

The Importance of Education in Ecotourism Ventures
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Substantial Research Paper
American University
May 2010

Table of Contents

Introduction

Chapter 1: An Overview of the Development and Current State of Ecotourism

Chapter 2: Education and Ecotourism

Chapter 3: Rara Avis Case Study: Education within an Ecotourism Venture

Conclusion: Future of Ecotourism

References

Appendix: Costa Rica Map, Pre-Survey, Post-Survey

Introduction

Tourism is an ever growing industry around the world with many countries now dependent on the tourism industry within their country to continue to grow and develop. As a report put out by the World Economic Forum states, there was an increase in the number of international tourism receipts from US\$2.1 billion to US\$622.7 billion between 1950 and 2004. By 2006, the tourism sector accounted for 10.3 percent of world GDP. Furthermore, in 2006 there were 234 million jobs in the industry, making up 8.2 percent of total employment worldwide. (World Tourism Analysis 2007) The World Tourism Organization (UNWTO) has estimated that the industry has grown from 25 million international travelers in 1950 to over 800 million today. They expect that number to jump to 1.2 billion travelers by 2020. The question now for the industry is how to minimize the impact of all these travelers. Since the 1980s one solution has been offered: ecotourism. With its promises to not only preserve the environment but also offer opportunities that are unique both culturally but also within nature, it has become an avenue for much of the industry to look towards for the future of tourism.

Therefore, this paper will concentrate on ecotourism in the following three chapters. The first chapter will concentrate on the development of ecotourism as well as the ongoing discussion on various aspects within the ecotourism field. The second chapter will take a closer look at the emerging emphasis on the role of education within the ecotourism field. The third chapter will focus on a case study from Costa Rica at the Rara Avis ecolodge showcasing how education and ecotourism can work together to form a more environmentally conscious and better educated society. Finally, a call for more research to be done on the importance of education and also an emphasis that as the field continues to develop education must be included as a requirement for ecotourism ventures.

Chapter One: The Development of Ecotourism

Introduction

Since the writing of the Brundtland Report in 1987, sustainable development has become a goal that practitioners of development strive to meet. The difficulty is preserving the environment of today for future generations while also allowing for economic development to occur. One solution came about in late 1980s, ecotourism, which was based on traveling and learning about other environments and cultures while also helping with that area's economic development through the money paid for those experiences. In recent years ecotourism has come under fire, especially because of its lack of definition and guidelines about what opportunities are included as ecotourism and which are not.

Definition

The creation of the term ecotourism has been credited to the Mexican Consultant, Hector Ceballos-Lascuráin, in July of 1983. He stated that ecotourism “involves travelling to relatively undisturbed or uncontaminated natural areas with the specific object of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural aspects.” (Weaver 2005a: 19) David Weaver, a professor of sustainable tourism, has said that Ceballos went even further to say that ecotourism should be undertaken in remote areas with modest accommodations. This initial interpretation has led many to put mass tourism and ecotourism on opposite ends of the tourism spectrum.

The problem is that since 1988, while many people have presented definitions no definition can be agreed upon. For example one leader in the industry, Martha Honey, has defined ecotourism as: “travel to fragile, pristine, and usually protected areas that strives to be low impact and (often) small scale. It helps educate the traveler, provides funds for conservation,

directly benefits the economic development and political empowerment of local communities, and fosters respect for different cultures and for human rights.” (Honey 2008: 33) Another definition has been offered by David Fennell, a professor of ecotourism, “Ecotourism is a sustainable, non-invasive form of nature-based tourism that focuses primarily on learning about nature first-hand, and which is ethically managed to be low-impact, non-consumptive, and locally oriented (control, benefits, and scale). It typically occurs in natural areas, and should contribute to the conservation of such areas.” (Fennell 2007: 24) Both are good definitions and there is commonality in that they both believe that ecotourism should involve natural areas, a local focus, learning on the part of the tourist, and conservation. The two differences are that Honey believes a focus should also be given to the improvement of the locals while Fennell focuses on low impact and doesn’t mention the improvement of locals. So finally The International Ecotourism Society (TIES) offered a very simple but encompassing definition that ecotourism is, “responsible travel to natural areas that conserves the environment and improves the well being of people.” (Honey 2008: 6) In the end it seems that much of the industry may run on the definition offered by TIES but scholars continue to debate what components should be included.

Ecotourism Catches On

Until the last 50 years tourism was a small industry done on foot, horse, or by boat. Then the inventions of trains, cars, and planes made travel accessible to almost anyone, and mass tourism began. According to two authors, Fritsch and Johannsen, mass tourism grew even further because of backpackers, “where backpackers go, the masses almost inevitably follow.” They also quote Arthur Frommer who noted, “The vacation choices of penniless backpackers tend to become mainstream favorites in later years.” (Fritsch 2004: 85) Since ecotourism as mentioned

above focuses on those natural areas that are remote and often inaccessible, backpackers were the first tourists to showcase the industry to mainstream tourists. Combined with the growing demand, beginning in the 1980s, of field scientists doing more work on these remote areas, ecotourism became an industry. This is because small local operators sprang up to cater to these field scientists and backpackers. (Fritsch 2004: 86) The industry really took off when “affluent, sedentary (information workers) [began] searching for new vacation worlds to conquer.” (Fritsch 2004: 87) Many of these more affluent travelers started to discover animal viewing safaris, which became more accessible to more people through the cheaper airfare to many African locations. The two authors go on to say that two main motivations attract more affluent travelers to ecotourism: thrill of new experiences and curiosity. (Fritsch 2004: 92)

One of the best examples of the combination of field work, backpackers, and affluence leading to more ecotourists is the gorilla project in Uganda. The work of Diane Fossey on gorilla observation, led many backpackers to come see the gorillas or help with the observation, such as Amy Vedder and Bill Weber. As their work became published in magazines such as National Geographic more affluent travelers saw their chance to fulfill their desire of curiosity while also doing something quite thrilling. Therefore the World Wildlife Fund, African Wildlife Foundation, and other NGOs came together to create an ecotourism project that allowed 12 tourists at a time to visit groups of gorillas in their natural surroundings. This project has created over \$400,000 annually for the region.

The above project also shows that ecotourism has led to many NGOs being created, especially locally, or the creation of departments and projects within existing NGOs. Also, many international agencies have pushed for ecotourism to grow as a way for countries to develop economically, faster than they otherwise would. Honey quotes a study done in 2005,

“approximately \$9.4 billion currently is invested by some dozen major international donor agencies in tourism and tourism-related projects.” (Honey 2008: 19) These agencies include United Nations Development Project, Global Environmental Facility, World Bank, USAID, and the Inter-American Development Bank. “The international politics of debt and the international pursuit of pleasure have become tightly knotted together.” (Honey 2008: 18)

One reason there has been so much investment in the industry is because there has been sustainable growth in the tourism industry. This growth in the tourism sector has been showcased by the World Travel Organization (WTO). In 1950 there were only 25 million travelers who stayed over at a destination internationally. By 1987 that number had increased to 367 million travelers. In 2004, the number doubled to over 750 million travelers. The study goes on to state that the tourism industry contributes nearly \$3.5 trillion or 10 percent of global GDP. (Weaver 2005b: 2) Of this tourist traffic nearly 25% occurs from developed to developing countries due largely to the creation of ecotourism. Ceballos supports this global North to South travel, “tourist travel is still very much the privilege of people of the industrialized world...nevertheless, the shift in favored tourism destinations, indicates that international tourism could become a means of redistributing wealth from north to south.” (Honey 2008: 87)

All of this growth of tourism, NGOs, and donor agencies has led to a few major international conventions. In 1992, the International Union for the Conservation of Nature (IUCN) created a small Ecotourism Consultancy Program. In addition, the IUCN also issued a policy recommendation: “in developing greater cooperation between the tourism industry and protected areas the primary consideration must be the conservation of the natural environment and the quality of life of local communities.” (Honey 2008: 16) The consultancy program created in 1992 was expanded in 1996 to become the Task Force on Tourism and Protected Areas with a

stated goal of collecting more data on tourism within protected areas. In 2002, the United Nations proclaimed the Year of Ecotourism with a stated goal to: “generate greater awareness among public authorities, the private sector, the civil society, and consumers regarding ecotourism’s capacity to contribute to the conservation of the natural and cultural heritage in natural and rural areas, and the improvement of standards of living in those areas” (Gossling 2007: 87) Finally, in 2003 IUCN’s meeting featured many speakers and events on tourism even though it was not the theme of the meeting. One such event featured Nelson Mandela who described ecotourism: “as part of the solution for both sustainable management of protected areas and poverty reduction for surrounding rural communities.” (Honey 2008: 16)

The bottom line is that the international tourism market has moved toward a need for travel that offers opportunities within nature, protection of nature, but also helps local populations at the same time. This has been seen in surveys conducted of international tourists. One survey done by Condé Nast Traveler showed that more than 75 percent of readers deemed it important for hotels near impoverished areas to help local people obtain education, clean water, food, and health care. (Honey 2008: 97) A recent study done by Won Lee found that for the most part ecotourists did prefer to do business with environmentally responsible accommodations. Furthermore, a majority of ecotourists were willing to pay 10-20 Australian dollars a day more for environmentally sensitive accommodation. (Lee 2005: 554) This type of shift in the tourism industry has led to about 13% of tourists from the United States to be included under the umbrella of ecotourism. (Honey 2008: 76) All of this attention to ecotourism has put pressure on the industry to grow rapidly creating many problems which will be covered in the next section.

