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STUDY OF THE TOURIST ATTRACTIONS IN PUERTO RICO



Project Report  
Submitted by:  
Worcester Polytechnic Institute

May 3<sup>rd</sup>, 1999

May 3, 1999

Mr. Jaime L. Gonzalez  
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Dear Mr. Gonzalez:

Enclosed is our report titled "Study on the Tourist Attractions in Puerto Rico." It was written at the Puerto Rico Tourism Company during the period of March 15 through May 3, 1999. The preliminary work was completed in Worcester, Massachusetts prior to our arrival in Puerto Rico. Copies of this report are being submitted simultaneously to Professor Addison, and Professor Rissmiller for evaluation. Upon faculty review, the original copy of this report will be catalogued in the Gordon Library at Worcester Polytechnic Institute. We appreciate the time which you, Teresa Caballero, and Kattia Pabon have devoted to us.

Sincerely,

Kristin Carreau

Jessica Horan

Corry Johnson



## **STUDY OF THE TOURIST ATTRACTIONS IN PUERTO RICO**

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**May 3, 1999**

This project report is submitted in partial fulfillment of the degree requirements of Worcester Polytechnic Institute. The views and opinions expressed herein are those of the authors and do not necessarily reflect the opinions of the Puerto Rico Tourism Company or Worcester Polytechnic Institute.



## Abstract

This report, prepared for the Puerto Rico Tourism Company, examines the quality of service, and presentation of history and culture, provided by various tourist attractions in Puerto Rico. We have surveyed tourists and recorded our own impressions about these various sites. All data was entered into SPSS and statistically analyzed. Based on the results and conclusions gathered from the analysis of our data, we offer recommendations concerning ways to improve the visited facilities.



## Authorship Page

This project was completed during the time period of March 15-May 3, 1999 by Kristin Carreau, Jessica Horan, and Corry Johnson. All partners contributed equally to the project in researching, surveying, and writing the report. All sources are listed in the reference section and have been noted within the text.



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We would like to thank the many tour guides and facility operators all over the island that helped us accomplish our project.

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## Executive Summary

Puerto Rico is an island rich in history and culture, with countless attractions that tourists can explore. In order for visitors to fully appreciate their visit to this unique island, the sites they visit should be of highest quality. The Puerto Rico Tourism Company needs to conduct periodic checks of the tourist attractions that they endorse to ensure that quality is being maintained. Without monitoring, these attractions may not maintain the level of quality that the Puerto Rico Tourism Company expects. The purpose of this project is to assess the quality of such facilities from a tourist's point of view by evaluating the service, the presentation of Puerto Rican history and culture, and the overall impression of the attraction. From these evaluations, we have made recommendations for improving the various attractions of Puerto Rico.

The government of Puerto Rico made a firm commitment in 1993 to invest time, money, and effort into improving the island's tourism industry. Their purpose was to double tourism's contribution to the Gross Domestic Product through an aggressive economic development program over a ten-year period. As the public corporation responsible for stimulating, promoting, and regulating the tourism industry, the Puerto Rico Tourism Company accepted this challenge, formulating a comprehensive tourism development policy. Our project is commissioned by the Puerto Rico Tourism Company and represents just one small part of this development initiative.

According to the Puerto Rico Tourism Company, many tourist facilities of Puerto Rico needed to be assessed to determine if they comply with standards concerning physical property conditions, sanitation, service, appearance, safety, and accessibility. When



standards are not being met, the number of tourists visiting a facility decreases and the economy is adversely affected and the notion of Puerto Rico as an ideal vacation spot declines. Our project team has made suggestions to improve facilities, which can be implemented by the company. We have identified some of the standards that are not being met and have suggested ways to meet them.

In order to meet our objectives, we have used predefined standards to evaluate each facility. We surveyed tourists to gain their opinions on whether the facility met their expectations and evaluated the facility operators on the quality of their service without their knowledge of our investigation. In order to assess the tourist experience, we surveyed the locations by telephone and tourist questionnaires, and recorded our own impressions. After reviewing this data, we were able to draw conclusions about the quality of the island's tourist locations.

At the completion of our study, we have found that most attractions generally satisfy their visitors, although some aspects of quality may need improvement at certain facilities. This is our own impression and that of tourists we surveyed.

We hope the results of this study will be of interest to a variety of people. First and foremost, the Puerto Rico Tourism Company can use this information to inform individual facility operators about methods for improving their site. The tourist site operators may also be interested in our findings because they will need to update their facilities to comply with the Puerto Rico Tourist Company's endorsement standards and learn how to attract more tourists. The tourists themselves will want to visit facilities that cater to their needs. Other regions with similar tourist industries may want to imitate the improvements made by the facilities of Puerto Rico. The Puerto Rico Tourism Company may use our results as a basis





for making recommendations to the facilities that they sponsor. We hope that facility operators will respond to our recommendations in a positive way by making appropriate improvements.

This WPI degree requirement was intended to challenge us to identify, investigate, and report on a topic where science or technology interacts with societal structures and values. Scientific and technological tools concerning survey techniques, statistical analysis, and its computerized presentation are used in this project to determine the social, cultural, and economic benefits of improving the physical qualities of tourist facilities, and thereby better promoting the history and culture of Puerto Rico.



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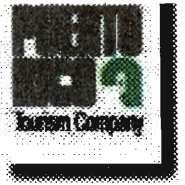


## 1.0 Introduction

Puerto Rico is an island rich in history and culture with countless attractions that tourists can explore. In order for visitors to fully appreciate their visit to this unique island, the sites they visit should be of highest quality. The Puerto Rico Tourism Company needs to conduct periodic checks of the tourist attractions that they endorse to ensure that quality is being maintained. Without monitoring, these attractions may not maintain the level of quality that the Puerto Rico Tourism Company expects. The purpose of this project is to assess the quality of facilities from a tourist's point of view by evaluating the service, the presentation of Puerto Rican history and culture, and the overall impression of the attraction. From these evaluations, we have made recommendations for improving the various attractions of Puerto Rico.

The Puerto Rico Tourism Company's mission is to formulate and facilitate the implementation of public policy that will make Puerto Rico a world-class tourism destination and maximize the tourism sector's contribution to Puerto Rico's economy. The company solicited this project because it wanted an impartial opinion about the tourist experience in Puerto Rico. Because we were first time visitors, representative of the average tourist, our opinions and impressions would suit this purpose.

Our project was formulated to determine how well each tourist site represents the island and its culture. The company wanted to ensure that the quality of service and the condition of the facility met the standards of visitors. We are pleased to report that most facilities meet tourists' expectations; however, minor changes could improve the quality of the facilities and the experience of tourists.



In order to assess the tourist experience, we surveyed the locations by telephone, questioned tourists, and recorded our own impressions. After reviewing this data, we were able to make conclusions about the quality of the island's tourist locations.

Time and the number of tourists in attendance were expected constraints of the project. We visited 27 sites in a five-week timeframe. Because this allowed only one visit to each attraction, we were confined to surveying the tourists that were there on the particular day and time of our visit, limiting our sample. However, we think our personal opinions and impressions will be as valuable to the company.

Not only did we assess the quality of the service at each attraction, but we also wrote a travel essay describing the cultural value and history of each site. We believe these essays will provide ideas about how the rich cultural heritage of Puerto Rico can be shaped to attract tourists. The essays may also help the employees of the Puerto Rico Tourism Company reacquaint themselves with the facilities that they endorse. The tourists' opinions that we collected were entered into a database and analyzed using SPSS. After reviewing our analysis, we were able to make recommendations for improvement of the attractions.

During our stay in Puerto Rico, we were given the opportunity to visit many of the cultural and historical attractions of the island. Our experiences have greatly enriched our understanding of the history and culture of the Puerto Rican people.



## 2.0 The Tourism Industry

In relation to the project goals outlined in Section 1.0, the following literature review provides important background information for the project. We will define and discuss tourism and its goals and address the usage of database technologies in the tourism industry. We also discuss many aspects of tourism planning, sustainable development, and conservation. We have also provided some short descriptions of tourist attractions in Puerto Rico.

When explaining the full scope of the tourism industry, most authors begin by examining the formal definition of tourism. One such definition of tourism is:

The sum of the phenomena and relationships arising from the interaction of tourists, businesses, host governments, and host communities in the process of attracting and hosting these tourists and other visitors (Goeldner & McIntosh, 1984, 122).

According to this definition, tourism represents the synthesis of the activities, services, and industries that work together to deliver the “travel experience” to the tourist. In order to make this experience complete, tourists must become aware of the history and culture of their tourist destination. The industry cannot function properly if any of these parts is lacking (Smith, 1991).

In accordance with the definition, some experts treat tourism as a system comprised of four major parts: the tourist, businesses, the government, and the community (Coccosis, 1995). First, the tourist is considered. Researchers study the various psychological and physical experiences that draw tourists to particular destinations. This is important because the tourist represents the market for tourism. Second, tourism is examined from a business point of view. For businesses, providing the tourist with goods and services such as



transportation, attractions, food, and lodging establishes the opportunity to make a profit. Third, government officials of the host community are concerned with the effects that tourism has on their economy and community and also the international relationships that are developed by foreign travel. Finally, tourism is examined from the point of view of the host community. Tourism acts as a source of the community's livelihood by providing employment for residents and bringing in revenue for quality of life improvements, which is particularly important in developing economies, such as those of the Caribbean islands (Serafin *et al*, 1992). In agreement with Serafin, Smith (1991) notes that parts of the tourism industry strive toward one common goal: for businesses, the government, and the community to improve their economic situation by attracting the tourist.

In 1963, a definition for the term "tourist" was formed by the United Nations Conference on International Travel and Tourism. The intent of this definition was that the United Nations Statistical Commission would use it for tourism research (Goeldner & McIntosh, 1984). This definition is still accepted today by many researchers on tourism (Bird *et al*, 1998). The Conference considers the overall definition of a tourist to be:

*A temporary visitor staying at least 24 hours in the country or region visited and the purpose of whose journey can be classified under one of the following headings: leisure (recreation, holiday, health, study, religion, and sport), business, family, mission, or meeting (Goeldner & McIntosh, 1984, 146).*

Of special interest to tourism developers are the recreational attractions that draw leisure tourists to a specific area (Inskeep, 1991).

There are thousands of recreational activities the tourism industry has to offer tourists. Tourism developers suggest that these activities and attractions be put into categories for easier statistical use (Inskeep, 1991). Following this example, Coccossis





categorizes these attractions under the titles of sporting, sightseeing, and nightlife activities (Coccosis, 1995). Sporting activities include bicycling, canoeing, hiking, horseback riding, swimming, tennis, golf, sailing, snorkeling, scuba diving, water skiing, and snow skiing. Some sightseeing attractions are natural resources, historical sites, cultural shows, man-made attractions, museums, and festivals. Attractions such as professional sports, amusement parks, night clubs and restaurants, and casino gambling fall under the “nightlife” category (Inskeep, 1995).

The leading benefit of tourism is improvement of the economy. Although tourism is developed for a number of other reasons such as international education and cultural preservation, the main reason is to generate economic advancement through foreign exchange, income, employment, and government revenues (Bull, 1991). Smith (1991) recognizes that tourism can also improve the infrastructure of other economic sectors within a community like agriculture, manufacturing, and forestry. Today, the tourism industry brings in the largest gross revenue, second only to the oil industry the world over. Authors Bird, Koski, and Treaster agree that by the next millennium, tourism will be the largest industry in the world (Bird *et al*, 1998).

Economic advancement, although most important, is not the only benefit of tourism. Tourism can also act as a catalyst for measures to be taken to protect and preserve the environment, cultural heritage, and historical sites of the host community. Revenues from tourism are often used for this purpose (Mieczkowski, 1990). In addition, the tourism industry brings about the development of recreational, cultural, and commercial facilities for use not only by tourists but also by local residents. Finally, tourism can bring about advancements in international education and cross-cultural understanding. Through tourism,



people have the opportunity to learn about the environment, culture, and history of another country or even that of their own (Inskeep, 1991).

The quality of a facility can affect the number of tourists that will visit a particular locale. In order for a facility to acquire a good reputation, it must have the highest quality relative to its cost (Handszuh, 1998). According to Handszuh, quality in tourism means satisfying all justifiable expectations and terms of the tourist at a reasonable cost. This is accomplished by following quality determinants such as safety, sanitation, accessibility, and service (Handszuh, 1998).

Tourists will assess a facility based on their impressions and comfort (Handszuh, 1998). One way that a tourist facility can improve the opinions of its visitors is by providing a familiar environment. Handszuh suggests that facilities use brand names, quality labels, and certification to make customers feel at home (Handszuh, 1998). A bilingual staff also can be helpful because visitors are more comfortable speaking in their own language. Behavior of the staff at a facility can also affect the tourists' perspective. Most tourists expect friendly, helpful staff members at any good facility (Handszuh, 1998).

To have a good customer base, tourist facilities must consider the tourists' perception of quality at the facility (Handszuh, 1998). If customers do not enjoy their stay at a particular attraction, they will not return, and they will not recommend the facility to other potential travelers. To ensure a better tourist market, the facility needs to make a firm commitment to providing the best possible quality from the tourists' perspective (Handszuh, 1998). Furthermore, if a tourist's stay is unpleasant, they may fail to appreciate the cultural and historical aspects a site has to offer.



One economic benefit of tourism is the market for hotels. In early 1997, the Department of Labor stated that hotels in Puerto Rico employed a total of 12,750 people. All of these people work either in the hotel itself, or in a facility that caters to tourists (Estudios, 1997). While this is a significant number of people, there are also a number of indirectly related jobs in associated industries throughout the entire economy. For every 100 jobs attributed directly to the hotels, there are 178 indirectly related jobs created in associated industries and 210 jobs created throughout the economy. Some of these indirectly related jobs include handicraft artists, travel agents, taxi drivers, and restaurant personnel (Estudios, 1997).

Beyond the direct and indirect employment benefits that tourist hotels provide, there are also direct and indirect ways in which tourists spend money at hotels. Tourists spending money in hotels and restaurants is one example of direct tourist spending. The recipients of direct expenditures may, in turn, spend the money on businesses that support the tourism industry (Estudios, 1997). For example, a taxi driver who drives tourists around San Juan might use his earnings to purchase a new taxi, thereby creating an indirect impact on the economy. Indirect impacts are more subtle and harder to track. The indirect impacts of tourist expenditures are called multipliers, which re-circulate through the economy stimulating its growth.

The government of Puerto Rico collects taxes on a large variety of activities related to tourism. Some of these activities include taxes on the use of hotel rooms, levies on casino income, taxes on airline fuel, and levies on aviation gasoline. Additionally, income tax on employment and labor income supplies the government with a steady flow of revenue (Estudios, 1997). The government gives over half of the tourism related tax revenue to the



educational system, mainly benefiting the University of Puerto Rico and the government's educational fund. The remainder of the collected taxes used for the promotion and regulation of tourism itself (Estudios, 1997). A chart of this revenue is found in Appendix C. Overall, approximately 210 million dollars is collected from tourist-related activities in Puerto Rico (Estudios, 1997).

Despite expectations of slow growth caused by several extraneous factors such as various industry related changes in the law, an increase in the minimum wage, and slow growth of the U.S. economy, the economy of Puerto Rico showed strong performance in the tourist industry in the 1996 fiscal year (Estudios, 1997). Tourism represents six percent of the island's economic income. From 1993-1997, the total employment increased at an average of 3.9 percent per year. Possibly a more important indicator is electric energy consumption, which is considered to be a highly precise and unequivocal indicator of the overall health of the economy (Estudios, 1997). The electric energy consumption in Puerto Rico rose 5.4 percent in residential areas, 5.2 percent in commercial areas, and 3.0 percent in industrial areas. This created an overall increase of 4.5 percent across the island (Estudios, 1997). In 1996 alone, non-farm employment enjoyed a 1.5 percent rise and hotel registrations increased 8.7 percent. All of these indicators show that the economy, influenced by tourism, is strengthening in Puerto Rico (Estudios, 1997). Charts of statistical increases in various tourist-related areas are in Appendix C.

There are a variety of tourist attractions that help to increase the amount of revenue brought into Puerto Rico. Two types that are especially important to this island are historical and environmental attractions.



Historical sites, fundamental in giving visitors a sense of a people's cultural heritage, can range from a museum like El Museo de las Americas to an entire historical region such as Viejo San Juan. Trends in tourism show that tourists are attracted to areas unique in architectural history and buildings of historical importance, for example, La Catedral de San Juan, the oldest church in the western hemisphere, or La Fortaleza, the governor's mansion (Mieczkowski, 1990). Other historical attractions include places where historical events took place like battlefields, forts, or sites where explorers landed, such as El Morro or La Fortaleza de San Cristobal (Goeldner & McIntosh, 1984). Because most historical sites are not confined to one area, a popular method the tourism industry uses is the historical tour. During the tour, tourists visit several sites and tour guides explain the points of historical interest (Coccosis, 1995). Learning about a nation's past is instrumental in understanding a nation's people.

In a very broad definition, environment is all of the natural as well as societal surroundings of people. In many cases, part of the reason tourists go to a certain region to vacation is the flora, fauna, or natural landmarks. For this reason, tourist establishments should be integrated with the environment so that there is a neutral or even positive effect upon it (Inskeep, 1991). The problem with this rule of thumb is that often popular tourist areas are located in vulnerable environments such as islands, coastlines, or archaeological sites. In Puerto Rico, this is the case with El Yunque and the phosphorescent Mosquito Bay. The planning necessary to smoothly integrate all of these variables becomes harder and more time consuming (Bull, 1991). One view is that tourism or any other kind of long term development cannot maintain viability unless economic and environmental factors are joined



for the benefit of the natural resources and the people themselves (Inskeep, 1991; Nelson, 1993).

Local residents are a key ingredient in successful tourism markets. The community that works well for locals will work well for visitors (Murphy, 1985). Site and facility assessments, graphic identification systems, identification of development opportunities and constraints, and image analysis are used to identify those characteristics that are uniquely attributed to a specific place or environment. These techniques can be used as a basis for tourism planning in the area. This reinforces the fact that the environment, in its broadest definition, must be recognized as that which attracts tourists to a location in the first place (Inskeep, 1991; Coccossis, 1995).

In the tourism industry, environmental attractions are very important. They form the basis for attracting other facilities and therefore tourists (Inskeep, 1991). At environmental sites, there typically are not a large number of displays. The exhibits are all around; in fact, the tourist is walking through an exhibit constantly. For this reason, environmental tourists tend to be of a different sort. They should be motivated by a respect for wildlife and other natural resources, which must be protected. In this way, local natural resources will survive for future tourists to enjoy (Inskeep, 1991).

Natural facilities can be as large as El Yunque, the only tropical rain forest in the U.S. forestry system or as small as the coral reefs off the island of Cayo Lobos. Whatever the tourist's interest, be it marveling at natural phenomena like the phosphorescent Mosquito Bay in Vieques, to photographing wildflowers in the Botanical Gardens of the University of Puerto Rico in Rio Piedras, it must always be remembered that those environments are



fragile and must be treated with care (Gunn, 1979; Inskip, 1991; Nelson, 1993; Coccossis, 1995).

An important point the tourist industry must consider when studying tourist attractions is their preservation, whether the site be historical or environmental (Inskip, 1991). Many measures have been taken by governmental agencies and foundations to preserve these sites. Governmental tourism organizations determine what types of measures need to be applied for the preservation of specific sites (Inskip, 1991). For example, the National Park System protects over 300 national parks, monuments, and historical sites in the United States. Without the National Park System, Bird (1998) speculates that the tourism industry would have turned Old Faithful into more of a “circus attraction” than a natural wonder. A similar situation has actually occurred in Puerto Rico at Las Cuevas de Camuy. There, the owners surround a natural wonder, a small cavern, with an amusement park.

