated to providing a place of beauty for all people to enjoy while learning about the value of plants and the preservation of the environment.

7. FAU Honors College, Jupiter, [www.honorscollege.edu](http://www.honorscollege.edu), 10 minutes. See also FAU, Boca Raton, Environmental Sciences Program, 1 hour.

[www.science.fau.edu/Environ.htm](http://www.science.fau.edu/Environ.htm).

8. Jupiter High School, Jupiter Environmental Research and Field Studies Academy.

[www.palmbeach.k12.fl.us/JupiterHS/html/jhs\\_frame\\_academy.html](http://www.palmbeach.k12.fl.us/JupiterHS/html/jhs_frame_academy.html)

JERFSA is a four year course of study designed to meet the needs of talented and motivated students who wish to pursue a rigorous academic curriculum with emphasis on environmental studies.

9. John D. MacArthur State Park, 10 minutes.

[www.dep.state.fl.us/parks/District\\_5/JohnDMacArthurBeach/](http://www.dep.state.fl.us/parks/District_5/JohnDMacArthurBeach/)

John D. MacArthur Beach State Park stands out as an "island in time." It preserves the natural heritage of subtropical coastal habitat that once covered southeast Florida. The park's 4,000 square foot Nature Center shown above, contains exhibits, displays and a video interpreting the barrier island's plant and animal communities. Programs are given to adult and school groups, as well as the general public, on a broad range of natural history subjects.

10. Jonathan Dickinson State Park, Hobe Sound, 25 minutes.

[www.dep.state.fl.us/parks/District\\_5/JonathanDickinson/](http://www.dep.state.fl.us/parks/District_5/JonathanDickinson/)

Close to 11,500 acres of land and river await the visitor to Jonathan Dickinson State Park. Teeming with wildlife, the park offers camping, canoeing, hiking and bicycling, picnicking, fresh and saltwater fishing and guided tours of the Loxahatchee River.

11. Hobe Sound National Wildlife Refuge, Hobe Sound, 25 minutes. [hobesound.fws.gov](http://hobesound.fws.gov)

The refuge offers saltwater fishing, boating, and birdwatching. Photography and hiking are also encouraged. Wildlife observation is best along the 0.4 mile Sand Pine Scrub Trail

and at the beach. The interpretive museum has exhibits and information. The museum is open Monday through Friday 9 a.m. - 11 a.m. and 1 p.m. - 3 p.m. The museum is closed on weekends. Refuge entry is only permitted at three designated entrances: Headquarters Area; Beach Area; and Peck Lake Area.

12. Arthur R. Marshall Loxahatchee National Wildlife Refuge, Boynton Beach 734-8303, 1 hour. [www.state.fl.us/gfc/viewing/sites/site85.html](http://www.state.fl.us/gfc/viewing/sites/site85.html)

A portion of the northern Everglades is preserved on this refuge. The Marsh trail takes visitors along dikes surrounding impoundments where water levels are manipulated seasonally to benefit wildlife. A boardwalk by the visitor center traverses a cypress swamp. For more adventurous souls, launch a canoe and paddle along a canoe trail that takes you into the refuge's marshy interior.

13. Marineline Center, Juno Beach, 627-8280, 15 minutes. [www.marinelife.org](http://www.marinelife.org)  
The Marineline Center is a non-profit education and conservation facility dedicated to the conservation and preservation of our marine environment through education, research and rehabilitation. They are located in Loggerhead Park, on the ocean.

14. Okeehetee Nature Center, West Palm Beach, 233-1400, [www.co.palm-beach.fl.us/parks/Okeehetee/nc\\_main.htm](http://www.co.palm-beach.fl.us/parks/Okeehetee/nc_main.htm)

Explore 90 acres of pine flatwoods at Okeehetee Nature Center tucked away in the back corner of Okeehetee Park. Two and a one half miles of trails wander through mature forest and past small ponds and marshes. A Trail for the Blind starts by our Butterfly Garden which surrounds the building. Exhibits inside the Nature Center building feature live animals, an interactive CD-Rom and other hands on displays. A Gift Shop overseen by the Friends of Okeehetee Nature Center offers many educational books and nature related toys for young and old. Marvel at our birds of prey, touch a live snake or prowl for owls during one of our many programs scheduled throughout the year for families, youth and adults.

#### Overnight trips

1. Riverwoods Field Laboratory, [riverwoods.ces.fau.edu](http://riverwoods.ces.fau.edu), 1.7 hours.

The Riverwoods Field Laboratory (RFL) is a facility jointly managed by the South Florida Water Management District (SFWMD) and the Florida Center for Environmental Studies (CES). Riverwoods' main mission is to support research and educational activities related to the restoration of the Kissimmee River and the greater Everglades watershed.

2. Archbold Biological Station, [www.archbold-station.org](http://www.archbold-station.org), 2 hours.

The station fosters long-term ecological research on native plants and animals and also provides environmental education for K-12 children.

3. MacArthur Agro-ecology Research Center, Lake Placid, [www.archbold-station.org/abs/maerc/maerc.htm](http://www.archbold-station.org/abs/maerc/maerc.htm), 2 hours.

The primary mission of MAERC is to conduct and stimulate long-term research on the relationships between cattle ranching, citrus production, and the native ecological systems of central and southern Florida.

4. Dry Tortugas National Park, [www.nps.gov/drto/](http://www.nps.gov/drto/), 8 hours

Almost 70 miles (112.9 km) west of Key West lies a cluster of seven islands, composed of coral reefs and sand, called the Dry Tortugas. Along with the surrounding shoals and waters, they make up Dry Tortugas National Park. The area is known for its famous bird and marine life, and its legends of pirates and sunken gold. Ft. Jefferson, the largest of the 19th century American coastal forts is a central feature.

5. Everglades National Park, [www.nps.gov/ever/](http://www.nps.gov/ever/), 4 hours.

Spanning the southern tip of the Florida peninsula and most of Florida Bay, Everglades National Park is the only subtropical preserve in North America. It contains both temperate and tropical plant communities, including sawgrass prairies, mangrove and cypress swamps, pinelands, and hardwood hammocks, as well as marine and estuarine environments. The park is known for its rich bird life, particularly large wading birds, such as the roseate spoonbill, wood stork, great blue heron and a variety of egrets. It is also the only place in the world where alligators and crocodiles exist side by side.

6. Big Cypress National Reserve, [www.nps.gov/bicy/](http://www.nps.gov/bicy/), 4 hours.

The 729,000 acre Big Cypress National Preserve was set aside in 1974 to ensure the preservation, conservation, and protection of the natural scenic, floral and faunal, and recreational values of the Big Cypress Watershed. The importance of this watershed to the Everglades National Park was a major consideration for its establishment. The name Big Cypress refers to the large size of this area. Vast expanses of cypress strands span this unique landscape.

7. Biscayne National Park, [www.nps.gov/bisc/](http://www.nps.gov/bisc/), 3 hours.

Turquoise waters, emerald islands and fish-bejeweled reefs make Biscayne National Park a paradise for wildlife-watching, snorkeling, diving, boating, fishing and other activities. Within the park boundaries are the longest stretch of mangrove forest left on Florida's east coast, the clear shallow waters of Biscayne Bay, over 40 of the northernmost Florida Keys, and a spectacular living coral reef. Superimposed on all of this natural beauty is evidence of 10,000 years of human history, including stories of native peoples, shipwrecks, pirates, pioneers, and Presidents.

The next time you find yourself with an unscheduled afternoon or weekend, I would encourage you to visit some of our environmental resources. They are close. They are very affordable—often free. Finally, they are an interesting way to bring to life the consequences these many news articles.