Problems with Ecotourism

Certification

The word ecotourism has gained a negative meaning within the last few years because of the many flaws people have begun to see. The first major problem is the lack of agreement on a definition for ecotourism. Many authors have argued that without a proper definition there can be no agreement on global guidelines or the creation of a certification process. Therefore, in lieu of a global certification process, many countries have created their own certification processes. One good example is Costa Rica. Certification for Sustainable Tourism (CST) has a system based on one to five green leaves. (Honey 2008: 89) The system was created by two officials at the Costa Rica Tourism Board (ICT) in the mid 1990s. One of the creators of the program stated that the goal of the program is to: “directly attack the practices of some businesses which operate as ‘green washers’ because it will offer reliable information about which businesses really make an effort to offer a sustainable tourism product and which don’t.” (Honey 2008: 203) The CST program addresses environmental, social, and community variables, not just in small scale operations but also large operations so that all of the ecotourism industry is held to the same requirements. CST conducts reviews of businesses based on 153 yes/no questions in four categories: physical/biological environment, hotel facilities, guest services, and socioeconomic environment. (Honey 2008: 204) The questions are not complicated, which allows for locals to conduct the interviews after minimal training. Instead of averaging the scores, the number of points is totaled for each category and then a business will receive a total final score to show clearly what each business needs to improve upon. Unfortunately, for the first decade of the program very little government support existed, especially in funding, which hampered the program from hiring enough auditors, resulting in a backlog of requests. Furthermore, because the government did not make the CST certification mandatory, tourists didn’t really pay attention

if a hotel was certified or not. This all changed in 2005 when a combination of tourist demands for universal certification and an opportunity to work with the International Organization for Standardization presented itself. Now there are 61 certified hotels with the numbers growing rapidly, and this has showcased not only the industry but the government's commitment to sustainable tourism practices. The problem is the system is still very small and only operates in Costa Rica, reducing accountability and visibility to international tourists.

An even smaller program has been introduced by the Swedish government through their Nature's Best program. Similar to the CST certification, it includes both a necessity to contribute to nature conservation/preservation but also cultural heritage of the destination. The program focuses on travel arrangements or packages instead of certain hotels or operators therefore certifying all of the components of tourism and not just where the tourist stays. (Gossling 2007: 2) Also, like Costa Rica, the government has gone beyond small scale operations to include hotel chains, airlines, and railways to make a larger certification network. (Gossling 2007: 7) Sweden breaks their program into six categories: minimize impact, support local economy, environmentally sustainable, nature/cultural conservation, provide knowledge, and quality and safety. Within these categories arrangements have to pass 90 basic questions and 25% of 40 additional bonus questions to be certified. (Gossling 2007: 34) So far 220 arrangements have been certified and the program has plans to expand to other countries such as Norway and the U.S. This program has already received support from the European Union as well (Gossling 2007: 35) and has promise to be even more successful than the Costa Rica program despite the fact that Costa Rica is considered more of an ecotourism destination.

Two processes have been created for a larger scale certification program. One has been offered by the Tour Operators Initiative for Sustainable Tourism Development (TOI). TOI

includes 20 members, most of which are European countries, but also include Brazil, Pakistan, the U.S., and Morocco. They have worked with Conservation International to produce a manual for the use of a sustainable supply chain, and a management guide for operators to integrate maximum sustainability into their business practices. Another organization, Adventure Collection, has brought together major American and Canadian operators to create a set of Strategic Principles of Responsible Travel. These principles support accountability, responsible travel education, and a systematic review of practices. (Honey 2008: 84) The problem is both of these groups are focused mostly in the global North and are very small and have not led to a global merging of many operators. Even with all of the above-mentioned efforts, both domestically and regionally, it is estimated that only about 7000 ecotourism ventures have been certified in the world today. (Fritsch 2004: 101)

Multiple Players

One reason there has been a lack of agreement internationally on standards is because standards within an individual country cannot even be agreed upon. This is because there are many players affecting the government's decision process in terms of ecotourism. These players include: tour operators, local/indigenous groups, forestry companies, business associations, special interest groups (WWF), tourist interest groups (WTO), other NGOs, and universities. (Gossling 2007: 194) Balancing the demands of local groups to make enough money to survive while also dealing with environmental NGOs and their needs to please donors by preserving the environment has led to many governments ignoring the issue of regulation altogether. Also, many governments face so much corruption that decisions may be made without taking into account many of the above players.

The creation of a coalition of forty organizations in 2007 has attempted to tackle this issue by creating a set of global sustainable tourism criteria. The criteria were agreed on in October of 2008 and are focused on four main themes: effective sustainability planning; maximizing social and economic benefits for the local community; enhancing cultural heritage; and reducing negative impacts to the environment. (Global Sustainable Tourism Criteria) One of the main reasons why these criteria were created was to offer governmental, non-governmental, and private sector programs a starting point for developing sustainable tourism requirements. This is the first step in trying to unify the ecotourism and sustainable tourism industries so that positive action can be taken in the larger tourism industry without being slowed down by the lack of a common starting point.

Ecological Consequences in Country

Rosaleen Duffy states in her book that, “One of the fundamental truths about tourism is that, as an industrial activity, tourism consumes resources, creates waste, and has specific infrastructure needs, and that as a consumer of resources it has the potential to over consume.” (Duffy 2002: 14) Furthermore, that “ecotourism still relies on the notion that developing states have a comparative advantage in terms of the variety and extent of unspoiled natural environments.” (Duffy 2002: 15) One example of the direct damage done is in terms of aquatic ecosystems. Duffy explains that, “dredging to provide ecotourists with sandy beaches and the dumping of construction waste destroy aquatic habitats and wildlife. The replacement of mangroves with concrete walls and coastal roads has destroyed coastal ecosystems that rely on the symbiotic relationship between mangrove swamps and coral reefs.” (Duffy 2002: 63) Further damage occurs because in order to get a tourist to the ecotourism site, roads often have to be built or expanded depending on the number of tourists arriving, which causes deforestation.

Many ecotourist activities include nature hikes or some level of interaction with the natural environment. This interaction can lead to trampling of potential seedlings, souvenir picking (removing potential reproduction), introduction of exotic species of plants, feeding of wildlife, etc. (Tisdell 1996: 15) These effects are often minimized as much as possible but still occur in most ecotourism ventures.

Animals often show the environmental effects of ecotourism very clearly. One example of this is from the large industry (9 million tourists) of whale watching. “Intensive whale and dolphin watching activities by boats and swimmers can disturb marine mammal behavior and acoustic activity.” (Davenport 2006: 284) Similar negative effects have been found in other marine animals such as penguins who, because of the presence of humans, may delay coming to shore to feed their chicks causing a lower survival rate because chicks do not get the proper nutrition early on. Land based animals also are affected such as bears, which often change and sometimes shorten their sleeping and hunting patterns because of human presence. (Ananthaswamy 2004: 6-7) Once again ecotourism may have less impact than mainstream tourism but still has some level of impact which must be minimized.

Beyond direct effects to the animal and plant life, humans always create some level of waste. A study conducted in Nepal that followed a set of climbers showed that they produced about 15 kilograms of nonbiodegradable/nonburnable garbage on a single trip. (Fritsch 2004: 11) In an ecotourism resort on Fraser Island off the coast of Australia one major tenet of the resort is to handle waste as safely as possible. Even this attempt is flawed, “[to] avoid any threat to the island’s aquifer, [liquid waste] is all discharged 100 meters out to sea through a pipe under the jetty.” (Peace 2005: 328) So the waste is no longer affecting the aquifer directly around the island but instead pollutes the ocean, which negatively effects marine life. On the other hand, the

resort's effort to get rid of solid waste in the water system is effective, "the system also produces a thick sludge which is creamed off in a holding tank, mixed with sawdust and waste paper, and fed into the reprocessing plant's on-site worm farm 'for further natural processing'." (Peace 2005: 328) All other waste is sorted and either recycled on the mainland of Australia or put into a dump, again displacing the waste to another location. Waste will always be a problem but again a smaller problem than would occur if mass tourism was occurring instead of ecotourism.

It appears that any project under the name ecotourism will always be flawed because the goal of any tourism project is to bring in as much money as possible. To bring as much money in as possible requires a large number of tourists, which leads to a higher rate of destruction and pressure on ecosystems. (Fritsch 2004: 182) This is already happening in places such as the Monteverde Cloud Forest in Costa Rica where the number of tourists has gone from 450 per year in 1974 to over 200,000 per year today. This has led not only to the loss of forest due to construction but also the loss of species such as the golden toad because of factors such as land fragmentation and the introduction of foreign organisms into the environment. (Honey 2008: 4)

Ecological Consequences out of Country

Another major flaw of ecotourism is that it is still dependent on fossil fuels. This has created the problem that each ecotourist has a large ecological footprint despite the idea that they are supposed to be helping the environment. As Fritsch writes, "the amount of fossil fuel consumed by a single traveler on such a trip may be more than a Third World resident uses in a year—or over many years." (Fritsch 2004: 175) Gossling estimates that for one tourist to travel from North America to New Zealand and back, a popular ecotourism destination, takes about 452 pounds of aircraft fuel accounting for about 1433 pounds of carbon dioxide emissions. (Carrier 2005: 317) Many airlines now offer the ability for tourists to buy carbon offsets for their

travel, which may alleviate much of this problem, but since this is not a requirement it does not fully compensate for this negative aspect of ecotourism. Furthermore, the idea of carbon offsets has started to have a negative association with it because many people now feel that replanting quick growing trees is not actually helping the planet. Instead some people now believe that protecting existing forests with that money would accomplish much more. This is what Costa Rica has done working with their forestry department, Fonafifo, to protect their existing forests and more strategically replant trees for long term benefits.

Focus on International not National Tourists

Since there are so many tourists that are travelling internationally, most of the resources in attracting potential visitors go towards international tourism and not domestic tourism. As Honey writes in her book this is a problem because, “[there is] the need to build a [domestic] constituency that appreciates and wants to protect national parks, local culture, and fragile ecosystems.” (Honey 2008: 104) In addition, there needs to be a creation of a pride attached to ecotourism domestically. Honey writes that, “Ecotourism has helped create the self-image of Costa Ricans. It’s now their self-identity.” (Honey 2008: 161) If this pride doesn’t occur then resistance to ecotourism may begin to emerge, such as one example from Belize where “one resident vowed to let his garbage pile up all over the beach to show that local people and not foreign tourists should decide what the town looks like.” (Fritsch 2004: 128)

Two simple acts have been done in Costa Rica to encourage domestic tourism. The first is a reduced entry cost to all national parks and museums. Furthermore, most ecotourism ventures whether they are a hotel or an attraction, such as the hanging bridges near the Arenal Volcano have resident rates as well. Simple actions like these have seen a high number of Costa Ricans visiting and therefore supporting ecotourism ventures throughout the country. This

example must be used more widely around the world so that local residents can afford to enjoy the attractions of their own country. A further argument would be that if local residents and foreigners interact, both can learn from each other, enriching both of their experiences and creating larger support for that ecotourism venture at the same time.