Some experts say the first factor that should be considered for many large sites is the visitor facility. They suggest that these facilities should be confined to one area in the form of a visitor’s center (Nelson & Wall, 1993). According to Coccossis (1995), this center should be located outside the site near the main entrance, so it does not impinge on the features of the site. Experts also suggest that the site be preserved in its natural setting. Proper planning will prevent the construction of other buildings or facilities near the site (Mieczkowski, 1990). For sites where this is not possible, such as historical districts in a municipal area, some authors suggest that commercial enterprises and tourist facilities be located within the buildings of less historical importance while the sites of greater importance are preserved (Inskip, 1991).



Planners also consider the tourist capacity of a site. Authors suggest that a site should have easy access to entrances and exits and should be designed so that it is never congested. Excessive congestion of a site could cause its deterioration (Hausner, 1981). It is also common practice to take extreme precautions to prevent access to fragile artifacts through use of glass cases, fences, and so forth. (Coccossis, 1995).

At the highest level, perhaps the most important quality of a well-planned site is that it promotes cultural appreciation and is educational (Mieczkowski, 1990). Mieczkowski (1990) suggests that signs be utilized for explanations of each site, that maps and brochures be readily accessible, and that a knowledgeable, well-trained, multi-lingual guide be available for tours. Inskip (1991) tells us that upon entrance to any site, tourists should also be well informed of any rules and regulations such as, “No Smoking,” or anything that might lead to cross-cultural misunderstandings. In order to be a truly excellent facility, tourists visiting the site should have the opportunity learn while enjoying their exposure to a new culture.

Bull (1991) notes that some facilities use interesting methods to keep the tourist entertained as well as educated. Some sites utilize animation such as robots or mannequins decorated with historical artifacts in order to recreate a scene. For example, El Museo de las Americas has mannequins dressed in traditional costumes from the past five centuries of various American countries. Other sites establish a feeling of authenticity by reproducing scents and sounds. The Ramon Power y Giralt House in Viejo San Juan has a display of various birds, where tourists can listen to the different bird calls and identify the bird as the corresponding light illuminates next to it. Another approach often used to capture the tourist’s attention is the participation of the tourist in an activity at the historic site. This





approach could be applied to some of the sites in Puerto Rico. For example, allowing tourists to participate in a ceremonial dance at the Tibes Ceremonial Center would be a nice feature. A newer technique found at larger sites is the use of sound and light shows. The most common approach to entertaining while educating is the use of the site as a stage for a dance, drama, or musical performance related to the period of that site (Goeldner & McIntosh, 1984; Casiano, 1998). Many of the sites in Puerto Rico use movies to convey information while at the same time entertaining; however, a live performance would be a pleasant addition to any of these sites. “Living” museums, where the staff dresses and acts like a historical character appropriate to the locale might be tried at some Puerto Rican sites.

In order to maintain tourist satisfaction as well as the preservation of historical and environmental attractions, experts strongly suggest monitoring of the site (Inskeep, 1991). This monitoring helps to prevent negative sociocultural and environmental impacts of the tourist industry from affecting the site in an adverse manner. Frequent monitoring of facilities and services allows for adjustments and improvements to be made before any irreversible damage can be done to the site (Goeldner & McIntosh, 1984). This project team is an example of such monitoring efforts.

## **2.1 Improving the Tourism Industry through Research and Planning**

To be able to improve the tourism industry, facility owners and developers should, of course, begin with research and planning (Handszuh, 1998). The following sections will explain why planning is needed, describe different methods of research, and show how technology is used in this research.



Strategic planning is an important part of the tourism industry because a well-organized industry can benefit the economy of an entire community. According to Hausner (1981), interaction between travel facilities and travelers is a key aspect, which requires integrated planning in order for the tourism industry to be successful. For a hotel to thrive, there must be a tourist attraction that will draw visitors to stay at the facility; and for a tourist attraction to benefit the economy, there must be a facility in which travelers can stay. The delicate relationship between these two concepts demonstrates the need for planning in tourism (Hausner, 1981).

Community harmony is another area in which planning proves to be valuable (Hausner, 1981). A well-traveled city, that is, one through which many tourists pass, should not be one that has few permanent residents. What a tourist learns from the museum of a country should enable that tourist to interact better with the locals. As Hausner (1981) suggests, businesses should not focus only on the tourist's needs, but also on the needs of residents. Otherwise, the economy will suffer during seasons of minimal travel, when businesses that do not cater to the community's needs will have little or no income. Tourism planning could help eliminate this type of problem by developing a design that will benefit both tourists and residents (Hausner, 1981).

Comprehensive planning can be helpful for acquiring funding for the tourism industry. Hausner (1981) indicates that investors are more willing to provide funds for an investment in which analyses and forecasts predict a successful end. Additionally, planning research will help provide the information to satisfy specifications for grants and loans from public funding agencies.



Potential growth of a tourism industry should also be considered during planning according to Hausner (1981) and Murphy (1984). Businesses dependent on tourist money need to obtain adequate market information in order to flourish. Without this knowledge, small retail and service firms are likely to fail (Hausner, 1981). Hausner (1981) indicates that managers should conduct the proper research in order to plan an appropriate market strategy for a successful industry. To avoid weakening the community economy, he postulates that prospective businesses must research the potential growth factor.

Research is a fundamental aspect of planning. To find the background information needed to make a reasonable plan, the planners must use certain basic research methods. One commonly used method is a survey, or questionnaire (Hausner, 1981; Murphy, 1984; McIntosh & Goeldner, 1984). In order to make recommendations for the improvement of tourist facilities and services, each existing tourist facility should be surveyed and evaluated based on its type, extent, and potential for development. (Inskeep, 1991). These surveys can be conducted by several methods, including factual, opinion, or interpretive surveys, which are defined below (Hausner, 1981; McIntosh, 1984; Murphy, 1984;).

A factual survey is composed of questions that the respondent can answer with factual information. This type of survey can be useful for collecting numerical data such as the number of people who visited a particular attraction (McIntosh & Goeldner, 1984). However, a factual survey cannot be used to rate a facility. A survey in which respondents make appraisals is an opinion survey. With this type of survey, respondents can indicate which tour package is most appealing, or they can rate hotels in order of preference (McIntosh & Goeldner, 1984). When respondents answer why they chose a particular package, the survey becomes an interpretive one.



The planners must determine which type of survey is the best method for finding the information they are seeking. Personal interviews can be useful because they are flexible in nature. Interviewers can re-word a particular question if the respondent does not understand it. They can also introduce additional questions prompted by a respondent's answers (McIntosh & Goeldner, 1984). According to Inskip (1991), the proper evaluation of facilities and services would include tourist attitude surveys and personal interviews with managers of hotels, restaurants, and other tourist enterprises.

Researchers can use many different ways of gathering information. Aside from personal interviews, other approaches include telephone, mail, and Internet surveys. Telephone surveys are arranged more easily than personal interviews and are usually conducted more rapidly (McIntosh & Goeldner, 1984). However, phone surveys tend to be less flexible than personal interviews and are sometimes too brief to be useful to the overall research (McIntosh & Goeldner, 1984).

Mail surveys are another option for researchers. This type of survey is generally low cost and can cover large geographic areas. In this respect, mail surveys are superior to telephone surveys and personal interviews because a telephone survey covering long distances would become too costly, and conducting interviews at great distances becomes unrealistic (McIntosh & Goeldner, 1984). Mail surveys are also more convenient for respondents because they can choose when to fill out the survey. An obvious disadvantage to mail surveys is that there may not be an adequate response. Without personal contact, there is no way for a researcher to ensure that the respondents will return the survey (McIntosh & Goeldner, 1984). Providing an incentive is one way to encourage respondents to complete the survey, but it does not guarantee a response (Lang, 1990).



Internet surveys are the newest technology for gathering survey information. The advantages and disadvantages to this method are similar to the mail survey technique. Respondents can fill out the questionnaire when it is convenient for them, and it is a low-cost process. Internet surveys can reach people all over the world, creating a wide range of respondents (Lang 1990). However, these surveys are limited to respondents who have Internet access, and this group may not reflect the total respondents with the market potential to travel or buy tourism products. Researchers would have to consider that Internet users might have a different response than other tourists, introducing a response bias (Lang 1990). According to Lang (1990), Internet surveys are most effective when used in conjunction with other types of survey.

In order for the tourism industry to be beneficial to society, the basic parts of the tourism system must work together. This can be accomplished through planning, research, management, and development. Inskeep (1991, 17) defines tourism planning as:

*The application of conceptual thinking and good judgment by decision-makers, the communication and utilization of the latest information and technology, and the involvement of principal actors in the development of physical resources and programs for the several goals of tourism.*

Tourism planning is done mainly by tourism organizations. The essential task of these organizations is to plan, develop, market, coordinate, and manage tourism in a country or region. Organizational structures for planning and development of tourism include public and private organizations at the regional, national, and international level.

Tourism experts agree that normally it is the task of the governmental system of a particular region or area to assume the responsibility of tourism planning (Inskeep, 1991). Its job is to establish policy in planning, maintain facility and service standards, aid in marketing



and advertisement, and preserve the quality of its historical, cultural, and environmental assets (Goeldner & McIntosh, 1984).

## **2.2 Advances in Tourism through Use of Databases**

A database is a collection of information stored in a computer-accessible form. The data collected can be anything that the database creator deems important. The information is categorized logically to make the database useful. Most databases are word-oriented, meaning that the database contains words, phrases, and sentences. Number-oriented databases are less common and are mainly for statistical use. Few picture-oriented databases exist, and they are highly specialized to compare images and colors.

Generally, databases are used to access information about a particular topic. There are both public and private databases. Private companies may use internal databases, which can be used only by employees. Other databases are intended for public use, such as a library database (Frank, 1988). Public on-line connections allow people to utilize databases that are provided by on-line vendors. Most public databases have integrated software tools that access the database information, making the database user friendly. However, some private databases lack a software interface and can be accessed only by using a database query language (Frank, 1988).

Databases play an important role in the business world today as they did in 1988 when Frank commented on their role. According to Frank (1988), almost every type of business utilizes databases in some form to help organize information about its company. In many professions, databases are used to track management systems containing employee data, business records, and product information (Frank, 1988). Banks use databases to track



customer account information, stores use databases to track inventory, and schools use databases to track student information and class schedules. The applications of databases are so numerous and varied that databases have become useful to almost every industry (Frank, 1988).

Tourism is another industry in which the use of databases is applicable. Some tourist companies have developed product databases containing destination data and customer data, known as destination databases (Archdale, 1994). These databases are used to log information about the industry: prices, locations, facilities, and availability. The resulting databases can be used in a variety of ways. Some are intended for visitor servicing and provide destination-based information to potential tourists. Others are used at a professional level to provide tourism and travel information to companies. More advanced databases include a reservation system for business use, and the most fully structured databases incorporate all of these features into a single destination database (Archdale, 1994).

Tourism companies can also use databases to track information pertaining to the industry. Organizing data about the tourist market in a specific community can be extremely helpful in developing and improving business. Tracking data about present and potential travel customers will help determine the current market and help find a model for marketing to new customers (Hausner, 1981).

Demographic variables are extremely important in identifying the current tourism market (Hausner, 1981). The database can include fields containing information about characteristics such as marital status, family size, and children's ages of tourists who travel as families. The age, occupation, education, and income of tourists are other significant demographic fields to track (Hausner, 1981). Geographic information about travelers is



another important database category. The tourist's origin and destination, the regional distribution of the tourist population, and the number of urban versus the number of rural tourists can be included in the geographic category (Hausner, 1981). Behavioral data also could be included in the database. Mode of transportation, trip activities, trip length, season of the trip, and travel companions are all items in the behavioral category (Hausner, 1981). Reasons for travel, influences on choice of destination, and key factors for choosing a destination are sociological aspects, which could also be included in a tourism database. Each category gives information that can help the tourism company define its tourist market and develop a better understanding of travelers' needs. When enough data has been collected, the company can begin examining consumer patterns and utilizing the database to improve the tourism market (Archdale, 1994). The information gathered for this project includes information on many of these areas.





### 3.0 Methodology

The following chapter discusses our methodology for obtaining information about the quality of the Puerto Rican tourist attractions that we visited and our procedure for analyzing our results. When speaking about the quality of a site, we are referring to the physical cleanliness of the site, the knowledge of the facility staff, and the conveyance of the history and culture of Puerto Rico to the tourist. The goal of this project was to recommend strategies to facilitate the development and maintenance of tourism quality in Puerto Rico. To meet the goals of this project, we conducted telephone interviews, surveyed tourists, and observed employees and owners or managers of the establishments. We also conducted background research on each location to find out a little more about how it represents the history and culture of the island. The purpose of the surveys and observations was to collect data to determine whether the basic quality standards expected by the Puerto Rico Tourism Company were being met. As we collected data, we entered it into a database. After the database was complete, we used a statistical analysis software package, SPSS, to analyze the data. From this analysis, we reported on each site and made recommendations for possible improvements.

The locations were chosen by the Puerto Rico Tourism Company because the sites selected are endorsed by them. Our project's goal was to assess them to find out if they are keeping the high standards that the company expects.

We completed background research in and around Worcester, Massachusetts. Prior to conducting interviews in Puerto Rico, it was necessary to gain a better understanding of the methodology for administering tourist surveys. We sought the expertise of survey



preparers at establishments similar to those we later visited in Puerto Rico. We visited both Old Sturbridge Village and the Worcester Art Museum. Each facility gave us useful advice on how to form and administer a successful survey. A summary of these interviews is in Appendix D.

In order to collect data concerning the quality of the facilities we visited, we used three different research methods. First, we conducted a telephone survey for each facility, which helped us to determine the helpfulness and ability of the staff to answer questions. Second, by a direct observation of the facility operators and the facility itself, we recorded our own impressions, which we used as a part of our evaluation. Last, we administered surveys to tourists to evaluate their opinions about the quality of the facility and service provided. All of these methods were used to evaluate facilities in both a qualitative and quantitative manner.

Once we had developed a first draft of our survey, we conducted a pretest. This means that we administered the survey to a test group similar to the target audience. From the pretest, we gathered valuable information about the survey.

Pretesting of the survey that was used to evaluate the tourists' opinions was done in Worcester, MA. The survey was administered to classmates at Worcester Polytechnic Institute. Students indicated which questions on the survey were ambiguous or difficult to understand. The appropriate changes were made to the survey according to the suggestions made by the students. Admittedly, this is not the ideal way to test a survey because the people we tested it on were not tourists, but by having the survey complete and revised when we arrived in Puerto Rico, we were able to start surveying our locations immediately.



To better find out how the staff of facilities are able to answer questions, we called each location and asked them a series of questions pertaining to hours, location, and reservations. We pretended to be tourists looking for information prior to a visit. After asking the employee our list of questions, we evaluated them using our survey. We used a scale of 1 to 5 to rate factors such as: the employee's knowledge of the facility, bilingual ability, enthusiasm, and explanation of health and safety issues. We also noted details such as: how difficult it was to reach someone who could answer our questions, how long we were put on hold, and how many times we were transferred. This assessment gave us an idea of how prepared these facilities are to answer and cater to the questions and needs of tourists. This is important because a phone call is often the first or second impression the tourist makes about the facility. If this impression is unfavorable, the tourist may decide against a visit. Appendix B contains a copy of our telephone survey.

To evaluate the staff and the facility, we directly observed the behavior of employees and noted qualities of the facility. We then recorded this information on our own observational surveys. Direct observation is an area in which objectivity can be difficult to achieve (Hood, 1992). An observer should not allow personal feelings or expectations to influence the measures. For this reason, when assessing the staff, we developed a standard list of behavior qualities to be measured. We based this list on sample lists from experts we interviewed. With this precisely defined list, there was less room for subjective measurement. Appendix B contains the checklist of behaviors that we measured.

At the end of each visit, we completed each of our own observational surveys without discussion to prevent skewing our opinions. We analyzed data from these surveys and



entered the results into the database. We also used the information from these surveys to help us report on our feelings and perceptions about each of the sites we visited.

To gather tourists' opinions about each facility, we used the self-administered survey technique. We gave surveys to the tourists of the facilities in Puerto Rico. The purpose of the survey was to determine whether the tourists enjoyed their time at the facility and their opinion of its quality. Concerning the facility staff, we addressed the issues of how knowledgeable, friendly, and helpful the employees and managers were toward the tourists. We also investigated the bilingual ability of the staff and the quality of the facility, such as sanitation, food, and ease of access. Tourists were also asked to comment on how they enjoyed their visit, what could be done to improve their visit, and what they learned about Puerto Rico from their experience. These opened-ended questions, although difficult to analyze, provided useful anecdotal information contained later in this report. A sample of our survey can be found in Appendix B.

In order to determine which tourists were selected to approach for surveying, we used convenience sampling. This means that we approached as many subjects as possible after they completed their tour of the facility. We did not target any specific age, sex, or nationality group. However, we included demographic information in the survey so that we could place the data into these categories when we performed our statistical analysis to determine whether our respondents represent a broad section of the traveling public.

Convenience sampling was the best method for our research because we had a limited amount of time at each facility and we could not be sure in advance how many visitors would be there on the particular day we decided to visit. If we had decided to use random sampling,



we would have had to devote more time to each facility to gather enough responses, and we would not have been able to conduct research at as many facilities as our project entailed.

We created a database of our survey results at the end of each surveying session. The following sections describe how we used the database. All references to Fowler below refer to data entry into statistical packages. We used similar methods to enter our data into a database. The database program we used to do this was SPSS. The database stored the information obtained from our project in an organized fashion and allowed for easy data retrieval. The process we used for devising our database consisted of four main steps: organizing the data, designing codes, coding, and data entry.

Data was organized into categories according to the question topics on our surveys. For example, age, sex, and nationality would represent three different variables. A database uses what is called a serial identifier to recognize each category. Fowler (1988) suggests that each column on the database should contain only one variable and the serial identifier for that category should be placed in the same location on each line. Data entry is also easier if the variables are placed in the same sequence as they appear on the questionnaire (Fowler, 1988). The way we entered the data was to make each question a column and each survey a row. This means that each respondent's answers to the different variables were contained in a single row.

We used numeric coding for our database. A numeric code is a number that corresponds to a response of a survey question. It represents the value a respondent assigns to a particular variable. Codes are necessary for a database because a computer can only recognize numbers. The response that corresponds to a particular code is irrelevant to the computer.



An example of a numeric code would be coding the response “strongly agree” to be 1. If the question or variable under observation was the first column of the database and the response to that question was “strongly agree,” the person inputting the data would put a 1 on the first row. The serial identifier, described in the previous section, would recognize the number 1 as the response “strongly agree” for that particular question. A code should also be assigned for the response “other.” In this way, if there is a response that does not have its own code, it can be assigned to the “other” code (Fowler, 1988).

Fowler (1988) suggests that a variable should not have too many values. If there are too many values, and respondents are equally likely to select them, then it is likely that the frequency of values chosen will be too low to perform a good analysis. On the other hand, not enough values for each variable could hide important differences among respondents. Finally, Fowler (1988) notes that the rule of thumb to coding is that each coded response can have one, and only one number. We cannot have two different numbers represent the same response (Fowler, 1988).

The first step of data entry was translating the responses from our questionnaire into their respective code numbers. It was convenient to translate each completed questionnaire onto its own coding sheet before data entry. A coding sheet is simply the questionnaire translated into its code form. Once this was complete, the code sheets were entered into the database.

Once data entry was done, the input needed to be checked by a process called data cleaning. We did this to assure that the correct codes were entered in the correct sequence. We cleaned our data manually by having another person check the data entry of the person who entered it originally.



various categories such as historical, religious, and recreational allowed us to compare differences between categories.

Responses to satisfaction surveys use many questions whose answers will be Male or Female, Yes or No, age ranges, or scales of 1-5 (Chen *et al*, 1998). When dealing with unfamiliar data, it can be difficult to remember what every coded answer represents. Often it is more intuitive to work with words rather than numbers (Bitgood, 1988). The SPSS Data Editor can show data in words or labels in place of numeric codes. For example, instead of listing a response as one or five, the program displays the label values, “Strongly Agree” or “Strongly Disagree”, in place of the codes. Using SPSS, our calculations are quick because numeric values are used, but we also have the benefit of viewing the labels on the screen, so we can better understand what is being analyzed (Chen *et al*, 1998).

For many reasons, survey respondents did not always answer every question. Missing responses occurred when a question was not applicable, a respondent refused to answer, or the respondent simply did not know the answer. Gaps in the data influenced the analysis and results.

When responses were missing, SPSS normally will disregard them in the analysis to produce accurate and meaningful results. It allowed us to compare percentages with and without missing values to see the difference. We had the choice of eliminating different types of missing data during analysis, so we could find and understand differences among respondents who answered “don’t know” instead of “not applicable.” SPSS looks at responses on a question-by-question basis, and can include a survey respondent’s answers only for those questions with a valid response (Chen *et al*, 1998).



The impressions of tourists differed among groups. Before we could make recommendations, it was important to identify where the differences occurred and their magnitude. By identifying key differences, we were able to direct our efforts where they would be most valued. We looked for relationships among variables, uncovered hidden trends, and made recommendations to satisfy different groups of tourists.





## 4.0 What is Puerto Rico?

Few tourists will come to Puerto Rico with adequate knowledge and understanding of who Puerto Ricans are as people. Most visitors only know the island as a place where they can soak up sun. But after visiting this island of enchantment, tourists will realize that Puerto Rico is rich in culture and history.

Almost every Puerto Rican one meets owns a Puerto Rican flag and displays that flag proudly whether it is hanging in their home, they are wearing it on their clothing, or wearing it as a piece of jewelry. The flag is flying everywhere because Puerto Ricans are proud of their island and their flag symbolizes their pride.

Puerto Ricans love their island and rightly so. The Puerto Rican culture is a unique one that cannot be found anywhere else in the world. It is a unique mix of Spanish, American, and Indian cultures. Looking around Puerto Rico, one can identify bits and pieces from each of these. The architecture of the brightly colored homes in Old San Juan is representative of that found in Spain. This represents the epoch of history when Spain ruled the land. Just next door one can see a McDonalds within one of these Spanish buildings, which demonstrates the more recent American influence. Remnants of the Taino Indian era is also evident here. As people drive through the Condado area to Route 26, they cannot miss the colorful mosaic of the Taino Indians playing batey.

Not only is the island diverse but so are its people. Puerto Ricans could never be identified by their color because all Puerto Ricans are different. Some are lighter, showing a more Spanish appearance, while some are tanner reflecting the Taino blood that runs through their veins. Others are darker displaying an African descent. Because of this diversity, one



may notice that racism is not a major issue in Puerto Rico. People here are not black or white; they are simply Puerto Rican and proud of it.

Language is another indication of the island's distinctive richness. Spanish obviously was adopted from Spain, however today there are two official languages: Spanish and English. Watching TV, one will find that some channels are in English while others are in Spanish. Better yet, one can be watching a show in English and the commercials are in Spanish, or vice versa. One cannot forget the Taino contribution to the language. Many of the cities and towns of Puerto Rico have Taino names like Mayaguez, Caguas, and Utuado. Words like hammock and hurricane are also of Taino origin.

Music and dance are representative of this blend of cultures.

The beat of the maracas, guiros, and other musical instruments created by the Tainos can be heard in much of the music. One can find this music being played by street musicians while locals dance in the streets of Old San Juan. Enjoying some Puerto Rican food while soaking in the atmosphere will give the best sense of culture available.

Puerto Ricans love to party. Looking at the Puerto Rican calendar reveals that almost every day there is some kind of holiday here, because Puerto Rico adopts the national holidays of both the United States and Spain, while it has its own distinct holidays. While in Puerto Rico, visitors should be aware of the music festivals, bike races, and parades. Not a single day goes by without a celebration.

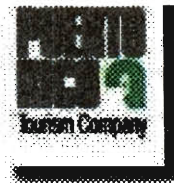
One should not leave Puerto Rico without sampling the local cuisine of rice and beans. Puerto Rican food has a rich flavor, and the best typical food, empanadillas or their famous mofongo, can be bought on the side of the road from Puerto Rican street vendors.



One can also obtain delicious paella from a Spanish restaurant, or an All-American hamburger at one of over 300 Burger King's on the island.

When visitors come to the island, they should not be oblivious to these enriching details. It will take more than a two-hour stop on a cruise ship or a brief stay in the Condado area to really learn what Puerto Rico is all about. But if tourists take the time to explore, they will find a cultural experience never to be forgotten. The experience will be so unique that visitors will be planning to return to Puerto Rico even before they leave.

What follows are some of the ingredients of the enchanting experience that we encountered during our travels to the 27 sites we investigated for this report. The sections are separated according to site classification, that is historical, religious, art, eco-tourist, scientific, and recreational. They are further separated according to site. The sections contain essays of our travels.



## 5.0 Essays About Our Travels

The following sections contain information that we collected when we researched and visited the sites.

### 5.1 Historical Essays

The following sections contain cultural and historical essays about the Native Indians and the Spanish and British history of the Caribbean, along with more recent history of the rum industry in Puerto Rico.

#### 5.1.1 Native Indian History

The island of Puerto Rico was originally settled by Indians and the Pre-Columbian and Archaic Paleolithic cultures from South Africa dominated the land. These were the Igneri Indians that lived during the 4<sup>th</sup> century and later the Tainos. In the 14<sup>th</sup> and 15<sup>th</sup> centuries the Carib Indians settled in the eastern part of the island which they called Boriquen.

Puerto Rican archaeologists have studied the material remains of the different cultures that have lived on the Island throughout history. By the way of archaeological excavations they have discovered the remains of older cultures hidden much deeper in the earth, and more recent remains closer to the surface. The artifacts found tell the story of Puerto Rico's roots. Most Puerto Ricans hold this indigenous ancestry dear to their hearts.



The oldest known archeological sites of the Archaic Indians were found in Cuba. Some are over 6,000 years old. The first evidence of the existence of the Archaic Indians in Puerto Rico was found in the Maria de la Cruz Cave in Loiza. Other discoveries have been found at Cayo Cofresi in Salinas, in Maravilla Cave in Morovis, and in Angostura, Barceloneta, among other places. The archeological remains of these primitive inhabitants tell archeologists that they lived here for more than 200 years.

Little remains of the first Indians but the coarse writing stones with which they ground their seeds, or tools made with large stones which they used for eating food. Stone chips and scrapers have also been found but time has erased all of their wooden and straw objects. At a later time the Igneri, also known as Saladoide Indian, came from the northeastern coast of South America. Some settled in the Lesser Antilles. They traveled in canoes and conquered the Archaic Indians. The Igneri Indians were farmers who brought with them seed to grow food. They brought casava, a nutritious fruit they used to make bread. Most settled in small coastal villages. The Igneris were among the outstanding potters of the Caribbean. Small baked clay figurines representing women were used in religious ceremonies dedicated to the fertility of the land. The Igneris also worked with stone. They carved hatchets, amulets, and tubular beads for their necklaces, which were made from semi precious stones like jadeite. These stones were believed to be sacred and were carved into small amulets such as bugs and other animals associated with rain to use in ceremonies asking the gods for rain.

Archeologists do not agree on what happened to the Igneri Indians, some believe they evolved to become the Tainos, the Indians the Spaniards met on their arrival to the Antilles. Others believe that the Sub-Taino conquered these Indians. Their culture was very different



to the Igneri in many ways. One difference is noticed in their ceramic work. It does not show the technical or artistic quality of the Igneri ceramic. In both form and technique, the shapes seem cruder and Igneris never used the characteristic red and white paint the Sub-Tainos used. The clay stamps were also characteristic of the Sub-Taino. They were used to print designs on their bodies and small aprons worn by married women. The Sub-Tainos also made small clay figurines representing fertility idols.

When the ceramic art declined, stone, shell, and bone art grew in importance. The shells of the large mollusks they ate for food were carved into utensils, idols, amulets, and jewelry. The Tainos shaped the ribs of the sea manatee into spatulas for their chiefs. The spatulas were used for vomiting. Vomiting was a common practice done for purification before a yearly ritual when hallucinogenic powders were used to communicate with gods and protective spirits. Toward 1200, the Sub-Tainos reached the apex of their cultural development. It is at this time when the Taino culture comes alive.

The Tainos moved inland to the mountains where they built their extensive ceremonial centers of bateys or playing fields for their ceremonial ball game. They lived in villages of small huts made of river weed and straw. These villages were set near the coast or near the interior valleys by the rivers. In the growing plots, women planted casava, corn, sweet potatoes, peanuts, and pineapples. Close to the village were fruit trees of custard apples, papaya, and guava. The Tainos planted cotton, which the women made into their naguas, or loincloth, which married women wore. They also used the cotton to make hammocks. Tobacco was planted for smoking and for use in magic and religious ceremonies.



The Tainos were not only farmers but they were also hunters and fishermen. Hunting was limited to birds and small rodents and iguanas. They hunted the manatee at the river mouth and turtles on the beach. The Tainos carved hard wood to make trays and bowls to hold their precious belongings. They also fashioned rattles, vomiting spatulas and drums. The large hardwood trees were used to build canoes, vital to their mobility as island dwellers. The Tainos were an inventive people with a sharp eye and a skilled hand.

The heart of the village was the batey. The batey was where religious ceremonies, dancing, and singing took place. They also told stories of the gods, the chiefs, and the history of the village here. They wrote nothing down but relied on these ceremonies to hand down their history, cultural traditions, and sacred myths to the younger generation. Some of these myths are still alive today in Puerto Rico and mothers tell them as bedtime stories to their young children.

The batey was also where the Taino ball game was held. The Tainos used a rubber ball, the first seen by the Europeans. The game's outcome had profound meaning for the tribe. Some players wore ceremonial belts. These strange stone belts are very common findings for archaeologists and many can be seen in museums all over Puerto Rico.

Taino society revolved around the cacique that was the religious as well as the military and political leader. The cacique lived in the largest hut, or bohio, in the village and was allowed to marry as many times as he liked. Archaeologists have also found many small stools carved from wood or stone in the area. These were called dujos and were used by the caciques.



Tainos loved to work with stone. They carved in the larger stones at the bateys and on cave walls. Some of their work is still visible in the Camuy Caves. These petroglyphs are among the most important aboriginal expressions of art.

The Tainos were masters of carving wood, bone, seashells, and stones. Their art forms are adapted to these materials. Eventually their technical refinement allowed them to decorate their carvings with inlaid gold, shells, and bone. Small beads were carved in bone, shell, and stone and used for necklaces and belts. The Tainos decorated themselves with these ornaments to attend important ceremonies like the ball games.

All the aborigines in Puerto Rico believed in life after death. Burying the dead was very important process for them. The dead were buried very carefully. The bodies were lowered into a pit after being laid in fetal position. This was done because they believed that when one died they returned to their mother's womb to be born again. Next to the body was placed valuables the weapons and ornaments all to be used in life after death. Bowls of food and water were also there. When the cacique died, he was buried along with his favorite wife. The wife, so it is said, considered it a privilege to be killed and buried with him.

The Tainos were peaceful people and it was rare that they fought. However sometimes they had to take arms to defend their women and towns against the invasion of the Carib Indians. When they fought, they used bows, arrows, and clubs. When the Spanish conquerors arrived, they were received respectfully and hospitably by the Tainos who thought these men on horses were gods. The conquistadors abused the Tainos and enslaved them, forcing them to labor in the mines. By the time the Indians discovered the conquerors were not gods at all but mere mortals, it was too late. Their arrows were useless against Spanish steel weapons. The conquerors hunted them with horses and dogs. Many Tainos





preferred to die instead of being enslaved. The Tainos committed mass suicides, killing themselves and their women and children. Others fled in canoes to the islands inhabited by their enemies, the Carib Indians. The new diseases carried by the Europeans such as colds, measles, and small poxes, greatly reduced the island's remaining Taino population.

At the end of the 16<sup>th</sup> century, the Tainos who had once ruled over the Island were but a handful of men, shadows of their former selves. Their culture had been torn apart and disintegrated. But the blood and the culture of the Tainos did not completely disappear from Puerto Rico. Some manifestations from their culture, many of the words from their language, their crafts, and above all their legendary hospitality are clearly alive in the Puerto Rican culture. All Taino DNA still runs strong in the blood of some Puerto Ricans who possess many of the same physical characteristics the Tainos had. The Taino roots are deeply embedded in the land. They formed the hard, indestructible core of the Puerto Rican identity (Tibes Indian Ceremonial Center Documentary, 1999).

There are many ways that the tourist can learn about the Taino Indians of Puerto Rico. Two ways are to visit either the Asilo de la Beneficiencia Museum in Old San Juan or go out to the Tibes Indian Ceremonial Center. At the museum tourists can look around at the exhibits of Taino artifacts, while at Tibes, tourists walk through a restored Taino Village.

### **5.1.2 Tibes Indian Ceremonial Center**

The Tibes Indian Ceremonial Center is a reproduction of a Taino village. The village was put together in the 1980s using the artifacts excavated by archaeologists in the area. The Center consists of the village, ball courts, and ceremonial fields. Here tourists go on a guided tour through the grounds, and can visit the Archaeological Museum and watch an



educational documentary in the visitor's center. There is also a gift shop and a sitting area where tourists can have a snack or a drink.

The Tibes Indian Ceremonial Center is located near Ponce. One can drive there by taking Route 52 and getting off on Road 503. Because we took a tour operator to the facility, getting there was easy. We have taken Route 52 to other facilities in the area and the route is easy to follow, however once in Ponce, it is easy to get stuck within the maze of one-way streets that are very tightly crowded with parked cars.

Admission to the park is surprisingly inexpensive. Tourists only pay \$2 to enter and they receive a guided tour and full usage of the facility. We feel that the park could charge more without effecting the number of tourists that will come.

Our first encounter with the Ceremonial Center was a telephone interview we administered. The operator who answered had acceptable English skills and could answer most of the questions on our telephone survey/questionnaire. She became confused when we asked about the attire one should wear for this attraction. The other difficulty she had was giving directions. Rather than giving directions, she suggested that when we arrived in Ponce, we stop at the police station and ask there.

We visited the Tibes Indian Ceremonial Center with a small tour group. The facility provides a complete experience with the museum, tour, and video. All informational signs in the museum were in both English and Spanish. The facility itself was very clean and well organized however, there were a few problems. The video we watched needed tracking because the screen was very blurry. In addition, the bathrooms here were in serious need of



improvement. Since there was no running water, the toilets did not flush and the faucets did not run. Also, there were no paper towels or soap.

The tour guide that walked us through the grounds was very informative. He was very knowledgeable about the facility, which was obvious as he could answer any questions from tourists. He gave us some of his own insights on the area rather than just rattling off information he had memorized. The guide spoke English with a strong accent but he was understandable. He had a very good attitude and we felt comfortable talking to him and asking him questions.

The best part of the tour was when we saw some children dressed in Taino costume and performing a ceremonial dance. These children are not there on a regular basis; they were practicing for the anniversary of the Ceremonial Center. The other tourists and we enjoyed this very much. We suggest that this could be included as a part of every tour. Seeing the children made us feel like we had stepped back in time and were actually witnessing the Tainos at their ceremony; it made the experience more authentic and very memorable.



### 5.1.2.1 Tibes Indian Ceremonial Park - 8 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M					
1 The facility met my expectations:	[62.5]	[25.0]	[0]	[0]	[0]	12.5					
2 The following areas were clean:	NA	SA	A	N	D	SD					
Bathroom	[62.5]	[0]	[0]	[0]	[25.0]	[0]	12.5				
Food area	[12.5]	[0]	[37.5]	[37.5]	[0]	[0]	12.5				
Other areas of the facility	[12.5]	[0]	[50.0]	[25.0]	[0]	[0]	12.5				
3 The facility staff was:	SA	A	N	D	SD						
Knowledgeable	[25.0]	[75.0]	[0]	[0]	[0]	0					
Friendly	[37.5]	[37.5]	[25.0]	[0]	[0]	0					
Helpful	[37.5]	[37.5]	[25.0]	[0]	[0]	0					
Bilingual	[50.0]	[25.0]	[25.0]	[0]	[0]	0					
4 Access to the facility was easy:	[37.5]	[50.0]	[12.5]	[0]	[0]	0					
5 The value for the ticket price was satisfactory:	[25.0]	[37.5]	[25.0]	[0]	[0]	12.5					
6 I will recommend this facility to a friend:	[12.5]	[75.0]	[12.5]	[0]	[0]	0					
7 What is the purpose of your visit:	[75.0]	Family Vacation	[12.5]	Business	[0]	Cruise					
	[0]	Honeymoon	[12.5]	Spring Break			0				
	[0]	Other	_____								
8 Gender:	[50.0]	Male	[50.0]	Female	[0]	Mix	0				
9 Age:	[12.5]	under 21	[37.5]	21-30	[0]	31-40	[25.0]	41-50	[12.5]	51-60	0
	[0]	61-70	[12.5]	71-80	[0]	81-up					
10 Salary (US\$):	[12.5]	0-10	[12.5]	10-20	[12.5]	20-30	[25.0]	30-40	[0]	40-50	12.5
(thousands)	[0]	50-60	[0]	60-70	[0]	70-80	[0]	80-90	[25.0]	90-up	



### 5.1.2.2 Tibes Indian Ceremonial Center Comments

**Question #12: What did you like best about your visit to this attraction?**

**8 out of 8 tourists responded:**

- “The history and the dancing children.”
- “Museum.”
- “The historical facts.”
- “Castillo Seralles.”
- “Native American Park.”
- “I enjoyed viewing all of the beautiful plants and trees.”
- “Scenery and the knowledge I learned from it.”
- “Museum, Native American Park, Castillo Seralles.”

**Question #13: What did you like least about your visit to this attraction?**

**5 out of 8 tourists responded:**

- “The bathroom had no running water.”
- “Video at Tibes.”
- “The small space of the building and the narrow road.”
- “The monument.”
- “Not very much to see.”

**Question #14: Describe your overall feelings concerning your visit to this attraction.**

**0 out of 8 tourists responded.**

**Question #15: What did you learn about Puerto Rico from this experience?**

**1 out of 8 tourists responded:**

- “Not acceptable.”