Green capitalism/Neoliberalizing Nature

Since ecotourism is a part of global tourism, authors such as Duffy and Fritsch argue that green capitalism, where the individual bears responsibility for environmental conservation or degradation rather than the governments or private industry, can be seen in many ecotourism projects. (Fritsch 2004: 165 and Duffy 2008: 10) This is illustrated strongly by Duffy, “the need to generate a profit has led to demands to provide visitors with what they want, even if it does have a negative environmental impact” (Duffy 2008: 58) Furthermore, this capitalism has led to many operators being privatized by foreign companies. “According to World Watch Institute, roughly 65 percent of the membership of the Belize Tourism Industry Association is made up of expatriates.” (Fritsch 2004: 123) This has led to too much of the profits created from ecotourism flowing out of the country, which doesn’t satisfy the principle of benefiting local communities. In addition to foreign ownership, “a large proportion of the in-country expenditure was spent before or after the ecotour itself, in the large cities and well established tourist centers of the destination country.” (Fritsch 2004: 172) Although the money is staying within the destination country, it still is not going directly to the local population resulting in no direct improvement in quality of life. Duffy cites a study that states, “Tourism is a worldwide phenomenon dominated by transnational corporations, which exports western culture to the developing world and which drains the developing world of its resources.” (Duffy 2008: 330) This quote shows that

ecotourism must keep its small scale local focus even as it becomes a major part of ecotourism or otherwise it will continue to lose credibility.

Another element of green capitalism has been the commodification of nature including plants but mainly animals such as the lion, which can bring in \$7000 a year, or an elephant herd which is valued at \$610,000 annually to Kenya. (Honey 2008: 23) These high values have led many governments to increase the amount of ecotourism with no limitations in some cases. Duffy goes even further to say that the commodification of nature means that nature has become another item that has been neoliberalized by the developed countries. The neoliberalization of nature is defined as: “a process whereby non-human phenomena are increasingly subject to market-based systems of management and development.” She states this because, “one of the core justifications for ecotourism is that nature can be conserved/saved precisely because of its ‘market value’ to ecotourists willing to pay to see and experience specific landscapes.” (Honey 2008: 327) Furthermore, ecotourism has now become a way for tourists to see the exotic places/animals and fill their passport instead of a meaningful experience. Also, in many cases an economic dependence on ecotourism may occur because it is now making up such a large portion of a country’s economy, such as in Kenya and Costa Rica. As Fritsch points out in his book, this will make the economy highly vulnerable to any disturbances both internal (government change/war) or external (weather or less travel). (Fritsch 2004: 133) Although there are positive aspects to liberalization such as rolling back of state powers, use of market to improve an economy, and more engagement with non-state actors, ecotourism must be careful not to become too intertwined with the global market.

Equality for locals

In many cases communities have been excluded, marginalized, and restricted from resources due to ecotourism ventures. Duffy summarizes this negative impact, “In some cases an expansion in ecotourism reduces the opportunity for local people to participate in its development, except as menial employees.” (Duffy 2002: 51) Furthermore many criticisms of mass tourism have been seen in ecotourism such as “recreating colonial patterns of behavior and exploitation, failing to make significant investment in local economies, [and] social exclusion of local people.” (Duffy 2002: 69) Another common occurrence is the displacement of indigenous people from land for ecotourism projects for which they see no returns or benefits. (Fritsch 2004: 163) Along with displacement, if indigenous people are allowed to stay their everyday lives are often commodified as part of the cultural part of ecotourism. These include circumcision practices or traditional rituals, making these elements a spectacle and not respecting their value to the indigenous people. As a central tenet of many definitions of ecotourism this issue of local involvement and respect needs to be addressed.

Ecotourist Bubble

Carrier and Macleod encompass all of the above problems created by ecotourists through a phenomenon that they believe occurs during most ecotourism ventures, the eco-tourist bubble. The basic idea is that the tourist is in a bubble where they only focus on the interaction between themselves and their immediate surroundings. Outside the bubble are all the influences the tourist is making through their environmental effects both domestically and internationally. Also, their cultural effect through the creation of unequal wealth in a society or displacement of locals for ecotourism projects becomes a significant factor. (Carrier 2005) Like many authors, Carrier and Macleod trace this problem to a definition that is too fluid. Consequently, tourists do not

fully realize the effect they are having on their surroundings because education of tourists is often left out of ecotourism practices. This bubble can easily be popped with the inclusion of more education within an ecotourism venture, as this paper argues. A fuller picture of the country must be provided including how culture, tourism, environment, etc. interact within a nation. This is especially important so that misperceptions don't form in people's minds. Instead, when they return home they can share stories not only about the awesome beaches but also the amazing culture and biodiversity of a country, therefore supporting more ecotourism within the country they visited.

Hard vs. Soft Ecotourists

David Weaver, along with other authors, has made a clear distinction between hard and soft ecotourism. Hard, active, or deep ecotourists are those who follow every part of the definition of ecotourism. Weaver defines hard ecotourism as: "a form of alternative ecotourism involving small groups of ecotourists who take relatively long specialized trips into relatively undisturbed settings where opportunities for physically and mentally challenging experiences are available." (Weaver 2008: 194) In addition they usually make their own travel arrangements and are committed to the environment. (Weaver 2008: 195) On the other hand soft ecotourists are: "associated with a more conventional tourist market that engages in mentally and physically unchallenging ecotourism experiences as a short duration component of a multi-purpose trip." (Weaver 2008: 194) One good example of a soft ecotourist is someone who goes on a two day safari in the middle of a cruise.

This difference is taken even further in Fennel's book through his use of a study done by Wight on accommodation needs of hard and soft ecotourists. Hard ecotourists tend to use accommodations that are primitive (hammocks, tent, camping), rustic (hut or cabin), or perhaps

an ecolodge or bed and breakfast. All of these accommodations tend to be domestically owned and therefore supply money to the local community. Soft ecotourists tend to want a more comfortable setting such as a hotel, resort, or a cruise ship, which tends to be foreign-owned and therefore is sending money out of the area. (Fennell 2007: 203) Even if these hotels/resorts have an eco label on them, most will not be benefiting the local community, because as Fennell points out in his book, “how will Ramada remain internationally competitive if it is pouring revenues into the local community and the preservation of biodiversity of a region? Flares are automatically discharged when the international business community gets involved in such ‘local’ enterprises.” (Fennell 2007: 227) The problem today, is that “In recent years, there has been a gradual trend for many ecotourists to be less intellectually curious, socially responsible, environmentally concerned, and politically aware than in the past. Increasing numbers of older, wealthier, and ‘softer’ travelers have begun opting for comfort over conservation.” (Fennell 2007: 125)

Two problems arise when this difference between ecotourists is brought up. First, that “In terms of inadvertent negative impacts, [hard ecotourists] are far more likely than soft ecotourists to introduce exotic pathogens into remote locations.” (Fennell, 2005, 378) Furthermore, they venture much farther into untouched areas causing more widespread damage than soft ecotourists who usually limit their activities to one area. On the other hand, because soft ecotourists are more numerous, many argue they cause just as much if not more damage. The question now is how to deal with the larger number of soft ecotourists and also the needs of hard ecotourists to make sure both types are still falling within the definition of ecotourism.

Ecotourism Moving Forward

The one facet that must occur for ecotourism to move forward is that there must be one unified definition agreed on and used by all ecotourism ventures. Since each ecosystem is unique, specific activities may differ, but all ventures should include the following criteria. First, there should be minimal impact upon both the natural environment and the local community. Second, control and economic benefits should mostly be held by the local population so that long term environment, economic, and cultural sustainability can occur, creating improvement in the local community. Third, a learning atmosphere must be created that facilitates learning not only while the ecotourist is on location but also before and after their experience. This is especially important because ecotourism provides a way for developing insight about other parts of the world, both the beauty and struggles those areas are facing, to be spread as quickly as possible through word of mouth. Therefore, in the current state of ecotourism a large amount of direct conservation is occurring. If this direct conservation can be connected with a stronger learning environment then more indirect conservation can occur by the ecotourist when they return home when they donate to conservation organizations, write their representatives, or get people they are in contact with involved with conservation. This will therefore result in more direct conservation occurring, creating a loop of direct-indirect-direct conservation that can be ongoing. The importance of education within ecotourism operations will be discussed further in the following chapter.

Chapter Two: Education and Ecotourism

Importance of Education within Ecotourism

Ceballos-Lascurain, a founder of the term ecotourism, states, “The main point is that the person that practices ecotourism has the opportunity of immersing him or herself in nature in a way that most people cannot enjoy in their routine, urban existences. This person will eventually acquire a consciousness and knowledge of the natural environment, together with its cultural aspects, that will convert [them] into somebody keenly involved in conservation issues.” (Ceballos-Lascurain 1988: 13) Furthermore, “one often overlooked way in which ecotourism supports conservation is that ecotourists, upon returning home, act as advocates for the area visited.” (Batta 2006: 58) Many authors including Ceballos-Lascurain (1996) have advocated that education is a necessary and important part of ecotourism ventures. (Buckley, Blamey, Weaver, Stem et al.) In one of the initial definitions for ecotourism, Ceballos-Lascurain states about ecotourism that it should have the “specific objective of *study*, admiring, and enjoying the scenery and its wild plants and animals as well as any existing cultural manifestations found in these areas”. (Ceballos-Lascurain 1988: 14) In addition Martha Honey emphasizes the importance of education in her work by including it as the third component of ecotourism out of the seven characteristics she identifies. (Honey 2008: 30) The importance of education in an ecotourism ventures will be demonstrated both in this chapter and in the following chapter by looking at research done at Rara Avis Ecolodge in central Costa Rica.