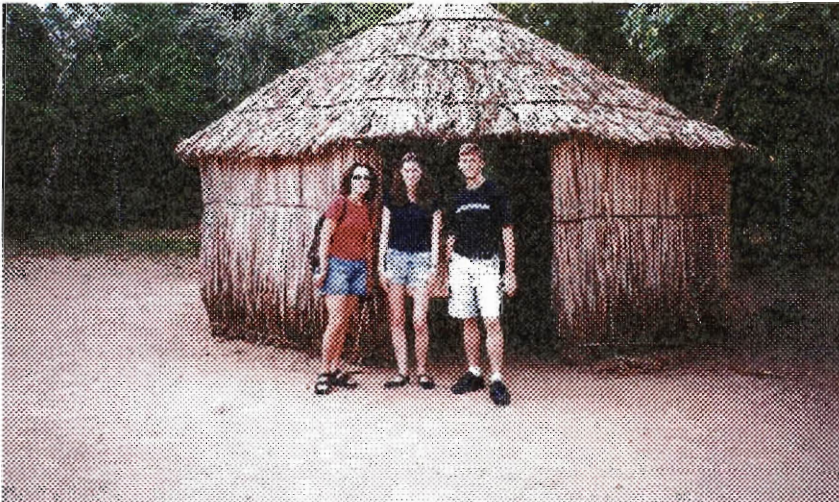
**Question #16: How would you describe your experience to a friend?**

**0 out of 8 tourists responded.**

**Question #17: Other Comments:**

**0 out of 8 tourists responded.**

### 5.1.2.3 Tibes Indian Ceremonial Center Pictures



Kristin,  
Corry, and  
Jessica in  
front of a  
Taino hut  
called a  
bohio



Walkway  
running  
through the  
Taino  
ceremonial  
park



The  
Portuguese  
River in  
Tibes



### **5.1.3 Asilo De La Beneficiencia**

The Asilo de la Beneficiencia is a small museum in Old San Juan that features exhibits and artifacts of the Taino Indians. Because there is no parking in front of the museum, tourists should plan to park in one of the parking garages in old San Juan and walk to the museum. Driving into San Juan is a bit difficult because there is always a lot of traffic. The museum is a small one-room exhibit hall that also offers an educational video.

Our first contact with the museum was a telephone call. The phone was answered quickly by a live operator. The staff here did an acceptable job on the phone. She was able to answer all the questions satisfactorily and had a good attitude.

The building which houses the museum is very large and there are several other offices in there. It is difficult to find which room is the museum. The museum itself is a small one-room exhibit hall. When we walked in it was very dark and hard to see. We did not get to watch the educational video because it was broken, so we went on to the exhibits. The exhibits looked interesting, but we could not read any of the information about them because they were all in Spanish except for one. The museum seemed a little outdated and dirty. In one area there was construction going on and there were tools and a vacuum cleaner left out by the exhibits. Even though the museum is small, it is full of valuable information and beautiful artifacts of the Taino Indians. The museum is free, so visitors really have nothing to lose. Any tourist that speaks Spanish would enjoy it.

Because we were the only tourists present in the museum at the time, we feel it needs to be better advertised. The tour is self-guided. The museum appears to be understaffed. A woman let us in, gave us an informational sheet, and then disappeared. We were left to explore the museum on our own and there was no one available to answer questions.



This museum needs a lot of improvements, which will be difficult to make since it receives no revenue from visitors. The lighting situation and video should be attended to quickly and informational signs need to be in both English and Spanish. Also, a guided tour through the facility or at least a staff member available to answer questions would enhance the tourist experience.





### 5.1.3.1 Asilo de La Beneficiencia - 9 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M					
1 The facility met my expectations:	[0]	[22.2]	[77.8]	[0]	[0]	0					
2 The following areas were clean:	NA	SA	A	N	D	SD					
Bathroom	[11.1]	[11.1]	[33.3]	[11.1]	[11.1]	[11.1]	11.1				
Food area	[22.2]	[11.1]	[0]	[33.3]	[0]	[11.1]	22.2				
Other areas of the facility	[0]	[22.2]	[22.2]	[33.3]	[0]	[0]	22.2				
3 The facility staff was:	SA	A	N	D	SD						
Knowledgeable	[11.1]	[33.3]	[44.4]	[0]	[0]	11.1					
Friendly	[0]	[77.8]	[11.1]	[0]	[0]	11.1					
Helpful	[33.3]	[22.2]	[33.3]	[0]	[0]	11.1					
Bilingual	[22.2]	[22.2]	[44.4]	[0]	[0]	11.1					
4 Access to the facility was easy:	[0]	[22.2]	[55.6]	[11.1]	[0]	11.1					
5 The value for the ticket price was satisfactory:	[33.3]	[22.2]	[33.3]	[0]	[0]	11.1					
6 I will recommend this facility to a friend:	[22.2]	[33.3]	[33.3]	[0]	[0]	11.1					
7 What is the purpose of your visit:	[44.4]	Family Vacation	[0]	Business	[11.1]	Cruise					
	[22.2]	Honeymoon	[22.2]	Spring Break			0				
	[0]	Other	_____								
8 Gender:	[33.3]	Male	[66.7]	Female	[0]	Mix	0				
9 Age:	[11.1]	under 21	[33.3]	21-30	[33.3]	31-40	[11.1]	41-50	[11.1]	51-60	0
	[0]	61-70	[0]	71-80	[0]	81-up					
10 Salary (US\$):	[44.4]	0-10	[22.2]	10-20	[33.3]	20-30	[0]	30-40	[0]	40-50	0
(thousands)	[0]	50-60	[0]	60-70	[0]	70-80	[0]	80-90	[0]	90-up	



### 5.1.3.2 Asilo De La Beneficiencia Comments

**Question #12: What did you like best about your visit to this attraction?**

**8 out of 9 tourists responded:**

“All.”

“It was very interesting learning about the historic islanders and others.”

“Everything.”

“The nature.”

“The attention.”

“All.”

“Everything.”

“The movie.”

**Question #13: What did you like least about your visit to this attraction?**

**3 out of 9 tourists responded:**

“Museum not clean.”

“The video was broken and most of the descriptions were in Spanish.”

“The walking.”

**Question #14: Describe your overall feelings concerning your visit to this attraction.**

**7 out of 9 tourists responded:**

“Good.”

“Very interesting, but make sure you either can read Spanish or go with someone who can.”

“Great.”

“Good.”

“Very good.”

“2 feel good.”

“Very good.”

**Question #15: What did you learn about Puerto Rico from this experience?**

**7 out of 9 tourists responded:**

“History.”

“About the history....people and their lines.”



“A lot.”  
“All.”  
“A few things.”  
“Good things.”  
“Very much.”

**Question #16: How would you describe your experience to a friend?**

**8 out of 9 tourists responded:**

“Good.”  
“A small museum aimed at the historic people and artifacts. Very interesting but hard to understand.”  
“Great.”  
“Good.”  
“Good.”  
“Good.”  
“Fascinating.”  
“Good.”

**Question #17: Other Comments:**

**2 out of 9 tourists responded:**

“Good.”  
“English translations on handouts of descriptions would be helpful.”

### 5.1.3.3 Asilo De La Beneficiencia Pictures



Artwork from  
the Taino  
Indians  
displayed in  
the exhibit  
hall at Asilo  
de la  
Beneficiencia



#### 5.1.4 Caribbean History

The massive walls of Old San Juan tell a story of discovery in a time when treasure was wonderous. New lands were ripe to be discovered and conquered. Colossal sailing ships stretched from one corner of the world to the other and the seas were filled with pirates. Even Cristopher Columbus and Don Juan Ponce de Leon on their second voyage of discovery sailed into this beautiful Caribbean harbor to re-supply their ships for their quest for gold and the elusive fountain of youth. 15 years later, when Ponce de Leon returned, he renamed the harbor Puerto Rico or rich port. Spain was the conquering queen and Puerto Rico her prize jewel, recognized for her strategic location as the gateway to the Caribbean. The shores near the harbor are protected and steep. Craggy headlands rise over 100 feet above the sea surrounded by jagged reefs that provide a perfect natural defense against invasion by both land and sea. Spain's quest was not only to control her new colonies of America, but the endless sea as well. Such a prize as Puerto Rico could not go unchallenged.

At first the native Taino Indians, who by nature were friendly, peaceful farmers, welcomed the white gods from the sea. But as the colony flourished and men exploited the Indians, the Tainos fought for their lands by burning the church in the old capital city of Caparra. Only their fear that the Spaniards were immortal kept the Tainos from full battle. Unfortunately, Caparra was not well located. In 1519, the seat of government was moved to what we now call Old San Juan. Daily rains, cool breezes, and the harbor made it the best and most beautiful site in the entire world. When Ponce de Leon left for Florida to find the Fountain of Youth, he left his family to build Casa Blanca and settle San Juan. Sadly he never returned to Puerto Rico alive. A Calusa Indian's arrow took his life. He was laid to

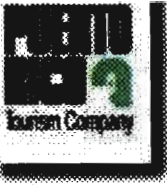


rest in San Jose Church, the oldest church on the island. Later his remains were moved to the metropolitan San Juan Cathedral.

Spain's new colony was not long left undisturbed. The cannibalistic Calibendes of the Lesser Antilles now pushed into the westerly islands with their savage raids threatening Puerto Rico. If Spain did not maintain a strong hold on San Juan she could lose other colonies in America.

The 16<sup>th</sup> century was the great age of the Spanish treasure fleets that carried gold, emeralds, silver, and pearls from the Americas back to Spain. Puerto Rico was the strategic stopover point to the Americas. The most valuable of all the island's treasure was cached in an ancient wooden box, the chest of the three keys. Here, not only were the riches of the city securely locked away, but also the priceless treasures from the fleets moored in the harbor. Today the ancient chest resides in the Seminario Concilidat, the first college institution on the island. Most of the people who became important to Puerto Rico's political history studied at this college. Today, scholars continue to pour over the library's excellent collection of Puerto Rican history. The Seminario Concilidat reflects Spanish architecture at its finest.

Because Spain's goal was to conquer and hold many new colonies in the Americas, she declared the Caribbean a "mali talson" or closed sea. All unauthorized ships were subject to seizure. Of course other countries rejected Spain's monopoly of the sea and angrily disregarded the Spanish ban on foreign trade. Piracy became rampant on all sides often sanctioned by governments. Even in Puerto Rico, many of the king's men who had not been paid for months, joined the plunder, just to survive. Although piracy was altogether unwelcome, trade and bartering was essential for existence. Slaves, farm equipment, and



cloth were exchanged for cattle, ginger, tobacco, coffee, and fruit. Piracy became profitable to colonists, but the threat to Spain was more than pirates. The English, Dutch, and French were fixated on Spain's newly acquired American colony. Their intent was to invade, cut supply lines, attack and occupy. Spain soon realized that in order to defend her other colonies, she needed to fortify Puerto Rico as the gateway or eastern entrance to the Caribbean.

In 1533, city officials gathered to open the honored chest of the three keys to withdraw 400 pesos to begin fortification of San Juan. Construction had not even started before the marauding Caribe Indians attacked. The funds for the fort were depleted in trying to arm the defense. But by 1537 the walls of La Fortaleza began to rise. The fort, with its seven foot thick walls, provided safety for the people of San Juan. But as with Cabarra, the site was wrong. The historian Gonzalez Hernandez de Aldiego wrote back to Spain that only a blind man could have chosen such a site for a fort. Aldiego said, the fort should have been built as a lofty watchtower on el morro, the rocky headland at the entrance to the harbor. Aldiego was right, in 1539, the crown approved 400 pesos to begin work at Castillê de San Felipe del Morro, or Fort Saint Philip of the headland. The Fortaleza was assigned to serve as a residence for the governor and other royal officials.

In 1716, British Gov. Hamilton reported in a letter to the British Queen of the Spaniards that, "one 'man of war' and six sloops came to Crab Island, now Vieques just east of PR. Demanded the surrender of the island to the king of Spain, carried Capt. Haliwell with them, and after landing, killed several of our men. They took several others along with the wives, and children, and as many as 50 Negroes, carrying them all to Puerto Rico." The



governor of Puerto Rico tried to ignore the British demands of restitution and although most of the persons were returned, their effects were kept by the Spanish authorities.

During the British war of the Australian succession, also called Jenken's Ear, there were British intelligence reports as to the military situation in the French and Spanish Caribbean, and inquiries regarding the military defenses in St. Lucia and Puerto Rico. The British all agreed that Puerto Rico had a magnificent harbor, had great richness of soil and timber, and was located in a privileged strategic position in the Atlantic passage to and from Europe. They also recognized the fortifications which protected the harbor. Throughout the 18<sup>th</sup> century there were repeated warnings that these fortifications would make its attack difficult.

William Beckford, a tremendously wealthy absentee planter from Jamaica was a personal friend of William Elder, Earl of Chatham, who had some authority as to the British holdings in the Caribbean. It was Beckford, who was responsible for the decision in 1763 to restore Guadalupe to France and no doubt he had his say in Britain's decision between Puerto Rico and Florida.

British Gov. Sir Ralph Payne's observations on Puerto Rico tell of its condition. Payne explained that due to the little intercourse between the Leeward Islands and Puerto Rico, it was difficult to guess the number of its inhabitants and of the proportion of its militia. He emphasized the small portion of cultivated land and their limited commerce apart from what they could clandestinely carry on with the neighboring colonies. It was presumed that the inhabitants were disproportionate to the size of the island. He reported in a letter that, "As far as the militia preparations in the capital, there are always, as far as I know, two regiments of regular troops which are doubled on any appearance of war, and two companies

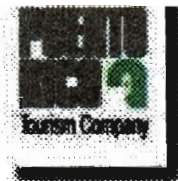




of militia. One of horse, and one of boat. The king and company's ships usually stop a couple of days on the northwest part of the island at Carthagen, Portobello, and La Vera Cruz in order to procure water and provisions, in their passage from Old Spain to Santo Domingo. But there are seldom or never any men who are regularly stationed at Puerto Rico."

The references to Puerto Rico then become scarce until 1774 when Gov. Sir Ralph Payne reported on the island mentioning that the fortifications were exceedingly advanced and the militia being officered by regular officers is very much improved. Gov. Bert of Antigua speaks of the value of Puerto Rico if England could capture it. Gov. Bert proceeded to follow up his recommendations to the king on the taking of Puerto Rico. He wrote the king that, "Should his majesty direct arms being carried against Puerto Rico, a colony by far superior to Jamaica, and in the course of a few years subject to Great Britain, would be of infinitely more value." He received a reply from Lord Jermaine in which it was agreed that Puerto Rico should be taken for England but was very pleased that his proposal had been heard and accepted. In order to gather the best possible information on the state of the island, he undertook a trusted gentleman to Puerto Rico in the guise of an officer appointed to exchange prisoners of war. This was the best ploy he could devise to get a man into the enemy fortifications. For reasons which are not recorded, the intelligence report was not acted upon and no subsequent attack was prepared.

In the 1780s a number of Britain's additional sugar territories were beginning to decline due to soil exhaustion and loss of cheap American supplies. Despite opposition from the planter lobby, a group of sugarcane planters in the British territories, Britain began to search for new sugar territories and her eyes soon fell upon the rich colony of Santo



Dominique in the eastern part of the islands of Hispanola (modern day Haiti). This territory was large, had considerable sugar growing capacity and space to grow its own crops. The idea of obtaining Puerto Rico persisted throughout the negotiations and in a further letter to the king, British Secretary of State for colonial affairs, Lord Shelburne wrote, "I have held the point of Gibraltar so big that the alternative of Puerto Rico may be cached. I thought of myself whenever the time comes for it to be hinted by way of compensation or exchange on the part of your majesty." It was the second major event, the French Revolution, in which appeared to give Britain her opportunity.

France's declaration of war against England in 1793 made her colonies legitimate targets and the prospects of taking Santo Domingo became brighter still. When the French planters were afraid they might suffer the same fate as the rich and powerful in France itself, they asked Britain for protection in return for their allegiance. Seeing this as an opportunity to gain a valuable colony with little apparent effort, Britain readily agreed.

An initial British force was sent to establish a presence there and it was confidently thought that by sending further reinforcements, the territory would soon be secured. The revolution however, had its downside. The Revolution's basic call was for the common people to throw off the repressive yolk of their masters and the slaves of the French colonies were quick to take up the cry. Slaves' rebellions were rapidly organized and these, together with actions by French republican groups in the colonies, and the ravages of the tropical climate on troops newly arrived from Europe, made it quickly apparent that this was not going to be an easy campaign.

The second event that took place in the final decades of the 18<sup>th</sup> century, having a profound effect on the West Indies was the American War of Independence, which robbed



British colonies of their guaranteed supplies and at the same time opened the American markets to their competitors. It was during the treaty negotiations at the end of the American War of Independence in 1783 that Puerto Rico was next mentioned in the British record. Lord Shelburne, Secretary of State for colonial affairs, was a firm believer in free trade, who envisioned the Atlantic Ocean as a common area across which Britain and America should be trading partners. To facilitate this, he did all in his power to cultivate and restore feelings of American goodwill towards Britain. Lord Shelburne and George III had both been toying with the idea of using Gibraltar as bait to induce Spain into exchanging it for some of her valuable overseas possessions. In 1782 the British king wrote to Lord Shelburne indicating that the holding of Gibraltar was quite judicious, and if not taken, I should hope Puerto Rico may be got for it. Spain however, was not ready to accept giving up any of her American empire to regain Gibraltar.

In order to save the situation, the newly appointed British Commander in Chief of the West Indies was Sir Ralph Abercromby. He was ordered in the fall of 1795 to bring an army of 10,000 men to Santo Domingue to quell all opposition and make the colony secure. It was the entry of Spain into the war that seemed to offer a way out. Spain's colonies were now legitimate targets and the decision was made to attempt to take two of them. The capture of Trinidad would remove the Spanish threat to Britain's Windward Islands. But more importantly, the taking of Puerto Rico would provide both large fertile sugar territory and a palace in which to relocate the loyal French planters.

Accordingly, the expedition of the winter of 1796 was given new orders. The British commander Lieutenant General Ralph Abercromby was to assemble a force and endeavor to take both objectives. The British Secretary of State Henry Dundas suggested that to appease



the demands of British planters, he would prefer that Trinidad was attempted first but he left the final decision to Abercromby.

Meanwhile events in Santo Domingue were going badly for the British. The rebellious slaves and their republican allies had the British forces pinned down in a small area near the strong point of St. Nicholas Nole. It was becoming obvious that despite all the money and resources being sent to keep the foothold, their continued presence could not be maintained for much longer. Britain then faced the dilemma of whether or not to honor her promise of protection to the French planters or whether to withdraw and cut her losses.

Owing to administrative problems and unusually bad weather, the expedition to take the territory was delayed to such an extent that there was insufficient time to carry out the mission before having to return to Europe in advance of the summer hurricane season. A further mission was planned for the fall of 1796 but in ensuing months, circumstances changed. Spain, originally Britain's ally against France, declared war on Britain and made peace with France. As part of the peace treaty she agreed to secede to France the eastern half of Hispanola then called Santo Domingo, but now the Dominican Republic, thus giving France control of the whole island.

Spain had anticipated for many years that Puerto Rico would one day fall under attack and she had gone to great expense to prepare for it. In 1765, the Spanish court had decreed that the small island on which lay the capital of San Juan should be heavily fortified. Accordingly, field marshal Alejandro O'Reilly was dispatched to the island the following year to review the fortifications and to institute an ongoing program of improvements. By 1797, these were almost complete and the defenses which faced the English invaders were impressive indeed. In addition, the element of surprise upon which Gen. Abercromby had



relied was lost. News of the fall of Trinidad had reached Puerto Rico and the forthcoming attack was fully expected.

The island's Gov. Brigadier Don Ramon de Castro was a man of wide military experience. He had previously distinguished himself against the British at Pensacola in 1781. He put his experience to good use in making considerable preparations and the defenders were alert and well prepared. He had considered the defense of two entrances to the bay. That on the western side being defended by the castle of El Morro and its outer works, and the eastern entrance on Congrejos Bay by the forts of San Antonio and San Heronimo and their outer works. The fortifications constituted a defense line, the function of which was to repulse the enemy before they could set foot on the island of San Juan itself. It was the eastern fortifications that would form the main line of defense against the British attack. The battle of San Juan Island should more aptly have been called the battle of San Antonio Channel.