Thus far this area of education in ecotourism has been largely overlooked. As Narelle Beaumont states in her article on ecotourism and education: “Therefore, as well as economic benefits that contribute both directly and indirectly to conservation and sustainable use of natural resources, [the definition] claims that the environmental education component of ecotourism

fosters awareness and understanding of natural environments and consequently promotes pro-environment attitudes and responsible environmental behavior.” (Beaumont 2001: 317) So far this educational component of ecotourism has been missing from much of the research on ecotourism. The question some authors have posed is: does ecotourism increase the knowledge of the ecotourist on the biodiversity and conservation of an area? In addition, after the ecotourist has concluded his or her stay at an ecotourism venture, are they more likely to try to conserve the environment more in their day to day lives and also through financial assistance to conservation organizations?

Rob Gilbert gives a good overview of the ecotourism and education field in his article. He begins by quoting Fien and Gough concerning three emphases they see in environmental education. The first approach is considered conventional where the environment is an entity that is to be studied as something separate from our lives. Second, education that occurs within the environment and the environment becomes an area where exercises and experiments involving the environment can take place. Third is when the environment is treated as something with intrinsic value that must be understood to maintain its level of reverence. As Gilbert points out in his article all three types of environmental education can be seen in ecotourism. (Gilbert 2003: 76) In the paragraphs that follow descriptions and examples of these types of environmental education will be showcased.

Informal Education in Ecotourism

Thus far in the study of ecotourism’s impact on educating tourists concerning the importance of biodiversity and conservation there have been two main studies conducted. The first was conducted by Narelle Beaumont in Lamington National Park in southeast Queensland, Australia. Her study focused on four groups of tourists: commercial coach day tours, commercial

guests, independent day visitors, and campers. Her research focus was to see if ecotourism contributes to conservation by promoting pro-environmental attitudes and responsible environmental behavior as a result of a better understanding of the environment following an ecotourism experience. Furthermore, she was testing the hypothesis that a ceiling effect occurs with ecotourists. She explains this idea of ceiling effect in her essay when she writes, “there has been a long held view that ecotourists already have pro-environment attitudes. Therefore, attitudes would not alter after involvement in an ecotourism activity due to a ‘ceiling effect’.” (Beaumont 2001: 318) Because of this idea of ceiling effect Beaumont attempts to prove another theory that researchers have found about tourists who do not have a pro-environmental attitudes when entering an ecotourism venture. She writes, “Studies of outdoor education programs indicate that those who have the least environmental experience and lowest attitude scores initially will be influenced the most by involvement in such a program.” (Beaumont 2001: 318)

Before writing about her study, Beaumont explains the reasoning for why ecotourism could be a vehicle for environmental education. “The experiential form of environmental education provided by ecotourism is deemed more efficient in altering attitudes than classroom learning methods”. (Beaumont 2001: 320) Beaumont goes on, “enjoyable experiences in the natural environment associated with learning about natural processes are said to be the stimulus for developing a rapport with nature and a desire to protect and care for it.” (Beaumont 2001: 320) Beyond this initial bond, outdoor experiences done through ecotourism can often showcase the degradation that human populations are responsible for, but also the change that conservation efforts can have on damaged land.

Beaumont’s research revealed a couple of interesting findings. First, “nearly 99% of respondents undertook one independent environmental activity, such as a short nature walk, a

half day or full day walk, bird watching, or bird feeding.” (Beaumont 2001: 330) This shows that almost everyone took the initiative beyond their prepared schedule of activities to take on an additional nature oriented activity. In addition, the author found that only 18% of post visit tourists and 29% of follow up respondents stated that their experience had influenced their conservation views. (Beaumont 2001: 333) An even lower percentage, 9% of post-visit and 14% of follow up respondents, said that their environmental behaviors had changed because of the ecotourism experience. (Beaumont 2001: 333) Of those that were surveyed for both change in conservation views and environmental behaviors and displayed a positive result, most were the coach day visitors who were the least pro-environment group before their ecotourism experience. (Beaumont 2001: 333) Therefore, Beaumont believes that her results fall in line with previous studies that have found that the biggest determinant of gains in knowledge is previous knowledge of the environment. (Beaumont 2001: 335) “These findings have important implications, as they demonstrate ecotourism’s potential to influence the views of the people who are not particularly pro-environment by a short ecotourism experience with limited environmental education”. (Beaumont 2001: 336) She concludes that even if ecotourists are already environmentally aware, an ecotourism experience can act as a way to reinforce the importance of supporting conservation. Furthermore, without ecotourism a conservation ethic in non-traditional ecotourists may never occur.

The second major study was conducted by Robert Powell in the Galapagos Islands. He presents a couple of interesting observations about the ecotourism field. The first is how the sustainability of ecotourism has been defined as the interdependence of four major E factors: environmental conservation, equity, education, and economic benefits. In terms of education Powell writes that, “through tour design and interpretation, [ecotourism can] mitigate the

negative impacts of tourism, both human and environmental, and build an educated and motivated constituency that supports environmental conservation and social improvements, both on site and at home.” (Powell 2008: 468) Therefore, like Beaumont, Powell is trying to determine if ecotourism can be linked to education and a conservation ethic.

Powell’s study looked at an all inclusive Galapagos islands cruise seven day package through Lindblad Expeditions (LEX) and its ability to positively affect the tourists’ viewpoint on the importance of conservation. The company had six certified naturalist guides, with an average experience level of almost 13 years, who accompanied the cruise. During the trip the guides offered 15 talks, lasting about two hours a day. In addition, the ecotourists disembarked from the boat 20 times during the trip, and were usually off the boat for an average of four hours a day doing a range of environmental interactive activities. (Powell 2008: 471) This large amount of time between guiding and hands on environmental experience is one of the cornerstones of LEX. One of the company’s goals is to involve tourists in the conservation of the islands. Furthermore, to help conserve and preserve the island LEX founded a conservation fund for the Galapagos.

A large emphasis is placed on the importance of contributing monetarily to the conservation of the islands. The author found that guides often included messages about the importance of the Galapagos to the area, biodiversity, and the larger ecosystem. Furthermore, a representative from the Charles Darwin Research Center made a presentation on the threats to the area and what was being done to conserve the area. The last push by LEX for financial support for the Galapagos is done through their voucher system where a tourist can receive a transferable \$250 voucher for a future trip if they make a \$250 or larger donation to the conservation effort.

Powell based his survey work on Ham's EROT model that states that successful environmental interpretation must be based on an enjoyable, relevant, organized, and thematic experience. (Powell 2008: 472) Powell distributed his survey to all 61 passengers before and after the trip. He asked questions concerning how the tourists felt the interpretative communication they received resulted in increased knowledge, attitudes toward the conservation of the area, environmental behavioral intentions, philanthropic behavior, and overall satisfaction with the trip. Powell found that over 90% of the group was satisfied and thoroughly enjoyed the trip. Furthermore, he found that the LEX cruise had succeeded in increasing knowledge about the natural history of the area, creating support of the management of the area, improved environmental behaviors, and the tourists' attitudes and intentions to support conservation philanthropy. Therefore, as Ham's EROT model suggests, environmental knowledge and satisfaction do correlate. Powell concludes by stating, "Research provides preliminary evidence that the type of ecotourism experience in this study is capable of increasing tourists' philanthropic support of conservation as well as positively influencing their knowledge and attitudes towards protected areas and general environmental behavioral intentions." (Powell 2008: 484) As the reader can see, Beaumont's study and Powell's study come up with fairly different results, which seems to be a trend in the research assessing the correlation between ecotourism and education.

One article in support of Beaumont's idea of a ceiling effect was written by Jennifer Hill. Hill also used a survey approach on tourists who visited a rainforest protected area that had a built in 1.75km rope walk. In her survey she asked about tourist satisfaction, desire for more information, and attitudes towards conservation as well as a short quiz about the rainforest the tourists were in. Two sets of tourists were interviewed: those who had access to information

sheets along the rope walk; and also a set of tourists who were not given the information sheets. Hill found three interesting statistics during her study. The first was the difference in the responses to the question ‘would you have liked more information during your visit.’ Of the group without information sheets 76% responded that they wanted more information, while only 27% of the tourists with information sheets said they wanted more information. This shows that some ecotourists do in fact want to gain knowledge during their ecotourism experience. The second finding Hill discovered was the difference between the quiz scores of the two groups. The group without information only got a score of 43% on the quiz while those with information got nearly 70% of the quiz questions correct. This finding makes sense but also means that at least in the short term some ecotourists do gain knowledge about the environment around them. Lastly, Hill found that on average about 75% of ecotourists with and without information said that neither their attitudes towards conservation nor their environmental behavior would change. As the author writes, “this was largely because visitors felt that they were already conservation-oriented or that they already behaved as environmentally responsible tourists.” (Hill 2007: 82) Hill’s work confirms Beaumont’s idea that ecotourists are often already environmentally conscious and there is a ceiling effect. She also demonstrates that knowledge, at least in the short term, can be gained and for the most part ecotourists want some form of environmental education during the experience.

Formal Education and Ecotourism

There are many programs in ecotourism that are much more education-focused, especially those run through schools. One example of this kind of education oriented program is presented by Abigail Rome in Belize. The author focuses on the School of Field Studies (SFS) four week program in northwestern part of Belize. The purpose of the program was not only to

educate the fifteen SFS students but also to leave an education program that could be adapted for future ecotourists. As part of the program SFS helped to design texts for three self-guided hiking trails, blueprints for signage of the trails, local educational resources for 4th-6th graders, and a new informative brochure for the nature reserve. (Rome 1998: 36) These changes at the reserve were accepted by the current staff and allowed for the education of the SFS students to be achieved. The added benefit for all future ecotourists was large and was the biggest impact the SFS program had because the resources left behind could be used for adults, teens, and children, allowing for all levels of ecotourists to have a fuller educational experience. This example supports the idea that more ecotourism ventures should work to attract school programs and field researchers because they will most likely be able to help improve the education quality of the venture.