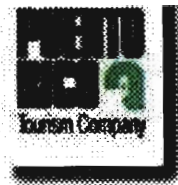
The first obstacle which faced the British on their arrival was made not by man, but by nature. An offshore reef protected the whole of the northern coastline of the island and the British Admiral Henry Harvey had to send out small boats with plumb lines to find a passage through. Although the invaders achieved little on their first day, the defenders were engaged with feverish activity. The general call to arms was sounded, staff conferences were held, and defense plans were put into action. Troops and gunboats were deployed and all the women, children, and elders were ordered to leave the city. Messengers were sent throughout the island to rally fighting men to the call. Hospitals were set up, and food was stockpiled in the walled city. Bodies of troops were sent out with cannons to defend the most likely landing beaches.



The small island on which the city of San Juan itself was situated was at the time an impressive fortress indeed. At its northwesterly point was the castle of El Morro with its three tiers of cannon protecting the entrance to the harbor and bay. A little to the east was the fortress of San Cristobal, which had a system of walls that stretched across the width of the island. Added to this were an impressive array of walls and ramparts that together with the rugged north coast gave no easy spot from which to attack. Further east still were the second then the first line of defense. All well supplied with cannon and placements for troops facing the channel which separates San Juan from the main island were small fortifications of San Antonio and San Geronimo which would see most of the heaviest action in the days that followed. San Geronimo can still be seen today but progress has erased all traces of San Antonio.

By April 30<sup>th</sup>, it was clear to Abercromby that his best efforts were achieving little against the Spanish defenses and that continuation of the attack promised little chances of success. He was also aware that the force gathered for his attack had left the other British Indian Islands severely undermanned and the longer he remained, the greater was the threat to these other islands. Therefore he reluctantly made the decision to call of the siege and cut his losses. He concentrated his men and equipment to give the impression that he was about to mount a significant attack, setting fire to mangroves to cover his movements, whilst actually using the cover of darkness to hide his withdrawal.

When day dawned on May 1<sup>st</sup>, the defenders found to their surprise that the enemy positions had been abandoned and the attackers were hastily re-embarking. By 4 o'clock that afternoon, the last transport had set sail and the following morning, the warships too, weighed anchor and left.



This not only concluded the final British attack on Puerto Rico, but it also signified the end of an era. It was estimated that any worthwhile target in the Caribbean would now require at least 10,000 men, a figure far beyond Britain's means to provide. Thus, she must in the future concentrate on maintaining her current colonies while permanently setting aside any future dreams of conquest in the West Indies. Puerto Rico had left its mark.

### **5.1.5 El Morro**

The Castle of San Felipe del Morro, more commonly known as "El Morro," constitutes a part of the old defense system of San Juan. El Morro is a six-level fortress with walls 18 feet thick located on a rocky chunk of land that juts into the sea. The fortress is outfitted with over 400 cannons and its height is an astonishing 140 above sea level. From its upper level, a view of the San Juan Bay and the Atlantic Ocean can be seen.

Spaniard, Juan Bautista Antonelli, completed the construction of El Morro in 1589. Its architecture is characteristic of the Spanish fortifications of the 16<sup>th</sup> thru 18<sup>th</sup> centuries. It started as a three-story tower and a water battery, the level closest to the water. This allows them two levels of cannon fire from the start, one on the water battery, and the other in the second floor of the tower. Due to the smoke and noise in the tower, the fort was expanded by building the San Barber battery.

By right of conquest, Spain claimed the Caribbean as its exclusive territory to safeguard its new world possessions and maintain its trading monopoly against England, France, and Holland. The fortifications of El Morro and El Conguelo were to protect the city from sea attacks by others. San Cristobal Fort protected against land approaches. The city walls provided additional protection to its population. The fort is considered a masterpiece



of military engineering. In case of siege, the fortress was designed with kitchens, water cisterns, and even chapels. El Morro held against its first attack in 1595 by Sir Francis Drake. However, in 1598, El Morro surrendered to the English forces under the command of the Earl of Cumberland. The English held the fort for three months until an epidemic broke out among their men and over half of them died. Since then, El Morro has never fallen to attack. It held against the Dutch in 1625 and the Americans in 1898.

In 1898, the Spanish American War broke out over the sinking of the *Main* off the coast of Cuba. The US won and Spain seceded Puerto Rico to the United States in the Treaty of Paris signed in the same year. The old Spanish defenses of San Felipe del Morro, San Cristobal, El Caouelo, and the city walls were used then by the US Army for military purposes. The same military reservation headquarters of the US Army Antilles was later known as the Fort Brooke Military Reservation.

In the immediate post WWII years, historians, preservationists, and groups interested in tourism again joined forces to secure the establishment of a national historical site. It was understood that the National Park Service was the most suitable agency to manage the site to conserve unimpaired the cultural and natural resources as well as the values for enjoyment, education and inspiration of this and future generations. In 1948, the Department of the Army and the Department of the Interior, who manages the National Park Service, reached an agreement regarding the future management of the area because these fortifications had exceptional importance to the nation as major monuments in American and Spanish history.

Although the San Juan National Historical Site was established by the Secretary of the Interior on Feb. 14<sup>th</sup> 1949, it remained under the control of the Department of the Army as a part of the Fort (Port) Military reserve until September 1961. The site was comprised by





Fort El Morro, Fort San Cristobal, the city walls, Fort El Conjuela, and Casa Blanca. On Sept. 13<sup>th</sup> 1961, the US Army determined that the forts, the city walls, and El Conjuela were no longer essential to military establishment. And consequently historic structures with adjacent land could be transferred to jurisdiction of the National Park Service. A total area of 36 acres was involved. On El Morro grounds, areas such as baseball fields, golf courses, swimming pools, and housing facilities were dismantled.

El Morro is a majestic historical fort built and used by the Spanish to defend the harbor of San Juan from Spain's enemies during her possession of the island. The fort has four levels of cannon fire and a targeting range of more than 180 degrees around the headland. The tour takes visitors through the parts of the fort that are authentic Spanish construction. Not included are the more recently built bunker and lookout tower of the US Army. It is currently maintained by the National Park Service.

The fort is located in Old San Juan at the northwesterly point of the island. It is most easily found by walking to the top of Cristo Street and through the plaza dedicated to the Taino Indians. From that point, it is a long, hot walk across the strikingly open spaces of the siege field in front of the fort to the entrance.

Tourists can take a self-guided tour of the fort or they can take a park ranger guided tour that lasts approximately 45 minutes. If taking the self-tour, tourists can view a movie about the fort and look around the small museum found in the side galleries of the fourth level of the fort. The lighthouse, maintained by the US Coast Guard, is located at the top of the fort. Unfortunately, it cannot be viewed from the inside.



When we called the fort, we found that they were able to answer all of our questions easily and were very friendly about doing so. One difficulty we had was that the only number listed was for the Puerto Rico division of the National Park Service. This meant that in order to talk to someone at one of the individual forts, we had to call and be transferred to the correct fort.

Upon visiting the fort, we found it to be very clean except for some broken kites laying outside on the field where local children fly their kites in droves every weekend. The fort seemed to be well maintained; however, there was a lack of informational signs and plaques giving information about the different parts of this historic fort. A severe lack of shade at this fort with all of its stones collecting the sun's intense Puerto Rican heat, can be a challenge to the tourist.

Our tour guide Millie did an excellent job of showing us the fort. At times her English was slightly difficult to understand; however, her enthusiasm for the fort made her tour interesting and easy to follow. She referred to areas of the fort that sounded fascinating but we could not see because they were closed off to the public.

Often used as the symbol of Puerto Rico, El Morro is one of our most recommended tours of the whole island. It is of high quality and educational value. To enhance the experience, tourists should be encouraged to visit El Morro in conjunction with the San Cristobal Fort and La Fortaleza. Tourists should take the time to go on the guided tour, as it is very informative; however, if time is of the essence, the view from the fifth level of the fort must be seen.

### 5.1.5.1 El Morro - 19 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M	
1 The facility met my expectations:	[36.8]	[57.9]	[0]	[0]	[0]	5.3	
2 The following areas were clean:	NA	SA	A	N	D	SD	
Bathroom	[31.6]	[31.6]	[26.3]	[5.3]	[0]	[0]	5.3
Food area	[63.2]	[15.8]	[5.3]	[5.3]	[0]	[0]	10.5
Other areas of the facility	[5.3]	[57.9]	[31.6]	[5.3]	[0]	[0]	0
3 The facility staff was:	SA	A	N	D	SD		
Knowledgeable	[36.8]	[31.6]	[10.5]	[10.5]	[0]	10.5	
Friendly	[47.4]	[26.3]	[15.8]	[5.3]	[0]	5.3	
Helpful	[36.8]	[31.6]	[21.1]	[5.3]	[0]	5.3	
Bilingual	[57.9]	[31.6]	[10.5]	[0]	[0]	0	
4 Access to the facility was easy:	[26.3]	[57.9]	[15.8]	[0]	[0]	0	
5 The value for the ticket price was satisfactory:	[57.9]	[42.1]	[0]	[0]	[0]	0	
6 I will recommend this facility to a friend:	[68.4]	[31.6]	[0]	[0]	[0]	0	
7 What is the purpose of your visit:	[68.4]	[0]	[0]	[0]	[0]	[0]	
Family Vacation	[68.4]	[0]	[0]	[0]	[0]	[0]	
Business	[0]	[0]	[0]	[0]	[0]	[0]	
Cruise	[0]	[0]	[0]	[0]	[0]	[0]	
Honeymoon	[0]	[10.5]	[0]	[0]	[0]	[0]	
Spring Break	[0]	[10.5]	[0]	[0]	[0]	[0]	
Other	[21.1]	[0]	[0]	[0]	[0]	0	
8 Gender:	[52.6]	[42.1]	[0]	[0]	[0]	5.3	
Male	[52.6]	[42.1]	[0]	[0]	[0]	[0]	
Female	[0]	[0]	[0]	[0]	[0]	[0]	
Mix	[0]	[0]	[0]	[0]	[0]	5.3	
9 Age:	[10.5]	[26.3]	[26.3]	[21.1]	[5.3]	[0]	
under 21	[10.5]	[26.3]	[26.3]	[21.1]	[5.3]	[0]	
21-30	[0]	[0]	[0]	[0]	[0]	[0]	
31-40	[0]	[0]	[0]	[0]	[0]	[0]	
41-50	[0]	[0]	[0]	[0]	[0]	[0]	
51-60	[0]	[0]	[0]	[0]	[0]	[0]	
61-70	[5.3]	[5.3]	[0]	[0]	[0]	[0]	
71-80	[0]	[0]	[0]	[0]	[0]	[0]	
81-up	[0]	[0]	[0]	[0]	[0]	[0]	
10 Salary (US\$):	[10.5]	[5.3]	[10.5]	[21.1]	[0]	10.5	
0-10	[10.5]	[5.3]	[10.5]	[21.1]	[0]	[0]	
10-20	[0]	[0]	[0]	[0]	[0]	[0]	
20-30	[0]	[0]	[0]	[0]	[0]	[0]	
30-40	[0]	[0]	[0]	[0]	[0]	[0]	
40-50	[0]	[0]	[0]	[0]	[0]	[0]	
50-60	[0]	[15.8]	[0]	[0]	[0]	[0]	
60-70	[0]	[15.8]	[0]	[0]	[0]	[0]	
70-80	[0]	[0]	[0]	[0]	[0]	[0]	
80-90	[0]	[0]	[0]	[0]	[0]	[0]	
90-up	[0]	[0]	[0]	[0]	[26.3]	[0]	



### 5.1.5.2 El Morro Comments

#### **Question #12: What did you like best about your visit to this attraction?**

**15 out of 19 tourists responded:**

- “How old it is and how protected you are inside. Great view!”
- “Movie.”
- “Movie.”
- “Tour guide very informative.”
- “The guide's knowledge. Fort itself.”
- “The history lesson from tour guide.”
- “Unusual design, easy access to all areas.”
- “The history, it show me the history of my home country of Puerto Rico.”
- “My wife and I enjoy historical sights. This is a very well preserved fort.”
- “The history it represents.”
- “A/V Room. Cleanliness.”
- “Old San Juan.”
- “We were able to go to the whole island because of the excellent road (highways) conditions.”
- “Learning about the history of the building.”
- “History, age of facility, imagining what it was like here during the previous centuries.”

#### **Question #13: What did you like least about your visit to this attraction?**

**11 out of 19 tourists responded:**

- “Artillery towers on the grounds smelled like urine.”
- “Steps.”
- “Steps.”
- “I would have liked a longer tour.”
- “The long walk to get there, in the heat.”
- “Not enough signs explaining areas. No guide map.”
- “More guides should be readily available throughout the entire facility to answer questions.”
- “The roads are too narrow.”
- “The time (too short).”
- “Smelly bins.”
- “Lack of guidance or assistance from staff or rangers. Would have liked to hear more about life stories of event.”

#### **Question #14: Describe your overall feelings concerning your visit to this attraction**



**14 out of 19 tourists responded:**

- “I have never been to a fortress. To me being in one had way more impact than reading or learning about one.”
- “Beautiful view.”
- “Interesting history.”
- “Most interesting.”
- “Amazing, awesome, great building.”
- “The tour was excellent. Guide was very knowledgeable.”
- “Excellent, very interesting.”
- “Great!”
- “A good feeling to see a awesome site to visit.”
- “We're glad we came.”
- “Incredible.”
- “I was very excited to see the governor's house.”
- “Very good value and interesting.”
- “Like to make this a "learning" experience for our 3 children, however, no explanations or tour was offered.”

**Question #15: What did you learn about Puerto Rico from this experience?**

**16 out of 19 tourists responded:**

- “That the harbor was very well protected.”
- “History.”
- “A lot.”
- “Highway signs are lacking. Also for ferry.”
- “Lots of history.”
- “History of Spain and US fort.”
- “Spanish history.”
- “Long Spanish history, defense against other European powers.”
- “How Puerto Rico was establish and history.”
- “Nothing that I didn't know already from reading history books.”
- “It has been a sought after island by many other nations.”
- “More info. on the war and the fort itself.”
- “That it's as beautiful as they say.”
- “Puerto Ricans like foreigners and appreciate them.”
- “It's got an interesting history.”
- “Same as other sites of interest, that is no help or assistance is offered unless you are in an expensive resort which does not reflect the history and culture of Puerto Rico.”

**Question #16: How would you describe your experience to a friend?**



**17 out of 19 tourists responded:**

“A must see.”

“It was warm, people were friendly and clean.”

“Great.”

“Must see.”

“Historical treasure for western hemisphere.”

“Go see it. Huge fort. They don't build like this anymore.”

“Excellent.”

“A must see, worth the time from a historical perspective.”

“Great place to visit.”

“Great and fun place to visit and to have great time.”

“I would recommend that they visit.”

“Awesome.”

“Unique experience and very educational. Excellent place for a family all day outing.”

“All of my friends.”

“Excellent. The best.”

“A good day out and worthwhile.”

“I would not advise a friend to visit outside the resorts unless they are prepared to be an "adventurer" and feel fairly comfortable with being your own guide and researching areas via books and handouts.”

**Question #17: Other Comments:**

**5 out of 19 tourists responded:**

“There was an artillery man who saw an English flag ship and shot Jimmy Hawkins and made his pirate ship retreat. I forgot his name.”

:-)

“It would help to have more accessible parking or local transportation.”

“Nice place to vacation. I'll be back.”

“Handout/map of El Morro could be a little better. Dressed in costume historians enacting fort life would be a wonderful addition or rangers stationed at various parts of interest or headphones/cassettes with history and numbered guide to follow.”

### 5.1.5.3 El Morro Pictures

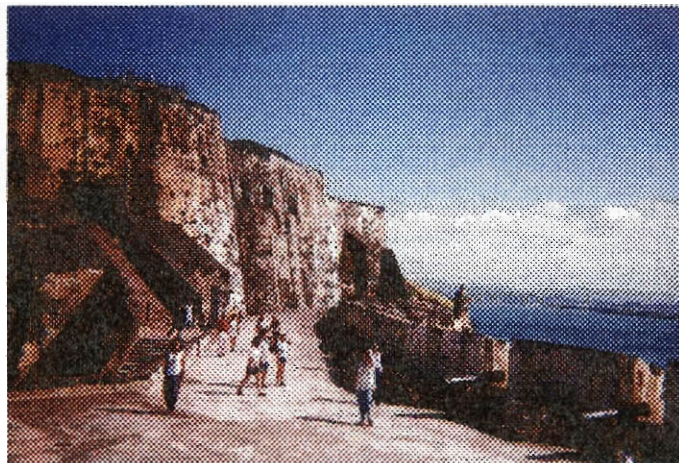
Entrance to  
El Morro



View of the ocean  
from El Morro



View of the harbor  
from El Morro





### 5.1.6 San Cristobal Fort

This castle was used to defend from attacks coming from inland of Puerto Rico. During the 18<sup>th</sup> century, Irish military engineer, O'Daly, was commissioned by the Spanish crown to build the fortress. There are five parts to this castle all of which are connected by tunnels and ditches. This was done so that the fortress could not be taken by one single attack. Its design would cause attackers to cross fire at themselves if they tried to take more than one section at a time. The fortress held against the attack of Abercromby in 1797. The brave men fighting at the time managed to drive back Abercromby's strong forces. Due to this success, Spanish monarch, Charles IV, gave San Juan the following motto: "For its constancy, love and faithfulness this is a most noble and loyal city." This motto appears on the San Juan coat of arms.

When visiting San Cristobal Fort, built by the Spanish to defend the city of San Juan from land attacks, tourists can see commanding views of both the city of Old San Juan and the northern coast of the island. This fort covers some 26 acres of land and was used by the Spanish in conjunction with El Morro and other forts to successfully defend the city for centuries.

The fort is located in Old San Juan, just up the hill from the Columbus Square. While there is limited parking at the fort, if touring Old San Juan for the day, it is advisable to park in one of the parking garages located near the docks. As with anything in Old San Juan, finding the fort is most easily done by asking a shop owner or police officer. Although there are maps of the city located on signs in Old San Juan, they are few and far between.





While in the fort, tourists can go through two small museums. One tells the dramatic history of Spanish rule and how the fort fit into that history, and the other depicts the typical soldier's rough life in the fort. In addition, there is a short movie that can be seen describing the fort. There are some informational signs scattered throughout the fort describing various items and points of interest.

We first contacted the fort by telephone. The person who answered the phone was able to answer all of our questions and even suggested some places to eat lunch. They warned us that the fort requires a lot of walking and that people with asthma should be wary. When we asked about a tour, we were told there are none.

While visiting the fort, we found it to be very clean and well maintained. Its appearance is rather drab, as some tourists commented, but that is perhaps to be expected in a four century old fort. The displays are in good condition and informative. While there are 26 acres of fort, only about two of them are open to public wandering. We had been told at El Morro that there is a tour of the fort including some of the tunnels and outer ramparts, but this was denied when we asked for a tour at the fort. One thing missing from the fort's informational signs is a map showing which parts tourists can walk through and the main points of interest.

There was no staff to speak of except for the park ranger who was collecting the entrance fee. Other rangers were scattered throughout the fort to answer questions from tourists; however, they never seemed to be around when we wanted to ask a question!

This is a good place to visit if you like to see old forts. It would benefit from a guided tour explaining the various points of interest but is interesting nonetheless. We recommend that the tour guides encourage tourists to visit San Cristobal Fort in conjunction

conjunction with La Fortaleza and El Morro in order to gain a better appreciation of the rich Spanish history contain within.

### 5.2.6.1 San Cristobal Fort - 31 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M					
1 The facility met my expectations:	[32.3]	[54.8]	[3.2]	[0]	[0]	9.7					
2 The following areas were clean:	NA	SA	A	N	D	SD					
Bathroom	[19.4]	[38.7]	[22.6]	[9.7]	[0]	[0]	9.7				
Food area	[38.7]	[9.7]	[12.9]	[16.1]	[0]	[0]	22.6				
Other areas of the facility	[3.2]	[38.7]	[35.5]	[0]	[0]	[0]	22.6				
3 The facility staff was:	SA	A	N	D	SD						
Knowledgeable	[25.8]	[35.5]	[19.4]	[0]	[0]	19.4					
Friendly	[32.3]	[35.5]	[19.4]	[0]	[0]	12.9					
Helpful	[25.8]	[35.5]	[19.4]	[0]	[0]	19.4					
Bilingual	[22.6]	[25.8]	[22.6]	[3.2]	[0]	25.8					
4 Access to the facility was easy:	[51.6]	[38.7]	[3.2]	[0]	[0]	6.5					
5 The value for the ticket price was satisfactory:	[67.7]	[29.0]	[0]	[0]	[0]	3.2					
6 I will recommend this facility to a friend:	[51.6]	[41.9]	[0]	[0]	[0]	6.5					
7 What is the purpose of your visit:	[22.6]	Family Vacation	[3.2]	Business	[61.3]	Cruise					
	[3.2]	Honeymoon	[0]	Spring Break			3.2				
	[6.5]	Other									
8 Gender:	[38.7]	Male	[48.4]	Female	[6.5]	Mix	6.5				
9 Age:	[0]	under 21	[3.2]	21-30	[29.0]	31-40	[29.0]	41-50	[22.6]	51-60	3.2
	[9.7]	61-70	[3.2]	71-80	[0]	81-up					
10 Salary (US\$):	[0]	0-10	[0]	10-20	[12.9]	20-30	[9.7]	30-40	[6.5]	40-50	35.5
(thousands)	[3.2]	50-60	[12.9]	60-70	[9.7]	70-80	[3.2]	80-90	[6.5]	90-up	

### 5.2.6.2 San Cristobal Fort Comments

**Question #12: What did you like best about your visit to this attraction?**

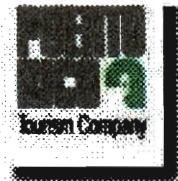
**25 out of 31 tourists responded:**

- “Enjoyed the history.”
- “The history of the attraction.”
- “The best attraction were the view and history.”
- “The motif.”
- “The view.”
- “Clean.”
- “How clean things are and organized.”
- “Historic value.”
- “Seeing the old uniforms and cannons that are around.”
- “View.”
- “The history.”
- “Historical value, convenient stroll from pier.”
- “The view.”
- “The historical value, people forget how difficult life was in the early days.”
- “Historical facts, fantastic architecture.”
- “Tunnels, dungeon.”
- “The physical structure.”
- “To be able to experience.”
- “Was in awe of size of fortress, beautiful views, history.”
- “The view.”
- “History.”
- “Historical.”
- “The history.”
- “The history, views.”
- “The view on castle a sea.”

**Question #13: What did you like least about your visit to this attraction?**

**13 out of 31 tourists responded:**

- “To short a time to take it all in.
- “I love it all.”
- “Lack of parking!!!”
- “Too sunny.”
- “Limited refreshments.”
- “Very empty, not as many guides as I would expect to show you around.”
- “Closed off areas.”
- “It's original, not a replica.”



- “It's original, not a replica.”
- “Graffiti upsetting.”
- “Concern about a few areas because of safety of small chil with us.”
- “This attraction was great.”
- “Surprised that it seemed so drab.”
- “Need talking points or placards.”

**Question #14: Describe your overall feelings concerning your visit to this attraction.**

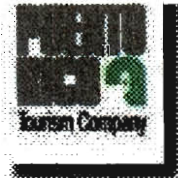
**25 out of 31 tourists responded:**

- “Glad I came.”
- “I love Puerto Rico and this attraction.”
- “The sense of history of the Puerto Rico.”
- “Very impressive.”
- “Very nice.”
- “Fine.”
- “It's nice they have places like this open to the public.”
- “Exciting, educational.”
- “Very impressive.”
- “Fun.”
- “My imagination ran wild.”
- “Good.”
- “Good.”
- “Spectacular.”
- “Wonderful opportunity to walk in history.”
- “Wonderful.”
- “I am glad I came.”
- “Beautiful architecture.”
- “Thoroughly enjoyable.”
- “The visit was excellent.”
- “Good.”
- “All visitors should see this place. They can learn so much about the real Puerto Rico and the people.”
- “Very beautiful and interesting.”
- “Interesting and worthwhile.”
- “First impression on the states are interesting.”

**Question #15: What did you learn about Puerto Rico from this experience?**

**22 out of 31 tourists responded:**

- “Enjoyed the British history part.”



“The beautiful people of the island.”  
“Cleaner than expected.”  
“Some but no concise information guide.”  
“How things were then.”  
“Not enough information to committee.”  
“Their history on wars and defending themselves.”  
“History, Span-American War.”  
“What it must have cost in lives to protect their country.”  
“Puerto Rico was a valued property during early year.”  
“History.”  
“This was our first sight on our walk.”  
“More about the history, appreciation.”  
“Its importance in the Caribbean.”  
“Too many low income housing.”  
“Costs a lot to live here, except in projects.”  
“Will re-visit without child to learn more in detail the history of fortress.”  
“The age of the forts.”  
“The people and the scenery are beautiful.”  
“Historic value as well as aesthetic nature.”  
“A feel for history and strong traditions.”  
“People in shops and bars as well as inhabitants are polite.”

**Question #16: How would you describe your experience to a friend?**

**22 out of 31 tourists responded:**

“Most enjoyable.  
“Fantastico.  
“Puerto Rico is a beautiful bland and friendly people.  
“A nice place to visit.  
“Very nice.  
“An easy worthwhile experience.  
“A very good one.  
“Enjoyable, would definitely say go.  
“Very interesting.  
“Worthwhile.  
“A must see.  
“High historical value.  
“Yes.  
“Need to visit.”  
“Need to go see for themselves.”  
“Thoroughly enjoyable. Will revisit without child to learn more in detail the history of fortress.”  
“Wonderful.”



“A place steeped in history.”  
“The people and the scenery are beautiful.”  
“Go!”  
“Interesting and must do it.”  
“Impressing.”

**Question #17: Other Comments:**

**10 out of 31 tourists responded:**

“Well worth seeing.”  
“I have visited this the fort at least 3 times.”  
“This site is in grave need of parking space. Beside that it offers a sense of history.”  
“They should consider adding umbrellas or a structure for shade but something that won't spoil the motif.”  
“More should be put in the galleries.”  
“Great place!! Very beautiful!”  
“Thank you.”  
“Great.”  
“A most enlightening experience, well worth a visit.”  
“We prefer the old open busses. Thank you.”

### 5.1.6.3 San Cristobal Fort Pictures



Entrance to the San Cristobal Fort







### 5.1.7 La Fortaleza

La Fortaleza also known as the Santa Catalina Palace, is the Governor's residence. La Fortaleza was originally used as a bastion of Puerto Rico. This beautiful mansion has housed the governors of Puerto Rico since the 17<sup>th</sup> century and is the oldest executive residence in the Western Hemisphere still used to house governors today.

La Fortaleza was built in 1533. The circular Homage Tower was its first structure. At one time, nobles to swear oaths of courage and fidelity inside this tower. Next to be built was the Atrial Tower. The architecture of this tower has a medieval military style. The towers were actually used as lookouts to warn of Carib Indian attack or to view the treasures on the ships coming from the Indies.

As a fortress, La Fortaleza, like El Morro, has also had an impressive military history. It has only been captured twice. Attacks occurred once in 1598 by the Earl of Cumberland and again in 1625 by Dutch general, Boudewijn Hendrick. The 1625 capture caused significant damage to the fort and it had to be rebuilt in the 1640s. Throughout the 19<sup>th</sup> century, improvements and expansions were made to the fortress. In 1846, it was beautifully remodeled with a neoclassical look.

Many famous people have stayed as guests at La Fortaleza. Some include H.M. Queen Elizabeth II, Charles Lindbergh, Roosevelt, Hoover, and Kennedy.

While walking through the grounds of the old house, tourists can imagine the governor of Puerto Rico having meetings in the oval garden. In the middle of that garden there is a wishing fountain, built in 1930. It is said that if visitors put their hand in the water and make a wish, it will come true. Another interesting thing to see while in the garden is a tile table, made in 1969, with the official seal of the island. This seal is identical to the coat



of arms given to Puerto Rico in 1511 by the Fernando and Isabel of Spain. Over the Fortaleza fly three flags: the US flag, the Puerto Rico flag, and the Puerto Rico coat of arms. These three flags show the influences of Spain and the United States on the development of Puerto Rico. Many Spanish artifacts are inside the house. In the formal reception room, there is a 19<sup>th</sup>-century oil painting of Queen Isabel II. The blue in her dress harmonizes elegantly with the blue theme of the room, nicknamed the “Blue Room”. The rug on the floor was handmade in Puerto Rico by a local company who has also designed rugs for the White House in Washington D.C. While looking at the pattern of the rug closely, one will notice that it echoes the design used on the ceiling above.

The Hall of Mirrors is the largest room on the second floor and its size makes it ideal for formal receptions. The name of the room comes from the array of Spanish mirrors imported in the 19<sup>th</sup> century. The classical columns, chandelier, and coat of arms of six of more than 100 Spanish governors who resided at La Fortaleza. The chandeliers were crafted in Spain and in cooperation with the classical columns, provide a formal atmosphere to the room.

Today at La Fortaleza, tourists can visit the lower level of the building. A clock in the gallery of the inner courtyard has a mysterious legend. In 1898, the last Spanish Governor of the island, before American troops took over, struck the clock with his sword. This blow made the hands of the clock stop at half past four, which happens to be a historical moment in Spain’s history.

The Fortaleza was originally built as a fort to protect the entrance of the San Juan harbor from Spanish enemies. It then became the governor’s mansion intended for Ponce de Leon who died before taking residency. Today it is still used as the governor’s mansion.



The only way to see the house is by taking a guided tour. The tour takes tourists through the grounds of the fort where views of the San Juan Harbor, Casa Blanca, and El Morro can be found.

Located in Old San Juan, La Fortaleza is surrounded by the high security of the San Juan Police. Entrance for the tour is one block north and one block west of the intersection of Cristo Street and Fortaleza Street. Because there is no parking near the fort except for street parking, tourists should expect to walk everywhere they go in Old San Juan.

While on the tour, visitors can see the original dungeon, the table in the garden covered by the official seal of the island, and the fountain which is said to grant wishes. After touring the grounds, visitors watch a movie about the rooms on the inside of the house. This movie was interesting but makes tourists wish they could actually tour the rooms described.

Our first contact with La Fortaleza was by telephone. We called to conduct our telephone survey. The person to whom we talked was able to answer most of our questions; however, she was not able to give us directions to the facility.

Upon visiting the fort, we found the grounds to be clean and the gardens to be very well maintained. Additionally, the house itself seems to be freshly painted, a change from many buildings in Old San Juan.

The tour we took was led by Lysamar. She was responsible for leading the tour around the grounds, telling the history of the house, and starting the movie showing the interior of the house. Lysamar was very friendly, and knowledgeable enough to answer all the questions the tourists asked of her. She also warned everyone of health hazards such as



the steep stairs down to the dungeon. When starting an explanation, she would make sure everyone was there before starting. However, when a tourist asked a question, she would answer that person personally so that the rest of the group did not benefit from that information. When she spoke, her English was somewhat difficult to understand, but the information she gave made the tour interesting anyway.

We recommend that La Fortaleza allow visitors to see the rooms inside the building. If this is not possible, they should inform tourists that they will not be able to see the interior of the house, so that they are not disappointed by the tour.



### **5.1.7.1 La Fortaleza - 2 Respondents**

#### **5.1.7.2 La Fortaleza Comments**

**Question #12: What did you like best about your visit to this attraction?**

**2 out of 2 tourists responded:**

“Beautiful site.”

“Explanation of history.”

**Question #13: What did you like least about your visit to this attraction?**

**1 out of 2 tourists responded:**

“No access to inside of Fortaleza Would have liked to see at least some of the rooms.”

**Question #14: Describe your overall feelings concerning your visit to this attraction.**

**2 out of 2 tourists responded:**

“So-so.”

“The only aspect that did not meet my expectations was visiting the inside rooms; I would have liked that.”

**Question #15: What did you learn about Puerto Rico from this experience?**

**1 out of 2 tourists responded:**

The history of Puerto Rico goes back much further than US history

**Question #16: How would you describe your experience to a friend?**

**1 out of 2 tourists responded:**

“Easy to visit, worthwhile to visit.”

**Question #17: Other Comments:**

**0 out of 2 tourists responded:**

### 5.1.7.3 La Fortaleza Pictures



The gates to the entrance of the Governor's home commonly known as La Fortaleza



Frontal view of La Fortaleza



### 5.1.8 Casa Blanca

In 1508, Juan Ponce de Leon undertook the Christian colonization of Puerto Rico. Caparra, its first village, was founded that same year. From here, Juan Ponce de Leon directed the entire colonization endeavor.

Against Juan Ponce de Leon's wishes, the Hieronimyte Friars, who were in charge of the government of the Spanish colonies in America, agreed to transfer the village of Caparra, now the city of Guaynabo, to Puerto Rico. The transfer began in 1519 and ended two years later. Ponce de Leon had obtained permission from the Crown to remain in Caparra with his family, but died in Havana in 1521 from a wound inflicted by the Indians in his attempt to conquer Florida.

Luis, Ponce de Leon's only male son, inherited the conqueror's titles and assets. Because he was a minor, his brother-in-law, Garcia Troche, took over the titles and assets in his name. Troche built the fortified house in the lot that was granted to him by the new city. The conqueror's family was entitled to this land because Ponce de Leon had also been warden and commander of the city.

In 1521, Troche erected a house that was made of wood, but a fire destroyed it soon afterwards. In 1523, he began the construction of a stone and rubble building that would serve not only as defense of the city against possible attacks by the Carib Indians, but also as the family residence of the conqueror's descendants.

Troche's son was born in that house in 1524. He received the name of his grandfather, Juan and in the future preferred to use his maternal surname Ponce de Leon. He is known in our history as Juan Ponce de Leon II.



For several years, the Ponce de Leon's fortress served as the City's only defense. As one of the only safe buildings in the city, neighbors would take refuge in it and in the Dominican Convent when they feared the attack of the Carib Indians. In 1529, several canoes of Carib Indians entered the bay, disembarking by the shores of the Bayamon River and raiding several haciendas. In an attempt to frighten the Indians, fighters shot cannons from the fortress of Ponce de Leon.

During the XVIth Century, the Ponce de Leon fortress began to be known as Casa Blanca. In the year 1533, the King, in response to the neighbor's pleas, ordered the construction of another fortification that would defend the city from the Carib Indians and French and English pirates who were already nearing the island's coasts. A point on the coast directly south of the Casa Blanca was chosen as the location. When La Forteleza was built, Casa Blanca lost its function as a fortress and came to be used solely as residence of Ponce de Leon's family.

In the year 1779, Ponce de Leon's descendants sold Casa Blanca to the Spanish Government, who used the buildings as residence for military engineers. At this time a small addition was added to the original structure. In addition, the north façade was demolished and another two-story wing was added on the side of the house that borders with the Guards Corps. A rectangular one-story structure was added to serve as the soldiers' barracks, adjoined to the other side of Casa Blanca.

In 1898, North American troops invaded and the United States occupied Puerto Rico. Casa Blanca, along with all other properties of the Spanish Army, was passed on to the hands of the North American Army. Shortly afterwards, the house became the official residence of





the Commander of the Armed Forces of the United States deployed in Puerto Rico. This new role for the structure entailed new architectural modifications.

Colonel John W. Wright, who was residing in Casa Blanca in 1939, was a man with a fondness for historical matters. He reconstructed Casa Blanca with W.P.A. funds, modifying the roofs, eliminating bricks, constructing a large concrete terrace on the west façade, as well as an unbroken balcony with blinds and balustrades on the patio.

In 1967, the Army of the United States officially vacated all the historical buildings it had occupied in San Juan and returned them to the people of Puerto Rico. Soon afterwards, the legislature of Puerto Rico declared Casa Blanca a historic and national monument, and entrusted its restoration and installation as a public museum to the Institute of Puerto Rican Culture.

In the gardens of Casa Blanca there is a water fountain that has some interesting artwork engraved on it. The art is of Aztec origin. Why it is there or who the artist was remains a mystery in Puerto Rican architecture to this day.

Before visiting Casa Blanca, our team called the facility to gather preliminary information about the site. However, this attraction had no bilingual personnel who could speak to us on the phone.

Our group visited Casa Blanca in the afternoon. The facility consists of the house and a beautiful garden. Admission is \$1 for adults and \$0.50 for children and senior citizens. There are no tour guides, but a woman gave us a brief orientation in English and told us how to proceed. She was available to answer any questions we had as we explored the small house.



Overall, we liked visiting the quaint little house, although it was smaller than we expected. We were disappointed that we could not see the second floor and were surprised that the staff did not suggest that we visit the garden. The woman who spoke with us spoke English fairly well, but had some trouble understanding our questions. She was not aware of the Aztec fountain in the garden, which also surprised us because we expected her to know more about the facility than we knew.

We recommend that Casa Blanca should conduct tours, or have informational signs describing the different rooms of the house. We would have enjoyed our visit more if we knew more about the rooms we saw.



### 5.1.8.1 Casa Blanca - 5 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M					
1 The facility met my expectations:	[40.0]	[60.0]	[0]	[0]	[0]	0					
2 The following areas were clean:	NA	SA	A	N	D	SD					
Bathroom	[60.0]	[20.0]	[0]	[0]	[0]	[0]	20.0				
Food area	[60.0]	[20.0]	[20.0]	[0]	[0]	[0]	0				
Other areas of the facility	[60.0]	[40.0]	[0]	[0]	[0]	[0]	0				
3 The facility staff was:	SA	A	N	D	SD						
Knowledgeable	[80.0]	[0]	[0]	[0]	[0]	[0]	20.0				
Friendly	[80.0]	[0]	[0]	[0]	[0]	[0]	20.0				
Helpful	[80.0]	[0]	[0]	[0]	[0]	[0]	20.0				
Bilingual	[80.0]	[0]	[0]	[0]	[0]	[0]	20.0				
4 Access to the facility was easy:	[20.0]	[40.0]	[20.0]	[20.0]	[0]	0					
5 The value for the ticket price was satisfactory:	[100]	[0]	[0]	[0]	[0]	0					
6 I will recommend this facility to a friend:	[100]	[0]	[0]	[0]	[0]	0					
7 What is the purpose of your visit:	[60.0]	Family Vacation	[0]	Business	[0]	Cruise					
	[0]	Honeymoon	[0]	Spring Break			20.0				
	[20.0]	Other									
8 Gender:	[80.0]	Male	[20.0]	Female	[0]	Mix	0				
9 Age:	[0]	under 21	[0]	21-30	[20.0]	31-40	[20.0]	41-50	[40.0]	51-60	0
	[20.0]	61-70	[0]	71-80	[0]	81-up					
10 Salary (US\$):	[20.0]	0-10	[20.0]	10-20	[0]	20-30	[0]	30-40	[0]	40-50	20.0
(thousands)	[0]	50-60	[0]	60-70	[0]	70-80	[20.0]	80-90	[20.0]	90-up	



### 5.1.8.2 Casa Blanca Comments

**Question #12: What did you like best about your visit to this attraction?**

**3 out of 5 tourists responded:**

“The excellent knowledge of the museum guide. The cleanliness of the museum and the friendliness of its personnel.”

“The history.”

“The architecture with its relation to the site.”

**Question #13: What did you like least about your visit to this attraction?**

**2 out of 5 tourists responded:**

“I liked everything.”

“Wanted to go down into the cellar. More info on the artifacts.”