Another example of formal education and ecotourism working together is the partnership between University of Maryland and the Kayapó indigenous group in Brazil. The focus was to keep Kayapó people as the guides and the teachers for the students instead of bringing in outsiders who were unconnected to the local culture. Therefore, students were given the opportunity not only to learn about the biology of the area but also the importance of the local culture, especially concerning environmental management. An interesting dynamic to this project is that there was an emphasis not only on the students learning from the Kayapó but also the local population learning from the students in an informal setting. This setup has proven to be effective strategy for ecotourism with four key benefits summarized by the authors, “(1) revenues; (2) the opportunity to control the presentation of knowledge about themselves and their territories; (3) a communicative experience in which to build competence in a new language and ideology that serves their interests in the global conversation; (4) furthers an already

expansive network of international support”. (Zanotti 2008: 515) One additional benefit of the program is that it can create powerful motivations for life-long interests in topics such as conservation of the environment and protection of local cultures. Two key examples from this program were students dedicating their graduate studies to focusing on the Kayapó and another student becoming an environmental journalist on the Amazon region. (Zanotti 2008: 513) This case study provides a key example to how formal and informal education can be combined in ecotourism ventures.

Improving Education in Ecotourism

In a different approach to why education is important in ecotourism, Duenkel and Scott write about the potential to alter tourists’ outlook on reality. “A wilderness travel excursion is a novel experience in which new views and understandings of the natural world may be presented. These new meanings could, therefore, lead to the construction of an alternate reality—a wilderness reality.” (Duenkel 1994: 42) The authors believe that if the educator in the ecotourism venture does their job properly the urban reality that tourists carry with them can be challenged and sometimes replaced with a reality that is more environmentally inclusive. They give a few examples of how to do this in article. First, “educating participants about necessary techniques to minimize degradation of natural areas”. Second, “dispelling the myth of dualism and encouraging the feeling that humans are a part of, and not apart from, the natural world.” (Duenkel 1994: 42) The authors’ basic idea is that tourists should be educated to the fact that they are part of a larger process beyond the human species and that we must think about how our actions are affecting the well-being of other beings especially plants and animals. This argument is a much more philosophical way of trying to make more conservation minded tourists through ecotourism.

Many authors have written on how education should be properly included in ecotourism. The first of these authors is Mark Orams who conducted a similar study to Powell but with dolphin tourism in Queensland, Australia. He based his survey work on five important aspects that he developed on how education programs in tourism should be designed. The first requirement is instilling a sense of curiosity about the area or animal that is being talked about. Second, presenting an affective domain, which is the creation of an emotional attachment to the subject matter. Third, creating motivation to act through a program that outlines the environmental problems in the area but also present possible solutions that the tourist could become involved with. Fourth, providing opportunities to act, such as financial donations or direct conservation activities during their time as a tourist. Lastly, there needs to be an opportunity for tourists to give feedback and evaluation so that the program can continually become stronger. (Orams 1997: 298) Like many other studies Orams' also uses a survey system with the tourists involved in the dolphin experience. The difference in his work is that he had one control group who had no environmental education and an experimental group that had been involved with the environmental education program. His survey work revealed that only 8% of those in the control group increased their environmental awareness whereas over 20% of the experimental group increased their awareness. (Orams 1997: 301) Furthermore, Orams saw a drastic difference in the number of people who tried to get more information on the dolphins they interacted with. Only 13% in the control group tried to get more information compared with over 41% in the experimental group. (Orams 1997: 303) Orams' study showed that nature based tourism, just interacting with the dolphins, did not have as big of an effect on changing ecotourists as dolphin interaction and a good educational program. I would have to agree with

Orams' conclusion that "the research presented in this paper adds weight to the argument that education should receive greater emphasis in tourism management." (Orams 1997: 304)

James Kimmel offers a different viewpoint on the subject of education and ecotourism, because he is writing from the tour guide's perspective and how he personally encourages learning in his tours. In contrast to what most people would assume, he believes direct education of ecotourists is not the way to go. His approach was to use meal times when everyone is together and less distracted as a time for informal education. During the breakfast period he would give a preview of the day to the ecotourists so they knew what to keep their eye out for and also would pose questions that he hoped the tourists could answer by lunch time. Lunch and dinner were used to review the important items seen during the day and to create discussion about the questions posed in the morning and the larger picture beyond specific animals or plants that were seen. His goal was not to name every animal and plant, because he didn't know all of them, but also he would encourage tourists to use field guides if they wanted to know exactly what things were. Instead his focus was on the bigger picture and posing questions that would demonstrate how adaptation and other natural processes related to humans so that tourists could easily see the connection and similarities between animals, plants, and humans. As he writes, "the discussions that resulted from those questions helped the participants discover much about the region. Setting a context for discovery allowed the participants to become actively involved in their own learning process. That is perhaps ecotourism's greatest potential for providing effective environmental learning." (Kimmel 1999: 43) This is another example of how education can become more effective in ecotourism, because forcing someone to learn for themselves is often the best way for retention of information to occur.

A study was conducted directly in response to the article written by Kimmel above. This study was done by Clem Tisdell in Queensland, Australia at the Mon Repos Conservation Park for turtles. In his study he surveys tourists who visit the park and what they feel they have learned as a result of signage and their ability to learn on their own. His study showed that over 75% of those surveyed stated that they had learned from the visitor centre displays and amphitheatre information provided about the current threats to sea turtles, the need to protect sea turtles and their life cycles. (Tisdell 2005: 296) Furthermore, “the respondents felt that the interpretive program conducted by the rangers and volunteers contributed in a major way to their understanding of the egg-laying process and hatchling behavior of sea turtles.” (Tisdell 2005: 296) Tisdell goes on to discuss that the information they received heightened their experience when viewing the sea turtles. As a result, the respondents said they were likely to change their conservation behavior, most now realized the importance of immediate marine turtle conservation, and 40% said they were likely to donate to help protect the marine turtle population. (Tisdell 2005: 297) This study once again supports the idea that education can result in active engagement in ecotourism which results in indirect conservation which can lead to more direct conservation efforts.

Regardless whether the education is in a formal or informal setting recent literature in the environmental education field has spoken to the fact that out of the classroom experiences are necessary. Louise Chawla conducted a study in 1999 on how to create effective environmental action. Her study found that environmental action could be attributed to a set of sources. These sources are: extended time spent outdoors in natural areas; parents or other family members; teachers or classes; involvement in environmental organizations; books; and the loss or degradation of a place. (Chawla 1999: 15) Out of these sources she finds that the top reason for

environmental action during the life of her respondents is experience of natural areas. Chawla asserts that “these consistent results suggest that—important as school instruction may be—environmental educators also need to seek ways to foster the type of out of school experiences that figure so saliently in environmentally committed people’s memories”. (Chawla 1999: 25) As can be seen above this has been occurring more and more often especially with university programs. In addition, ecotourism operations offer a great opportunity for these out of the classroom environmental education opportunities. Furthermore, as stated at the end of the first chapter if a loop of direct-indirect-direct conservation can occur because of an ecotourism venture increasing their educational component in their operation then the conservation movement as a whole will benefit.

To further strengthen the field of education and ecotourism research, in the following section a case study conducted in a small scale ecotourism venture located in the tropical rainforest of central Costa Rica will be presented.

Chapter Three: Education and Ecotourism Case Study, Rara Avis, Costa Rica Background

Costa Rica has been identified as one of the key areas where ecotourism has taken hold and been successful (Kruger 2005; Honey 2008). One of the key establishments within the country that has been identified by the industry as a prime example of good ecotourism practices is Rara Avis (Honey 2008: 198) The venture is located near the center of the country on the border of the Braulio Carrillo National Park and La Selva. Rara Avis was founded by a United States ecologist, Amos Bien, who discovered the site for the venture during his work with La Selva from 1979-1983. In 1983, Amos decided he wanted to do more than research the land in the area and instead dedicate his time and money to the new idea of ecotourism. Therefore, he purchased the land Rara Avis is on in order to test his theory that Costa Ricans could make more per acre from the land doing ecotourism than the \$7 per acre they could make by deforesting and using the land for pasture. (Volunteer Handbook: Rara Avis) By 1986, students were brought to the area to conduct research on the forests surrounding the main lodge that was being constructed. In 1989, Rara Avis officially opened its Waterfall Lodge and ecotourists began to join the researchers in exploring the rainforests of Rara Avis's private reserve.

Rara Avis is considered the first eco lodge in Latin America (Volunteer Handbook: Rara Avis) and most likely the world, having started the movement of both eco lodges and ecotourism in the region. Over the last 20 years Rara Avis has been responsible for the beginnings of many projects that can be seen around Costa Rica. The first is orchid houses, which was one of the first projects implemented after the lodge was established as a way for the venture to make some money, and can now be seen around the country. Second, butterfly houses, which are now seen around the country as a primary attraction in most tourism locations in Costa Rica, got their beginnings at Rara Avis as well. Third, the first aerial tram was established at Rara Avis by

Donald Perry and he later moved on to his two locations at Jaco Beach in southern Costa Rica and along the Braulio Carrillo highway in central Costa Rica.

The private reserve that surrounds the Rara Avis lodge protects nearly 1500 hectares of land directly, but because of the decree made by President Monge in 1986, the borders of Braulio Carrillo National Park were extended to meet Rara Avis's borders, connecting it to 45,000 hectares of protected forest of the national park. (Rara Avis: Costa Rican Conservation) As a result, Rara Avis is both an area for ecotourists but also scientific researchers and schools to visit as well.

This unusual mixture of students, ecotourists, and researchers often creates a learning atmosphere for everyone. Guides can learn from both students and ecotourists as well as the researchers to enhance their knowledge. Therefore, the guides can then share the knowledge they gain from the constant flow of visitors to Rara Avis to future tourists, creating an ongoing cycle of knowledge. Furthermore, the venture offers a unique opportunity for locals and foreigners to either work or volunteer at the lodge, often as guides. As a result, locals receive a great education on biology, which make them even better guides at Rara Avis, and often has allowed them to move on to other ecotourism ventures around the country since they are now a more valuable asset. In addition, since Rara Avis accepts foreigners as volunteers year round it provides these people training not only firsthand training in biology but also a cultural training that they can share once they return to their home country.