**Question #14: Describe your overall feelings concerning your visit to this attraction.**

**2 out of 5 tourists responded:**

“I was transported to the sixteen century's Spain colony.”

“Enjoyed ourselves.”

**Question #15: What did you learn about Puerto Rico from this experience?**

**3 out of 5 tourists responded:**

“The Spanish culture still prevails.”

“Its heritage.”

“The remote and unpopulated aspect of this location when this building was begun.”

**Question #16: How would you describe your experience to a friend?**

**2 out of 5 tourists responded:**

“With enthusiasm and motivational spirit to visit all of Puerto Rico's historical sites and museums.”

“This is a charming site which makes a good beginning to study this city.”



**Question #17: Other Comments:**

**2 out of 5 tourists responded:**

“By visiting all sites of historical background, we can truly find where cultural roots are based.”

“The guide who greeted us made us feel most welcome as she shared her enthusiasm for the history of San Juan.”

### 5.1.8.3 Casa Blanca Pictures



Water fountain in the gardens of Casa Blanca with mysterious Aztec artwork

Left: Casa Blanca

Right: Casa Blanca Gardens





### 5.1.9 Museo De Las Americas

Visitors that come to the Museo de Las Americas will learn about the diverse cultures of the people that make up the Americas, that is, North, Central, and South America, and also the Caribbean Islands. On display are beautiful objects such as costumes, carved saints and even a replica of a Puerto Rican home. These artifacts are preserved to help people perceive how in the Americas, the racial and cultural traits of three major human races, black, white, and Indian, have fused together during the past centuries to produce new nationalities, each with their own unique cultures. Tourists can take a close look at the brightly colored ceremonial costumes of the Mexicans or imagine the rhythmic beat of the African bongo. Fine examples of basket weaving by Indians are on display and tiny, colorful, carvings of saints inherited from the Spaniards and other European cultures are also there. Through their popular arts and traditions, these nationalities reveal to us how rich and diverse the cultural heritage that characterizes the Americas is.

The first exhibit to catch the tourists' eye when they enter the small museum is a large replica of a country cottage, a bohio-typical of those in the rural areas of Puerto Rico. A tourist from the northern United States may notice that this home has some characteristics of their own home. This is because houses were built with a European style that was adapted to a tropical environment. While looking at the house one may smell the sweet scent of cedar. The odor comes from the cedar planks that were used to build this model. Cedar was used because it was sturdy and resistant to insects and humidity. One also may at first be stupefied by the long wooden posts beneath the house, but after reading the information plaque one realizes that homes were built on wooden posts to prevent contact with the damp soil. The tourist will also learn that several decades ago it was popular to build these houses



with wide planks and leaves from the royal palm, using the fibrous tissue in the upper part of these palm trees as a thatching material. Later houses were made from wood and imported zinc roofing. Unlike the homes in North America, these houses were covered with bright, multicolored oil-based paints that in addition to giving the house a vivid appearance also served to protect the house from rain and humidity.

The next exhibit to grasp one's attention is that of the musical instruments collected from all over the Americas. There is undoubtedly at least one instrument here that is new to each visitor and imagining exactly what type of sound it makes will boggle the mind. While looking at the variety of instruments, one realizes that the rich and distinct musical manifestations in the Americas stem from the diversity of musical sounds and rhythms that characterize the multi-cultural richness of the continent.

When the Europeans arrived, the indigenous population of North, Central, and South America already had a distinct musical tradition with various wind instruments. It is amazing to realize that these tribal peoples could take what they found in nature and turn it into such beautiful sounds: different types of flutes were made from a variety of woods, maracas from gourds, and drums from animal skin. When compared to the indigenous percussion instruments present quite a contrast to the European string instruments like the guitar, the vihuela (an ancient type of guitar), the lute, and the harp. However, as people from separate lands came together so did their music and many of these instruments underwent changes and gave way to variations producing new sounds and incorporating both types of musical techniques. To add to the mix, slaves from West Africa brought with them their rhythms as well as their percussion instruments. Among the first African imports were drums and marimbas. Again new world music took another form and integrated these





new sounds to produce even newer musical styles. In listening to music on the radio, initially it will sound very different from the sounds of the maraca or lute, however, if one listens carefully, hints of these original sounds are still present.

Another important aspect that characterizes any culture is clothing. In the Americas, clothes and ornaments reflect the rich heritage of the different currents that through the past five centuries have fused together in our hemisphere. Looking at these unique costumes, it is obvious that people wore clothes appropriate to their environment and made from the materials available to them like furs, leathers, cotton, grass, feathers, straw, and so forth. One can visualize an Alaskan keeping warm in their furry coats in the frozen north and the bright colors of the Bolivian ceremonial costume are only possible thanks to the feathers of the tropical birds indigenous to South America.

While admiring this exhibit, one may also notice that the use of body decoration such as corporal paint, elaborate hairdos, and ornaments also varied from region to region. The fashions the Europeans imported to the Americas were definitely distinct from those already in existence here. Sometimes these styles clashed with the environment and climate and needed to be changed. In order to adapt to the new environment, European styles blended with the native clothes and on other occasions the natives, liking the European style, incorporated details and elements from their fashion to their clothing and ornaments. If one takes a look at the clothes we wear today, it is evident that they represent a mixture of the clothes and ornaments born in the different regions of the New World and reflect this crossing of cultures that characterizes American culture.

A person's culture is also expressed by their religion. There are many religious exhibits at the museum and visiting Catholics or Christians may recognize many religious



icons on display here. However, one display may seem a bit out of place because some people may not realize that voodoo is actually a religion practiced by many Africans. In the 1780s slaves from the Dahomui region in Africa brought with them their magical and religious beliefs. In order to preserve their religion, in a society dominated by Christians, they maintained those beliefs and rituals by disguising them with Christian-like images of saints and gods. Some of their better known gods are: Erzulie Z'yeux Roues, Damballah Wedo, and St. Patrick. In this religion they make use of a voodoo altar which has objects like candles, voodoo dolls, icons and small statues.

The attentive tourist will leave the museum with an understanding that the works displayed here represent a cultural expression of great civilizational force and a dramatic manifestation of the racial and cultural blending which has occurred during the course of the last five centuries in our continent. The European immigration, which occurred during the last 500 years, particularly that of the Spanish, Portuguese, English, French and Dutch, have left their mark by imposing their language and especially their customs, religions, philosophical concepts, politics, and economics. The Africans, who from the first decades of the sixteenth century were forcibly removed from their land to work as slaves in the New World, also contributed their own cultural heritage to the formation of Western identity. Other Asian cultures, such as the Hindus and Chinese, also to a lesser degree contributed to the development of some geographical areas into the formation of several American Nations. The Museo de las Americas was inaugurated in October 1992 by the Puerto Rican Commission to commemorate the 500-year anniversary of the discovery of America and Puerto Rico. Its principal purpose is to give visitors a vision of the history and culture of the Americas from the pre-Columbian era to present day. The museum is made up of a



permanent exhibit and temporary exhibits. The permanent exhibit is called “The Popular Arts of the Americas” and the temporary exhibits are located in adjacent galleries and feature different works of art, history, culture, and folklore from Puerto Rican artists.

The museum is located on the second floor of the Antiguo Cuartel Ballaja building in Old San Juan. It is very difficult to find this inconspicuous museum nestled among the other offices within the building and tourists may have to ask for directions several times before they find it. Admission to the museum is free and tourists may take a self-tour around the exhibit rooms. Tourists gather information about the site by reading informational plaques. There is a guide present at each room to answer any questions. The facility also has a gift shop that sells a wide variety of books on the Puerto Rican culture and pieces of artwork from local artists.

Our first contact with the museum’s staff was by telephone. On March 15, 1999, we called the museum and administered our telephone survey/questionnaire. Our call was answered quickly and we spoke directly with an operator that was able to answer all of our questions satisfactorily. The operator had a little difficulty with his English skills. The directions the operator gave were unclear, which was evident when we had trouble finding the facility.

We visited the museum’s permanent exhibit on the morning of March 31, 1999. Finding the small museum was difficult, even with the Old San Juan map. Visitors should plan to walk to the museum because parking is difficult in this area. It is better to park in the nearby parking garage than risk getting a ticket for parking in front of the museum.



The facility contains an interesting collection of artifacts and costumes from several different American countries. The exhibit explores several cultural aspects of each country including art, music, history, and religion. The facility itself is very neat and clean however the lighting is poor making it difficult to read informational signs. Unfortunately not all of the informational plaques are in both English and Spanish so non-Spanish speakers may be missing out on some interesting information. There is a lot of information on many of the countries that comprise the Americas, however, it seems as though the museum is lacking on cultural information about many of the smaller American countries like Honduras and Belize. Visitors from these countries may feel offended that their country has not been equally represented. The exhibits they do have are very well presented and tourist should take the time to read each well-written informational plaque in order to fully understand the museum's theme.

Because there are not many tourists who visit this attraction, staff is low at the museum. Upon entrance, we had difficulty finding anyone that seemed to work there. Initially, we mistook our guide for a tourist because he was sitting on a bench reading the newspaper, but once he realized we were there to see the museum, he came to life. The guide was very friendly and personable and made sure that any questions we had about the exhibits were completely answered. Upon leaving the guide shook our hands and bid us a good stay in Puerto Rico.

The museum is very educational and well organized but it seems as though it is lacking in some areas because so few tourists visit. The museum should be better advertised and directions to the museum should be clearer. The exhibit is very educational, however we feel that it would make a stronger, more memorable impact on the tourist if it were more



interactive. For example, the display of the musical instruments could have set of headphones so tourist could hear the sounds of each of the instruments. The children may enjoy a place where they could actually dress up in some of the costumes worn by the various American countries. Food is also a very important part of ones culture, so maybe the museum could have an exhibit which displays some of the unique menus of the American countries and maybe even have samples of these foods for visitors to try. Again, lighting needs to be better in the facility and all informational signs should be in both English and Spanish. Overall, our experience at the museum was very enjoyable and educational.

### 5.1.9.1 Museo de las Americas - 23 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M					
1 The facility met my expectations:	[47.8]	[39.1]	[8.7]	[4.3]	[0]	0					
2 The following areas were clean:	NA	SA	A	N	D	SD					
Bathroom	[43.5]	[30.4]	[26.1]	[0]	[0]	[0]	0				
Food area	[56.5]	[13.0]	[17.4]	[4.3]	[0]	[0]	8.7				
Other areas of the facility	[8.7]	[47.8]	[34.8]	[0]	[0]	[0]	8.7				
3 The facility staff was:	SA	A	N	D	SD						
Knowledgeable	[60.9]	[17.4]	[21.7]	[0]	[0]	0					
Friendly	[56.5]	[30.4]	[8.7]	[0]	[0]	4.3					
Helpful	[56.5]	[21.7]	[17.4]	[0]	[0]	4.3					
Bilingual	[47.8]	[21.7]	[21.7]	[0]	[0]	8.7					
4 Access to the facility was easy:	[73.9]	[21.7]	[0]	[4.3]	[0]	0					
5 The value for the ticket price was satisfactory:	[60.9]	[26.1]	[0]	[0]	[0]	13.0					
6 I will recommend this facility to a friend:	[82.6]	[17.4]	[0]	[0]	[0]	0					
7 What is the purpose of your visit:	[60.9]	Family Vacation	[8.7]	Business	[0]	Cruise					
	[0]	Honeymoon	[13.0]	Spring Break			0				
	[17.4]	Other									
8 Gender:	[39.1]	Male	[52.2]	Female	[4.3]	Mix	4.3				
9 Age:	[4.3]	under 21	[30.4]	21-30	[17.4]	31-40	[26.1]	41-50	[13.0]	51-60	0
	[4.3]	61-70	[4.3]	71-80	[0]	81-up					
10 Salary (US\$):	[30.4]	0-10	[17.4]	10-20	[17.4]	20-30	[4.3]	30-40	[4.3]	40-50	13.0
(thousands)	[8.7]	50-60	[0]	60-70	[4.3]	70-80	[0]	80-90	[0]	90-up	



### 5.1.9.2 Museo De Las Americas Comments

#### Question #12: What did you like best about your visit to this attraction?

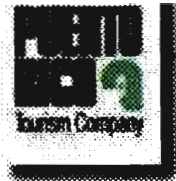
##### 17 out of 23 tourists responded:

- “The state of preservation of the old city and its buildings and fortifications.”
- “Masks and carvings.”
- “All areas that I saw.”
- “Las exhibiciones son muy educativos para los niños.”
- “Exhibiciones.”
- “Se gana mas conocimiento historico.”
- “El edificio "Cuartel de Ballaja"/The architecture building.”
- “All of it.”
- “Tiene una buena organizacion, limpieza, y sobre todo lo interesante de conocer un poco de otras culturas.”
- “Casa, herramientas usados por nuestros antecesores.”
- “The recreation of the houses and it's furniture. The costumes were interesting too.”
- “Very attractive for my kids.”
- “Mask collection.”
- “Craft work in the museum.”
- “Los Santos.”
- “Authentic people, art; easy access & exit, comfortable environment.”
- “La limpieza, el buen estado de preservacion de los objetos a exhibirse.”

#### Question #13: What did you like least about your visit to this attraction?

##### 16 out of 23 tourists responded:

- “Note being able to communicate better.”
- “Not large enough--need more exhibits.”
- “The hot weather.”
- “Me parece que el edificio es enorme y es pena que no se utilizado a ser capacidad.”
- “Todo bien.”
- “N/A.”
- “No direction sign.”
- “Poor signs and lighting.”
- “Todo esta muy bonito.”
- “Nothing. I think everything's interesting. You enjoy while you learn.”
- “More information.”
- “No specific signs to get to the facility. Poor signage.”
- “None.”
- “Too small, too diverse for collection, quality needs improving.”



“N/A.”

“Todo me gusta!”

**Question #14: Describe your overall feelings concerning your visit to this attraction.**

**15 out of 23 tourists responded:**

“I have mixed feelings. I came in feeling I knew one thing and came out thinking differently.”

“Very interesting, especially primitive conditions in Puerto Rico in early 20th century.”

“Very good.”

“Agradable.”

“Muy interesante ver el folklore de diferentes paises.”

“Satisfecho con lo que vi.”

“It was good.”

“Bueno.”

“It's a good idea not only to learn about your own culture, but from the others cultures in America too.”

“I enjoy showing my kid about other countries culture.”

“Good walk.”

“Satisfactory and precise.”

“Good, because it was a relief from European art. Not dominated by a religious art.”

“Me senti en paz, muy bien, cerca de mis raices.”

“Identificarse con todas las culturas hispanas fue se demostan en la exposicion.”

**Question #15: What did you learn about Puerto Rico from this experience?**

**14 out of 23 tourists responded:**

“That it is a nation with its own distinctive culture, which culture is a least several hundred years old and which culture developed from even older cultures, namely: the Spanish, African and Indian cultures.”

“The arts.”

“Comparar nuestro arte popular con el de otros paises.”

“Soy puertorriquena, pero anadio conocimientos sobre diferentes aspectos de nuestra cultura.”

“N/A.”

“A lot about PR's customs.”

“Detalles sobre la historia de PR y de otros paises de America.”

“I enjoyed most watching old pictures of the way of life since 1900.”

“The effects of hurricane Georges to the museum.”

“Local Traditions.”

“Is a beautiful country.”





“Historically, Puerto Rico is young; needs a purpose to go along with its culture.”

“Que somos mas que una isla en el caribe. Ya que en nuestro interior hay una diversidad cultural increíble.”

“Que somos un pais muy especial y de gran cienividad al igual fue nuestros paises vecinos.”

#### **Question #16: How would you describe your experience to a friend?**

**15 out of 23 tourists responded:**

“It is definitely NOT WASP, not English-speaking.”

“Yes.”

“The Best (Very good).”

“Muy constructiva.”

“Aprendizaje.”

“Le recomendarsa vener.”

“Fantastic!”

“Es uan buena experiencia para toda la familia.”

“A nice experience to learn about all America's culture while having fun.”

“It is a good craft collection.”

“Strongly recommend to visit the museum.”

“Amazing.”

“Less than an hour needed to view the exhibits, comfortable surroundings, collection okay, but small and needs additions.”

“Muy buena. Recomendara a mis amigos a visitar estas facilidades y hasta regresaria con ellos.”

“Exquisito.”

#### **Question #17: Other Comments:**

**10 out of 23 tourists responded:**

“My experience has been enlightening.”

“Thank You.”

“Les felicito!”

“n/a.”

“Considero una latta de respeto el no tener cuestionario en espanol estamos en Puerto Rico aqui so habla espanol!”

“I woud like to see more indian's costumes. (It would be great to bring the questionnaires in Spanish).”

“I am from Puerto Rico. I am a tourist to San Juan. I speak Spanish as my first language. Would have liked to answer this questionnaire in my language.”

“Friendly, helpful staff.”

“Para mi proxima vez,,usan dos cuestionares uno en espanol, y el otro en ingles.”

“Este cuestionaire debe estar en espanol e ingles para beneficiar muchos latinos que no conocer el idioma ingles.”

### 5.1.9.3 Museo De Las Americas Pictures



Carved figures of Christian saints at Museo de las Americas



### 5.1.10 Casa Cautino

The Casa Cautino is a small historical home in Guayama, Puerto Rico. Visitors come here to see a fine example of architecture. The style of the house is Neoclassic and Creole, a common style for the homes of the wealthy during the 1800's. The home has been beautifully restored and it is so authentic that the more imaginative visitor will feel like they have gone back in time. It looks as though the family still lives here since all of the furnishings are in their original place.

A native Puerto Rican built the house in 1887. The architect studied in Paris, a city known for its wonderful architecture. The house definitely shows a French influence and for those who have been to France the architecture may even seem familiar. The home was built for the prosperous Cautino family. The first Cautino's to live in the home were Don Genaro Cautino Vazquez and his wife Genoveva Insua. After them, three other generations of the family occupied the home.

The most impressive part of the home is its balcony. The balcony is designed with intricate detail and has a fantastic view of the town's center. Within the home is a gallery of beautiful antique furniture. Even the lamps and rugs can be considered works of art.

The Casa Cautino is now open to the public as a museum. Visitors can come and tour the house with a guide. The house is very small so it only takes about 20 minutes to tour. There is no gift shop or visitor center, just the house with a few tour guides standing out front. Admission is only a dollar, which is a small price to pay for some new knowledge. If they were to charge anymore, however, the cost would not be worth the experience.



Casa Cautino is located in Guayama near Ponce on the southeastern end of the Island. It takes about 1 1/2 to get to the museum from San Juan. The museum is very small so if that is all your going to see in Guayanama, our opinion is that it is not worth the long drive.

The main route to Guayama is Highway 3, which is easy to follow. Problems begin when one enters Guayama. The streets here are narrow and many are one way. There are, however, signs directing tourists to the house, so as long as you keep an eye out for them you should be fine. At the museum there is no parking and one may spend a lot of time circling the center of town searching for an empty spot. Because parking is so difficult, many people park illegally, risking the chance of getting a ticket.

Our first conversation with the staff at Casa Cautino was a telephone call. The staff member that answered the phone was very helpful and friendly. They were able to answer all of our questions and gave precise directions to the museum.

Our project team drove out to Guayama to see the museum one afternoon. The house was beautiful but very small. We had higher expectations. The pictures on the informational card we had made it seem as though it were very large. Although small, the house is very beautiful. It is very clean and well maintained. The informational signs in the museum are in Spanish only so we could not read them.

There were several tour guides at the museum when we visited but no tourists. The guide that gave us the tour had very poor English skills. Because it was difficult to understand her, we were easily confused and left the museum not being sure about facts like why the house was built and who lived there.