An article written in *Biological Conservation* in 2008 reinforces the importance of the conservation biology and ecotourism working together. The article describes the positive impact that biologists can have on an ecotourism operation. In this case because the biologists are researching and therefore protecting the macaws more ecotourists are likely to visit because they

come to see the macaws and there will be more macaws there because of the researchers (Brightsmith et al. 2008: 2840) Furthermore, the ecotourists are more likely to see the macaws and other key species because the conservation biologists will either directly inform of their sightings and convey their knowledge to the tourists. Or indirectly because the guides will gain knowledge from the conservation biologists and they can therefore share it during their time with the ecotourists. This kind of process has occurred in the past at Rara Avis more than it does now. Therefore, Rara Avis needs to present itself and offer benefits for biologists to come once again more regularly so these benefits can once again flow from biologists to guides to guests. As the article points out,

“Conservation researchers face a perennial shortage of funds, especially in the developing world where biodiversity is concentrated and local resources are scarcest. Fortunately there are hundreds of ecotourism lodges and many volunteer organizations recruiting for projects in the developing world. Researchers can help these lodges fulfill the requirements of true ecotourism and distinguish themselves in the market.” (Brightsmith et al. 2008: 2840)

This system of biologists getting an area to research and protect species while also offering benefits to the ecotourism venture at the same time should be looked at closely for an option for many ventures to improve their education component in the future.

Currently, Rara Avis has about 1000 ecotourists a year with higher amounts of tourists coming during the high tourism season in Costa Rica December-April. (Rara Avis Staff) Rara Avis has over 30 kilometers of trails with guided hikes offered daily. Also, tourists can access the 65 meter two tier waterfall 200 meters from the lodge. In addition, the venture operates a butterfly house where the larva of butterflies are cared for and protected to preserve species diversification but also for viewing by the visiting ecotourists. Another project that Rara Avis has is an outdoor orchid house where orchids are raised that have fallen onto the paths of the forest and once again protected and displayed for the ecotourists. Ecotourists can choose to stay

in one of the eight casitas (bunkhouses), one of eight rooms in the waterfall lodge, or a riverside cabin. The venture can host up to 80 visitors at one time.

Rara Avis offers a unique experience isolated from day to day life because of the need to take a three hour tractor ride from the nearest town. In addition, electricity can only currently be found in two buildings and is not available in the rooms. This isolation allows visitors to connect with nature and learn by experiencing during their time at Rara Avis. In addition, during their time guides share with the ecotourists formally during hikes and informally over meals the importance of conservation of the rainforest around them through the sharing of the history of Rara Avis as well as sharing knowledge about the rainforest.

Methods

The study was conducted during my three months as a volunteer at Rara Avis between May and August 2009. The majority of the study involved survey work. Throughout my stay in Rara Avis, visitors were given pre-trip and post-trip surveys. A total of 108 pre-surveys and 176 post-surveys were taken. The discrepancy between the pre and post surveys was a result of a Rara Avis staff member being responsible for the pre-surveys and myself being responsible for the post surveys. Therefore, many times the pre-survey would not be handed out and as a result there were 68 less pre-surveys filled out. The pre-visit survey included five sections. The first and second section asked the ecotourist about their reasons for visiting Rara Avis and to describe their main reason as well as their expectations for their visit. The third section was used to see what level of conservation ethic the ecotourist has already through a rating system based on different statements concerning the environment. This section is followed by one that ascertained how committed tourists are to their conservation ethic. Section five asks four questions to get a preliminary sense of the ecotourists' environmental knowledge.

The post-visit survey mirrored much of the pre-visit survey in order to assess the change that may have occurred because of tourists' time at Rara Avis. Therefore, the first and second section of the survey asked the ecotourist to rate their agreement with a list of statements about the environment. Section three solicited information on the same commitment questions as the pre-survey to see if any change occurred. The ecotourist was then asked the same four questions testing their environmental knowledge. The last three sections of the survey focused on customer satisfaction, including a few open ended response questions to solicit information not attained through the main part of the survey.

The pre-trip surveys were handed out by a staff member in the office at Las Horquetas before the tourists took a three hour journey by tractor to the lodge. During their stay I was one of two main nature guides. As a result, the environmental knowledge gained was personally affected by my guided hikes. Furthermore, I was responsible for conducting the post-surveys during the tourist's last meal at Rara Avis before making the journey back down to the office at Las Horquetas.

My guiding approach tried to mirror as much of the literature that I discussed above as possible when incorporating education into my guided hikes. We would always start all ecotourists out on our introductory hike where I would emphasize for them to keep track of the five or six types of palms they would see during the hike. This often worked as a good way for some ecotourists to even guess the next plant as a palm before I described it and during the rest of their stay many would often correctly identify the palms on other hikes. In addition, I would rarely identify plants and animals by scientific names but instead by common names so that the tourist would be more likely to retain the information. Also, when certain plants were identified I

would also inform the ecotourist of the vital connections and importance it has to other plants and animals or what uses humans have used the species for.

This process would often continue over the meal tables or during times in between hikes. Therefore, beyond the formal survey work that is described above a certain amount of informal observation was also conducted. During these times I would informally test how much knowledge the tourist had retained from the hikes that day. Furthermore, deeper discussions would occur on the importance of the overall rainforest to the area and to the planet.

Research Question

The purpose of this study is to answer two main questions. First, can ecotourists gain knowledge about the environment through their experience at Rara Avis? Second, do ecotourists change their conservation ethic because of their experience at Rara Avis?

Results (Quantitative from surveys and also qualitative responses from final questions)

Demographic Information

Of the 108 respondents to the pre-survey over 60% were female (66 respondents) and the average age was 28 years old. Over 40% reported that they were from an urban area. The two major areas tourists came from were the United States (45%) and Europe (35%). Over 90% had some level of college education with over 60% having at least a college or professional/graduate degree. The average length of stay was two nights at Rara Avis. This information relates directly to the fact that over 60% of Rara Avis business during the May-July 2009 period was from an organized group tour company, GAP adventures. This company caters to 20-30 year olds from Europe, Canada and the United States.

Motivation

Respondents had ten choices for what motivated them to visit Rara Avis, and had to rate each reason unimportant, somewhat important, important, or very important. Exploring a new place received 73% of responses as a very important reason they visited. Seeing a beautiful landscape was the second highest choice with 69%, while both experiencing wilderness and seeing wildlife received 62%. When asked which was the most important reason for their visit, exploring a new place was the biggest reason for the most number of respondents.

Environmental Interest/Conservation Ethic

A series of sixteen questions related to the environment and conservation were asked to gauge the conservation ethic of the ecotourist on the pre and post surveys. Four key statements were identified from the surveys. First, “if wood is needed from a forest then it should be logged out.” On both the pre and post survey about 75% of respondents said they disagree or strongly disagree with this statement. Second, “I think it is ok to hike off a trail.” In the pre-survey 62% and the post-survey 74% disagreed or strongly disagreed with this statement. Third, I think the environment is important but only if conserving it doesn’t hurt the economy. Again the pre and post surveys had a similar response rate of 77% either disagreeing or strongly disagreeing. Finally, I care if the lodge I am staying at protects the environment around it. Both the pre and post surveys had a response of over 92% agreeing or strongly agreeing. In addition, on the post survey tourists were asked if they would be willing to donate \$15-\$20 to help conserve the forest around Rara Avis. Over 65% of respondents said they would agree or strongly agree.

Environmental Commitment/Involvement

A collection of seven questions related to commitment and involvement with environmental protection were asked on both the pre and post surveys to see if any change

occurred because of the Rara Avis experience. First, how often would they donate to a conservation organization? A large change occurred from only 53% saying they occasionally or most of the time donated to nearly 81% on the post-surveys. A fairly equal number ratio of people on both the pre-survey, 50%, and the post survey, 62%, said they would vote for elected officials who support environmental protection most of the time or always. Both on the pre and post surveys a low ratio of people would commit to writing letters to your representatives about environmental issues and participating in environmental organizations/rallies. There was a change seen in the commitment to avoid items because of their environmental impact from 51% on the pre-survey to 66% on the post survey. No increase was seen on commitment to recycling because on both the pre and post surveys over 91% stated they always or most of the time recycled, signifying that this practice occurred before and would continue after the visit. Over half of all visitors on both the pre and post survey said they read about the environment always or most of the time.

Environmental Knowledge

Four environmental knowledge questions were asked to see if the level of knowledge had increased during the time spent at Rara Avis. The first question asked about leaf cutter practices. The percentage of correct responses rose from 39% to 70% between surveys. The second question asked about what impact climate change would have on the forests of Costa Rica. Both the pre and post surveys had a correct response rate of over 72%. Third respondents were asked what the biggest reason is why plants and trees grow so well at Rara Avis. A drastic increase occurred with only 26% answering correctly on the pre-survey compared to 61% on the post survey. The final question asked what the major components of ecotourism are. A slight increase occurred from 88% to 96% from pre to post survey for correct responses.

Self-Assessed Environmental Knowledge Gain

Within the post-survey a section asks participants to rate their increase of knowledge in five areas because of their time at Rara Avis. In terms of increase in general awareness of the environment over 76% stated they had gained some to a lot of awareness. Over 67% of respondents said they expanded some or a lot on their knowledge on conservation issues. Only 38% stated they had expanded their knowledge on ornithology some or a lot. About 74% responded that they had their knowledge of forest biology had increased some or a lot. 62% of ecotourists stated that they had improved their knowledge of natural history some to a lot.

Open Response Results

In response to the question “How do you think your experience at Rara Avis has affected you?” three major responses were seen. The most prevalent answer was a better understanding and more knowledge of the rainforest, conservation, and ecotourism practices. Second, a higher awareness of the environment and its importance and therefore why it needs to be protected. Third, an increased appreciation for the environment, especially the unique dynamics of the tropical rainforest at Rara Avis. All three of these responses are related to supplementary answers which included a better understanding of our impact on the environment, a desire to pass the knowledge the tourist has gained to others, and a need to expand support and protection for the environment and conservation. Two responses give an overall sense of how the Rara Avis experience affected ecotourists. First, “I already appreciate the values demonstrated by Rara Avis, so I was not surprised to be profoundly affected by the environment. It makes me feel, even more dedicated to protecting the environment.” (May 19th, 2009) A second response stated, “Rara Avis has been an excellent experience. To be so isolated, and be able to enjoy the

impressive nature has made me realize even more how important it is for humans to become more aware of our impact on our precious planet.” (July 12th, 2009)

Informal Findings

During my three months at Rara Avis a few main informal findings occurred. First, with the organized group tours through GAP adventures a majority of the groups would not only want to take the post survey so they could test their knowledge. They also would eagerly wait for me to give the correct answers to the environmental knowledge questions. Second, many tourists would spend long periods of time between hikes trying to identify species we had seen or may see on our next hike from the vast library Rara Avis had. Third, even between hikes many tourists would ask for us to take them up to the orchid house, butterfly house, or science lab because they wanted to experience as much as they could. Finally and I believe most important, no matter the age of the ecotourist, most were engaged and wanted to learn as much as possible during their time at Rara Avis.

Discussion

A few key conclusions can be made from the results presented above. First, the general type of person that Rara Avis attracts is one that wants to explore a new place and feel like they are experiencing wilderness. This means they probably already have had some interaction with the environment and at least have some level of knowledge on the importance of preserving nature. Furthermore, Rara Avis tends to target more rugged tourists through its advertising with the group travel adventure company, GAP adventures, in addition to its lengthy descriptions in both the Rough Guide for Costa Rica and Lonely Planet’s guide to Costa Rica. Therefore, when looking at responses to the statements concerning a conservation ethic many already had an ethic instilled in them before arriving. As a result, statements that deforestation is not good, whether

lodges should protect the environment around them, and whether environment is worth protecting regardless if it hurts the economy had response ratios that didn't change much from pre to post surveys. The one change that was significant was the statement concerning hiking off the trail. I believe as a result of discussions in the forest and out ecotourists gained an understanding that we are impacting the rainforest enough through the creation of roads and trails and we must minimize any further impact since every step off the path may result in unknown repercussions for the relationships within the rainforest.

There are a few conclusions that can be taken away from the commitment to conservation and environment. First, despite their experience at Rara Avis people are still reluctant to spend the time to write or pressure their representatives and also to become involved in environmental organizations. Again similar to conservation ethic the type of person that visits Rara Avis also has a certain commitment to the environment instilled within in them. Therefore, it is not surprising to see that ecotourists will vote for environmentally minded representatives, read about the environment, and already are committed to recycling. The study did find that the tourist's commitment to buy goods that had less impact increased, possibly because their eyes were opened even further to what is directly impacted by their purchases. This is especially true of protected woods, which were a common discussion topic that occurred at the lodge. The biggest change that was seen from pre to post survey was that of a commitment to donate to conservation organizations, because once again when someone sees what their money can do in person they then have an attachment and more of a reason to use their resources to help the cause. Overall, this study reaffirms Beaumont's idea of a ceiling effect and that "it seems that in the long term ecotourism may in fact be 'preaching to the converted' but still acts as a reinforcer." (Beaumont 2001: 336) Most visitors to Rara Avis know the importance of the

environment and have some level of commitment to help the environment already but the experience reinforces that importance and will cause them to rethink if they are doing enough. Furthermore, it reiterates what other studies have shown that ventures such as Rara Avis should continue to try to expand their cliental beyond the environmentally minded and rugged travelers to incorporate a larger population.

A major finding of this study is that environmental knowledge increases greatly in areas in which most ecotourists do not have previous knowledge. This is seen in the drastic increase in correct responses on the leaf cutter ant practices question and the question on leaf litter recycling. As one of the two guides at Rara Avis during the period of the study we did make a concerted effort to cover these questions, which is one reason why correct responses increased. At the same time, we did not talk about climate change effects on the rainforest, showing that in general the population that visits Rara Avis already has knowledge on this area. Finally, many (88%) already knew the major components of ecotourism. The 8% increase in correct responses and 96% overall correct response rate shows that if ecotourists didn't know before their visit almost everyone knows by the time they leave what should be seen in a true ecotourism operation.

Rara Avis is a key case of how informal and formal experiential education can work in ecotourism operations. Between the self-assessment responses and open response questions this study shows that significance knowledge is gained and conservation ethic is improved because of a person's time at Rara Avis. As stated above, over three-fourths of tourists responded that they believed their awareness of environment had increased. Furthermore, over two-thirds stated that knowledge of conservation issues had increased. This is reinforced by the open responses that were received which mainly focused on more awareness, more knowledge, and a greater appreciation for the environment, resulting in ecotourists writing that they were more likely to

support the environment and conservation. Furthermore, nearly two-thirds of those surveyed said they would be likely to donate to an organization such as Rara Avis to help conserve the rainforest. Although donations were not actually taken, the intent and responses that were gathered shows that an ecotourism venture such as Rara Avis can have an impact--especially on the knowledge that people have about the environment and its importance, therefore resulting in a desire to become involved in supporting conservation and the preservation the environment.

This case study is a great example for how direct conservation of an area (Rara Avis protecting the rainforest) can lead to indirect conservation (Rara Avis ecotourists donating money to a conservation organization) on a wider scale, which can result in direct conservation (conservation organizations purchasing and protecting another area of rainforest). Rara Avis was established to show that conserving land could be more profitable than deforesting the land. Therefore, direct conservation can be seen in the nearly 1500 hectares of land that Rara Avis protects as long as it stays operational. As a result every ecotourist is contributing directly to conservation because the money they spend at Rara Avis results in a large piece of land continuing to be largely untouched. In addition, during their time the information visitors receive and the experiences they have reinforce and enhance a certain set of values towards conservation that the ecotourist takes away with them, as the survey results show. This may result in indirect conservation efforts such as supporting conservation organizations, becoming more educated on the environment and continuing or increasing the amount of recycling the tourist does. These indirect conservation efforts may therefore result in direct conservation once again through more land being preserved because of money donated or less resources used because of recycling. A loop of conservation can be seen at Rara Avis because of its efforts with informal and formal experiential education during a tourist's stay at the venture.

Limitations to Educational Experience and Suggestions for Improvement

One of the biggest limitations to a solid educational experience at Rara Avis is the lack of certified and fully trained guides. During my time there, the main two guides were myself and a volunteer who had worked on and off for three years. Neither of us had a biology background and neither of us was certified. After an informal discussion with the founder, Amos Bien, it appears that when Rara Avis first started it was the training grounds for many of the top certified guides in Costa Rica today. The problem that Rara Avis faces today is that they cannot pay as well as many of the other ecolodges and therefore struggle to maintain a top level guiding staff. So my first recommendation is that Rara Avis needs to reinstate a guide training program to create a solid group of guides for future ecotourists who visit.

Another area which is still lacking is the ability for ecotourists to go out on their own on self guided hikes. Many tourists requested that they either wanted smaller groups or the ability to go out by themselves because they would then have a higher chance of seeing wildlife during their time. In order for this occur, more guides need to be hired. Second, a future project for staff or a volunteer should be the creation of a self guided hike with a handout with key species of plants and animals as well as marked areas that have key species of plants.

Lastly, I believe that as part of the evening routine at Rara Avis between dinner and possible night hike or other evening activities an informal 20-30 minute discussion should occur amongst the guests and guides on what was seen that day, identifying those species in the available books, and how those species that were seen interrelate and the creation of a Rara Avis ecosystem picture. Therefore, the ecotourist can see that all components of what they have seen and experienced are important to the ongoing vitality of the area.

Orams presents a key concept that needs to be introduced and reinforced at Rara Avis. There needs to be a way for ecotourists to become involved with Rara Avis if they want to so they can have a stake in their experience. They can do this by directly donating to a conservation fund that Rara Avis could set up to continue to protect their reserve or perhaps purchase more land. Furthermore, the lodge is always looking for funding for projects such as a hydroelectric generator to provide clean energy to the lodge which ecotourists could support. Also, they could offer opportunities for ecotourists to work with the field researchers to learn about conservation and wildlife protection. As Orams describes in his article these kinds of opportunities allow ecotourists to have a deeper investment in their experience and therefore may result in a longer term impact on their lifestyle and conservation ethic.

Contribution to Education and Ecotourism

Rara Avis is a prime example of a small ecotourism operation that is achieving success in both fulfilling the requirements for an ecotourism venture and showing that education can be included in an operation easily. This inclusion is beneficial for the conservation movement as a whole because it increases environmental knowledge. Furthermore, this form of informal experiential education is important for effective environmental education and retention of knowledge. The knowledge leads to an increase in tourists' desire to support the conservation movement and environmental protection and also a desire to share this knowledge with others. Therefore, creating a new group of conservation minded individuals to expand the movement towards sustainable development.

Conclusion: Future of Ecotourism

The future of ecotourism is at a turning point. Both the ecotourism industry as a whole and Costa Rica, the home to much of the world's ecotourism, are at a turning point. The word ecotourism is used everywhere and has lost much of its original meaning in many cases. It is time to reinvent the industry and give the edge back to "real" ecotourism. Ventures such as Rara Avis, where there is a combination of taking ecotourists out of their comfort zone as well as preserving an important piece of biodiversity, are a great example of where ecotourism should return. Furthermore, because ecotourists are disconnected from the day to day world many feel they can open themselves up to connect with the nature around them. Rara Avis allows this to happen by giving ecotourists the freedom to sit quietly at the lodge or the waterfall or to go on an informational hike within their network of trails. As the study above shows, this has increased environmental knowledge at least at some level and also has either reaffirmed many people's conservation ethic or converted more people to be more environmentally aware. Through this reaffirmation and conversion, a larger base of conservation minded people can be created to help build the movement towards conserving and protecting our forests, which is one of the three key principles of ecotourism. Future and current ecotourism ventures must bring the true meaning of ecotourism--to protect nature, empower local people, and educate the local population and the ecotourist--into their ventures instead of only tackling one of these tenets or doing each very weakly. This needs to be done quickly before the idea of ecotourism becomes any more distilled and future ecotourists become too disheartened to care. Furthermore, the importance of education in ecotourism is still an under-researched area. Therefore, beyond this study of Rara Avis there needs to be more research concerning how to best incorporate education into ventures. In addition, there also needs to be a stronger emphasis on making sure ecotourism ventures are

including education as part of their model of operations. As mentioned at the beginning of this paper, ecotourism can be a great vehicle for sustainable development, which is the only kind of development the planet can afford to have. By incorporating a stronger educational component, it can better create positive change both for our common environment and for the people that are protecting the last of our resources.

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Appendix 1: Map of Rara Avis Region in Central Costa Rica

(Map Courtesy of CostaRicaTravelGuide.com)



Appendix 2: Pre-Survey

Rara Avis Pre-Survey

The following survey solicits data on customer satisfaction, motivations, interests, and background information in order to improve the quality of the visitors' experience at Rara Avis. Furthermore, this information will be used by Ben Sander in writing his Master's Thesis in Natural Resources and Sustainable Development at the University for Peace in Ciudad Colon, Costa Rica. Participation is voluntary, but we are interested in everyone's opinions. If you choose to participate please answer the questions to the best of your knowledge, as honestly as possible, and without assistance. The survey should take about 10 minutes, and should be **completed before arriving at Rara Avis**. All responses will be kept confidential and at no time will the names of individual visitors be used when reporting the results of this investigation. Thank you in advance for your assistance with this project and enjoy your stay at Rara Avis.

1. Please indicate how important the following reasons are for your visit

		Very Important	Important	Somewhat Important	Unimportant	No opinion
1	Socializing with family and friends.					

2	Relaxing, escaping daily life					
3	Seeing wildlife					
4	Learning about the natural history of Costa Rica					
5	Adventure					
6	Learning about conservation					
7	Exploring a new place					
8	Seeing a beautiful landscape					
9	Experiencing wilderness					
10	Connecting with nature					

2. Please choose the most important reason from above and write it here:

Please explain in your own words why you chose and what you expect to get out of your visit to Rara Avis:

How did you learn about Rara Avis?

3. Please give your opinion on the following statements about the natural environment

		Strongly Agree	Agree	Disagree	Strongly Disagree	No opinion
1	I often participate in outdoor activities					
2	I enjoy exploring new areas					
3	I enjoy a beautiful bird like a toucan more than seeing a common robin					
4	I approve of hunting as a sport					
5	I prefer well kept lawns to wild forest					
6	If wood is needed from a forest then it should be logged out					
7	If I want to get a better picture of ant hill it is alright to carefully step on or near it					
8	Seeing a beautiful animal is better than seeing a beautiful forest					

9	I would prefer to zip line through a forest than hike through the forest					
10	I would rather see wildlife than study wildlife					
11	I care if the lodge I am staying at protects the environment around it					
12	I think it is ok to hike off a trail					
13	When I travel I rather relax on a beach then spend time in a forest					
14	I would like to read more about the rainforests of Latin America					
15	I think the environment is important but only if conserving it doesn't hurt the economy					
16	I am visiting Rara Avis mainly to see wildlife and beautiful scenery					
17	Eating an apple and discarding the core of the apple in the forest is ok					
18	It is ok to pick a pretty flower from a tree/bush					

4. How often do you participate in the following activities?

		Always	Most of time	Occasionally	Rarely	Never
1	Donating to conservation organizations					
2	Voting for elected officials who support environmental protection					
3	Writing letters to your representatives about environmental issues					
4	Participate in environmental organizations/rallies					
5	Avoiding items because of their environmental impact					
6	Recycle at home/work					
7	Read about the environment					

5. The following questions are about your knowledge of the environment and its' processes along with Rara Avis's environment. For each question please circle the correct answer. Answer the questions without any help from someone else or a guide book. If you don't know the answer please circle don't know. Lastly, please don't be concerned if you cannot answer all the questions, few people can.

1. What happens to the leaves that leaf cutter ants cut?
 - a. Ants eat the leaves
 - b. Leaves bio-degrade

- c. Fungus feeds on leaves
 - d. Used to make ants home
 - e. Don't know
2. What effect does climate change have on the forests of Costa Rica?
- a. Causes more erosion because of increased rain
 - b. Less biodiversity because species do not migrate at the right time, move to a different area
 - c. Change in timing of the flowers coming out
 - d. All of the above
 - e. Don't know
3. What is the biggest reason that plants/trees grow so well in the tropics
- a. Lots of sunlight
 - b. Warm temperatures
 - c. Lots of rain
 - d. High amounts of leaf litter that degrades quickly (nutrient cycling)
 - e. Don't know
4. Which of these components makes up ecotourism?
- a. Protecting the environment
 - b. Education
 - c. Supporting local cultures
 - d. All of the above
 - e. Don't know

6. Background Information—All information is kept confidential

1. How many days are you spending at Rara Avis?
2. Where else are you traveling on your trip in Costa Rica?
3. Please circle the description of the area you live in
- A. Rural B. Small Town C. Suburban D. Urban
4. What country are you from?
5. What is your sex? Male Female
6. What is your age?

7. What is the highest level of education you have completed?
- Some High School
 - Graduated from High School
 - Some college
 - Associates Degree
 - Bachelor's Degree
 - Some Professional or Graduate Education
 - Professional or Graduate Degree

Appendix 3: Post-Survey

Rara Avis Post-Survey

The following survey solicits data on customer satisfaction, motivations, interests, and background information in order to improve the quality of the visitors' experience at Rara Avis. Furthermore, this information will be used by Ben Sander in writing his Master's Thesis in Natural Resources and Sustainable Development at the University for Peace in Ciudad Colon, Costa Rica. Participation is voluntary, but we are interested in everyone's opinions. If you choose to participate please answer the questions to the best of your knowledge, as honestly as possible, and without assistance. The survey should take about 10 minutes, and should be **completed before departing Rara Avis**. All responses will be kept confidential and at no time will the names of individual visitors be used when reporting the results of this investigation. Thank you in advance for your assistance with this project and I hope you enjoyed your stay at Rara Avis.

1. Please give your opinion on the following statements about the natural environment

		Strongly Agree	Agree	Disagree	Strongly Disagree	No opinion
1	I enjoy participating in outdoor activities					
2	I enjoy exploring new areas					
3	I enjoy a beautiful bird like a toucan more than seeing a common robin					
4	I approve of hunting as a sport					
5	I prefer well kept lawns to wild forest					
6	If wood is needed from a forest then it should be logged out					
7	If I want to get a better picture of ant hill it is alright to carefully step on or near it					
8	Seeing a beautiful animal is better than seeing a beautiful forest					
9	I would prefer to zip line through a forest than hike through the forest					
10	I would rather see wildlife than study wildlife					
11	I care if the lodge I am staying at					

	protects the environment around it					
12	I think it is ok to hike off a trail					
13	When I travel I rather relax on a beach then spend time in a forest					
14	I would like to read more about the rainforests of Latin America					
		Strongly Agree	Agree	Disagree	Strongly Disagree	No opinion
15	I think the environment is important but only if conserving it doesn't hurt the economy					
16	It is ok to pick a pretty flower from a tree/bush					
17	I would be willing to donate \$15-\$20 to help conserve the forest around Rara Avis					

2. Please indicate how much you think this trip has increased your knowledge in the following areas

		A Lot	Some	A Little	None	No opinion
1	General awareness of the environment					
2	Conservation issues					
3	Ornithology (bird biology)					
4	Forest biology					
5	Natural History					

3. Because of your experience at Rara Avis, how often do you think you will now participate in the following activities?

		Always	Most of time	Occasionally	Rarely	Never
1	Donating to conservation organizations					
2	Voting for elected officials who support environmental protection					
3	Writing letters to your representatives about environmental issues					
4	Participate in environmental organizations/rallies					
5	Avoiding items because of their environmental impact					
6	Recycle at home/work					
7	Read about the environment					

4. The following questions are about your knowledge of the environment and its' processes along with Rara Avis's environment. For each question please circle the correct answer. Answer the questions without any help from someone else or a guide book. If you don't know the answer please circle don't know. Lastly, please don't be concerned if you cannot answer all the questions, few people can.
5. What happens to the leaves that leaf cutter ants cut?
- Ants eat the leaves
 - Leaves bio-degrade
 - Fungus feeds on leaves
 - Used to make ants home
 - Don't know
6. What effect does climate change have on the forests of Costa Rica?
- Causes more erosion because of increased rain
 - Less biodiversity because species do not migrate at the right time, move to a different area
 - Change in timing of the flowers coming out
 - All of the above
 - Don't know
7. What is the biggest reason that plants/trees grow so well in the tropics
- Lots of sunlight
 - Warm temperatures
 - Lots of rain
 - High amounts of leaf litter that degrades quickly (nutrient cycling)
 - Don't know
8. Which of these components makes up ecotourism?
- Protecting the environment
 - Education
 - Supporting local cultures
 - All of the above
 - Don't know

5. Please rank the following statements about your experience at Rara Avis

		Excellent	Good	Fair	Bad	No Opinion
1	The quality of the guides					
2	Quality of information provided on by guides and staff					
3	Quality of your accommodations					
		Excellent	Good	Fair	Bad	No Opinion
4	Quality of food					

5	Quality of Trails					
6	Overall quality of staff					
7	Overall experience at Rara Avis					

6. Please answer the following questions

1. How do you think your experience at Rara Avis has affected you?
2. What did you enjoy most about your trip?
3. Was there anything that detracted from your enjoyment?
4. Do you have any suggestions for how to improve your experience at Rara Avis?

7. Please indicate your response to the statements below

		Very Likely	Likely	Unlikely	Very Unlikely	No opinion
1	Recommend Rara Avis to others					
2	More likely to visit another ecotourism venture					
3	Return to Rara Avis					