The facility really needs to work on how they present the museum to non-Spanish speakers. Because we could not understand the guide and we could not read the

informational signs, our cultural experience was greatly diminished. The house is beautiful to see, but it has a rich history and should be presented as such.

### Casa Cautino Pictures





### 5.1.11 Serralles Castle

The sweet green stalk with its white flower crown, sugar cane, came from the South Pacific and was brought to the island of Puerto Rico by Juan Ponce de Leon in 1508. From that point on until the early 20<sup>th</sup> century, the history of sugar cane was the basis of Puerto Rico's economy and much of that history was written in Ponce at the Hacienda Teresa.

Sebastian Serralles, a Spaniard, settled in Ponce and established Hacienda Teresa. However, he decided to return to Spain, and left it to his son, Juan Serralles to administrate. Juan Serralles developed one of the island's most powerful estates, Hacienda Meselita, named after his wife. Meselita was founded in 1861. By 1869, Meselita was a medium-sized estate consisting of 350 acres, and by 1877 it became 850 acres. Like most estates of this time, its production processes covered the planting of sugar cane, the making of molasses at its own factory, and the exporting to the external market, particularly the United States, England, and France.

By 1890, Juan Serralles already owned over 4,000 acres of productive land. Messelita was a very advanced farming and industrial project for its time. This technology was so advanced that even today it is still used. Thus, Hacienda Messelita is an extraordinary example of the best international technology prior to the change in sovereignty in Puerto Rico's 19<sup>th</sup> century. The intense activities of sugar exports turned the Ponce harbor into an active commercial exchange center. In 1980, Santiago catalogued Messelita as the model to be followed by sugar producers in Puerto Rico. Because of their success, the Serralles castle has become the Serralles Castle museum.



Before visiting Serralles Castle, our project team called the facility to conduct our telephone survey. The woman we reached was unable to answer all of our questions and actually hung up on us the first time we called. She seemed to have some difficulty understanding English and answered some of our questions incorrectly.

The facility offers a café, an outdoor sitting area, and a fairly large gift shop. The tour includes the house, its gardens, and an informational movie. Admission is \$3 for adults and \$1.50 for children. There are tours in both English and Spanish. Tourists should call ahead to find out the tour schedules

Our team toured Serralles Castle, covering all areas of the house. It was well maintained, clean, and very organized. Our tour guide had a great attitude, she smiled and laughed as she described to us the history of the house. We all thought the tour was very well done. Our only suggestion is that they may want to consider giving curious tasters a sample of Don Q Cristal Rum after showing the movie on how it is produced! Serralles castle should be aware that its competitor, Bacardi, offers a free tour with samples their product.

**5.1.11.1 Serralles Castle Pictures**







### **5.1.12 Bacardi Rum Factory**

Puerto Rico's economy, in the recent past, has been stimulated by large industry. One of these companies, Ron Bacardi Rum, distributes rum to the entire world. The taxes that the company pays to the government of Puerto Rico are substantial. The Bacardi Family Rum Factory is located in Catano on the western side of the San Juan Harbor. While at the factory, tourists can learn about some of the island's more recent history. After relocating to Puerto Rico from Cuba, Ron Bacardi started this factory out of a single building, which today is the fermentation building. In front of this building he planted a palm tree which has since become one of the two symbols of Bacardi Rum. As time went on, he built other buildings around this palm tree until it was surrounded. While at the factory, tourists learn about the rum making process. When the tour starts, you can envision the black slaves and other workers toiling in the sugarcane fields, as the trolley passes mocked up houses depicting where the slaves lived, as well as a sugarcane crane. You next learn about the Bacardi family's contribution to the island. They pay hundreds of millions of dollars in taxes to the Puerto Rican government, thereby improving the economy. In the distilling area, the tourist learns that Facundo Bacardi Maso, founder of Bacardi, was a wine and rum merchant. His wish was to make rum into a smooth, light drink. After 20 years of tinkering, he finally came up with the secret technique that gives us the rums that are produced today. After distilling, the rum is put into casks to age from one to six years. This flavors the rum, making it more suitable for different kinds of drinks. At the end of the tour, you are invited to partake of the famous Caribbean pastime, drinking.

The Bacardi Family Rum Factory is the producer of Bacardi rums. The factory is the first factory built in Puerto Rico after moving from Cuba. There is a tour that takes visitors



through the factory showing them the rum making process, the bottling process, and the gift shop. Two free drinks are also part of the tour.

The factory is located near the town of Catano on the western side of the San Juan Harbor. Unless one takes a tour from a commercial tour operator, the factory can be difficult to find. There do not appear to be any signs pointing the way to the factory, and the directions given by the factory are rather poor.

At the Bacardi facility, tourists take a trolley through the grounds of the factory stopping at different parts of the manufacturing process. There are some fake house fronts depicting the buildings that workers and plantation owners lived in while harvesting sugarcane. A sugarcane crane can also be seen outside the fermentation building. The bottling process occurs in a separate building.

When we contacted the factory by telephone, we were connected to a message that gave us most of the information we were looking for. The voice was clear and understandable. Overall, a positive impression was made.

The facility itself was very clean and professionally run. There was no visible trash or dirt in any part of the factory. On the day of our visit, it was rainy. The trolleys we rode in had covers so that the only seats that got wet from the rain were on the sides of the trolley.

At the first trolley stop, the tourists heard three different tour guides talk about different parts of the rum making process. In all cases, the microphone and speaker system made it very difficult to understand the guide's speech. When one of the tour guides turned off their microphone, it was much easier to understand her. Beyond the problem of



understanding what they were saying, the information given by the tour guides was informative and interesting.

This is a good tour to take in order to learn a little about Puerto Rico's more recent history and economy. While the Bacardi/City Tour is well known and popular, we recommend tourists find their own way to the factory. While difficult, the hassle of finding the factory by car is outweighed by the price of the commercially available tours.

### 5.1.12.1 Bacardi - 28 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M	
1 The facility met my expectations:	[35.7]	[60.7]	[0]	[3.6]	[0]	0	
2 The following areas were clean:	NA	SA	A	N	D	SD	
Bathroom	[32.1]	[17.9]	[35.7]	[10.7]	[3.6]	[0]	0
Food area	[28.6]	[35.7]	[35.7]	[0]	[0]	[0]	0
Other areas of the facility	[25.0]	[46.4]	[25.0]	[3.6]	[0]	[0]	0
3 The facility staff was:	SA	A	N	D	SD		
Knowledgeable	[60.7]	[35.7]	[0]	[0]	[0]	3.6	
Friendly	[64.3]	[32.1]	[3.6]	[0]	[0]	0	
Helpful	[57.1]	[42.9]	[0]	[0]	[0]	0	
Bilingual	[75.0]	[17.9]	[0]	[0]	[0]	7.1	
4 Access to the facility was easy:	[42.9]	[32.1]	[3.6]	[0]	[0]	3.6	
5 The value for the ticket price was satisfactory:	[50.0]	[28.6]	[7.1]	[0]	[0]	14.3	
6 I will recommend this facility to a friend:	[46.4]	[32.1]	[14.3]	[0]	[0]	7.1	
7 What is the purpose of your visit:	[67.9] Family Vacation	[3.6] Business	[21.4] Cruise				
	[0] Honeymoon	[3.6] Spring Break				0	
	[3.6] Other						
8 Gender:	[50.0] Male	[39.3] Female	[0] Mix			10.7	
9 Age:	[3.6] under 21	[28.6] 21-30	[0] 31-40	[17.9] 41-50	[46.4] 51-60	3.6	
	[0] 61-70	[0] 71-80	[0] 81-up				
10 Salary (US\$):	[10.7] 0-10	[0] 10-20	[7.1] 20-30	[10.7] 30-40	[7.1] 40-50	14.3	
(thousands)	[21.4] 50-60	[7.1] 60-70	[0] 70-80	[14.3] 80-90	[7.1] 90-up		



### 5.1.12.2 Bacardi Rum Factory Comments

#### Question #12: What did you like best about your visit to this attraction?

**22 out of 28 tourists responded:**

- “It was free.”
- “Distillery.”
- “Interesting, informative.”
- “Historical information.”
- “Good explanations by guides.”
- “Samples!”
- “Friendly, welcoming employees.”
- “Samples, bottling tour.”
- “Free samples.”
- “Tour and samples.”
- “The facilities, that it was free, courteous and helpful staff.”
- “The whole tour was great.”
- “Knowledgeable guides and cleanliness.”
- “Visit to museum.”
- “The actual drink.”
- “Las personas su modo de ser. Afables.”
- “Me gusta mucho el clima y el pasaje y el trato que he recibido de todas las personas.”
- “El Viejo San Juan.”
- “Friendship of the guides.”
- “Great tour and buses made it even easier to get around.”
- “Vats and bottling.”
- “Good visual example of production process.”
- “Well run tour and excellent tourist accomidations.”

#### Question #13: What did you like least about your visit to this attraction?

**15 out of 28 tourists responded:**

- “The smelly room.”
- “Enjoyed all areas.”
- “No bathrooms available during the tour itself.”
- “Medical facilities.”
- “We drove and wish there were signs better identifying the way to Bacardi tour.”
- “The tenant and owners houses were cheesy.”
- “The weather was raining.”
- “Stairs.”
- “The tour.”



- “Demasiado costosa la vida.”
- “El muy caro.”
- “Streets are small.”
- “Acoustics.”
- “Too many stops with entering and exiting tram.”
- “Finding the facilities was difficult, recommend installing direction signs on roads.”

**Question #14: Describe your overall feelings concerning your visit to this attraction.**

**21 out of 28 tourists responded:**

- “Overall I did not like it. It was too long, and just like any other place.”
- “Pleasant, interesting.”
- “Glad I came.”
- “It was a good experience.”
- “Very good.”
- “Enjoyable, relaxing, informative.”
- “Fun and interesting.”
- “Very simple, very well organized tour.”
- “Fun and informative.”
- “Informative.”
- “It was fun.”
- “Very informative.”
- “Very good.”
- “I like the drink but the tour was very boring.”
- “Gran emocion por viajar con mi familia y conocer otro pais.”
- “Emocion por conocer otro lugar de latino america y poder compararlo con mi familia.”
- “Es un estado de U.S.A. con calor Mexicano.”
- “Its great, people and attractions.”
- “It was informing.”
- “Very informative as to Bacardi family history and product manufacturing.”
- “Excellent tour.”

**Question #15: What did you learn about Puerto Rico from this experience?**

**18 out of 28 tourists responded:**

- “Export a lot of rum.”
- “History of Bacardi and family.”
- “Where rum originated.”
- “That a great deal of tax revenue is generated by this industry.”
- “That PR is home to the world's largest rum distillery.”



“The Bacardi industry is prosperous and contributes to charity and pays high taxes to help the economy.”

“They house the largest rum producer in the world.”

“Not in country long enough to form an opinion.”

“A lot of history.”

“About a portion of their economy.”

“A lot.”

“La forma de vida de educacion bilingue.”

“La amabilidad de los puertoriquenos y el manejo de los dos idiomas.”

“La buena atencion de los puertoriquenos.”

“Puerto Rico can do it by themselves.”

“They make a lot of money on alcohol.”

“Extent of manufacturing in Puerto Rico.”

“Learned about Puerto Rican industry.”

### **Question #16: How would you describe your experience to a friend?**

#### **23 out of 28 tourists responded:**

“It was ok. Nothing very special about the tour.”

“Interesting and enjoyable.”

“Fun.”

“Informative and interesting.”

“Worthwhile.”

“Samples! :-)”

“Friendly people, interesting tour.”

“Go and enjoy!”

“Nice relaxing way to spend an hour.”

“Interesting and worth the time.”

“Well worth a trip.”

“Interesting place to visit.”

“It was great.”

“Enjoyable and informative.”

“Worthwhile to visit.”

“A good time.”

“Recomendar ----- la viseta para ----- el pasaje y la cortacia de sus pabladores.”

“El pasaje se parece a Vera Cruz Mexico y que es una isla muy bonita con ambiente agradable.”

“De donde estes tienes una vista muy bonita.”

“Is a really nice experience.”

“A worthwhile tour.”

“Very pleasant, good drinks.”

“A very good tour, would recommend as an adult outing.”



**Question #17: Other Comments:**

**11 out of 28 tourists responded:**

“They shouldn't put people in that smelly room for 45 min. 10 min. is enough.”

“Pleasant staff assisting with tour.”

“Highway signs and maps are very very poor and not informative.”

“Access! You need signs to the facility - arrows pointing the way.”

“The rum was very good.”

“Definite asset to the tourism in San Juan. The grounds are immaculate.”

“Me agrado contestar el cuestionario por ser jovenes los que me lo solicitarion.”

“Me ubiera gustado ayudarles mas escribiendo esto en engles pero no se su idioma.”

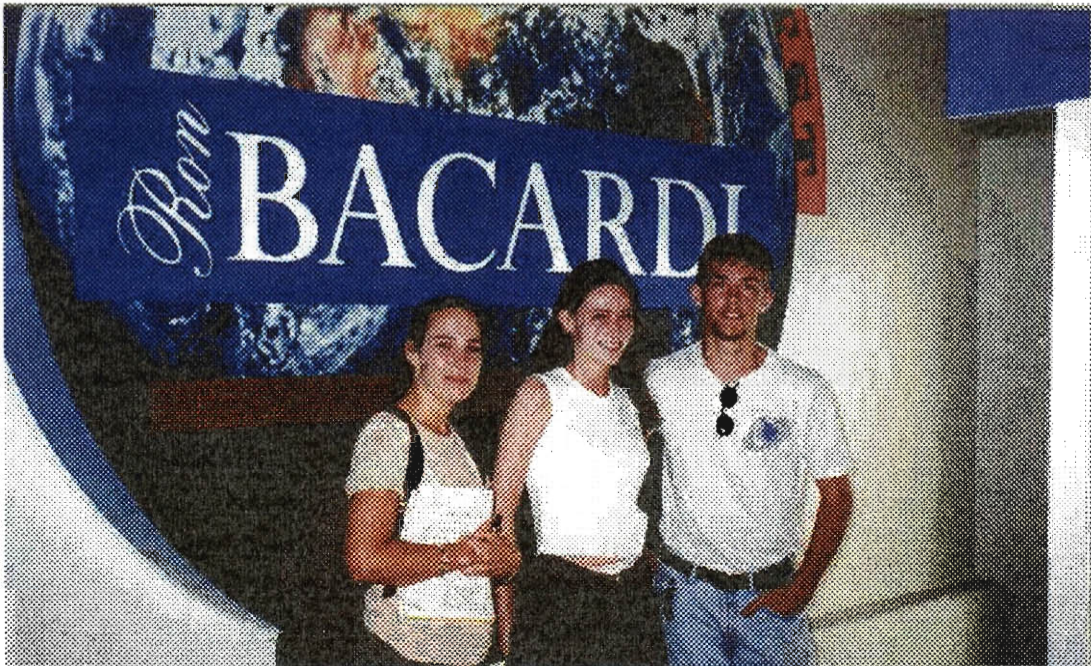
“Me encanto Puerto Rico.”

“Freeway are really good.”

“Rum samples were a nice touch.”



### 5.1.12.3 Bacardi Rum Factory Pictures



Kristin,  
Corry, and  
Jessica at  
the Bacardi  
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## **5.2 Environmental Essays.**

For an island that is only 100 miles long and 30 miles wide, it contains a wide variety of environments. One can visit the lush rain forest at El Yunque in the northern part of the island or travel to the south to see the other extreme, the dry forest of Guanica. One can even see seven ecosystems existing together at Las Cabezas de San Juan or witness the unique phenomenon of the phosphorescent bays in Parguera and Vieques. Puerto Rico is also home to the second largest subterranean river in its Camuy Cave System. The following sections describe our experiences and evaluations at the eco-tourist sites in Puerto Rico.

### **5.2.1 Phosphorescent Bay**

One may go out on a dark night into the wilderness to see the brilliant sparkle of the twinkling stars above, but it never occurs to most people that a similar brilliance could occur below their feet in the waters of a lagoon. In Puerto Rico an even more amazing light demonstration occurs in the waters than that of the stars above. This brilliance comes from a rare micro-organism that lives in some of Puerto Rico's waters known as phosphorescent bays.

Boat tours in the phosphorescent bays of Puerto Rico are a popular tourist attraction. When entering a phosphorescent bay for the first time, visitors should be prepared for a spectacle they could never have imagined. It is true, the water glows here. It is hard to explain this to someone who has never seen it before because it is such a unique phenomenon. The waters of Puerto Rico are shining due to a rare micro-organism that lives in only a few bays around the world. Trying to explain the experience to a friend is very



difficult, each person seems to create his or her own images in describing the shiny waters. It makes matters worse that it is almost impossible to get good photographs of it.

The first thing that will amaze someone who is seeing this for the first time is the glowing wake beneath the stern of the boat as it breaks the calm surface of the bay. The waves from the boat glow due to the micro-organisms; it is not glowing on its own, as some may imagine. It takes movement to make these animals glow. Looking off into the darkness of the bay, one will also see bolting streaks of brilliant light. This phenomenon is again from the micro-organisms shining due to the movement of the fish as they quickly swim off after being frightened by the boat's disturbance.

The movement of swimmers at night will also cause the organisms to glow. This is an experience that everyone who comes to see the bay must try. When you jump into the water it is like entering a whole new world. It appears as if one's body begins to glow. One could spend hours creating one's own light demonstration with these microscopic animals. Swimming through the water, anyone looks like a graceful shining fairy flying through a magical wonderland. Some may think that if it began to rain while out on the bay it would ruin the experience, however it enhances it. For those fortunate enough to visit the bioluminescent bay on a rainy night, they will see that each raindrop creates its own spot of light. The collective result is that the entire bay glows faintly with a bluish-white light.

Bioluminescence, the glowing of animals, is not an uncommon process. Almost everyone has observed the intermittent flashing of fireflies in the night sky. The phenomenon in Puerto Rico seems strange to us because the light is coming from the water. However, bioluminescence occurs naturally among animals at the greater ocean depths.

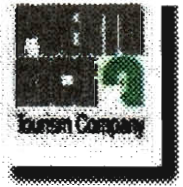


People are often not aware of this because the animals live so deep under water we never see them.

Bioluminescent bays are often referred to as “phosphorescent bays.” However, phosphorescence refers to the light-emitting properties of the chemical element phosphorus after it is exposed to light. Luminous clocks and wristwatches utilize this property. The essential difference between phosphorescent and bioluminescence lies in the prefix “bio.” Bioluminescence is the emission of light by living organisms. Pyrodinium, the family of organisms that these animals are in, contains chlorophyll and thus, like green plants, it is able to manufacture food with sunlight for energy, the process we call photosynthesis. Because of their combining movement with the ability to carry out photosynthesis, they are like plants and animals. For this reason, biologists for many years had a difficult time classifying such organisms.

The scientific name for these brilliant animals is dinoflagellates (single-celled pyrodinium). Scientists understand how these animals shine but why they do it still remains a mystery. Because they shine when the water is disturbed, it is possible that this is a defense mechanism. Others think that it may be a form of communication for the animal. Then there is also the "indirect" theory that they are signaling their predator's predator.

Bio bays in other parts of the Caribbean have been lost because of development and pollution. The phosphorescent bay off Puerto Rico's southern coast is now 1/10 as bright as it used to be due to damages caused by pollution. The dinoflagellates flourish in very delicate environments. The organisms need the vitamin B12 that comes from mangroves. Mangroves live where the tide changes and often the strength of the tide washes out much of the B12 the organisms need to survive. Therefore another stipulation of the dinoflagellate's



environment is a narrow bay opening to the sea that prevents the wash out of B12. These requirements make this ecosystem extremely fragile and phosphorescent bays a rarity. Even the slightest amount of pollutant will disrupt this precise balance necessary for the organisms to survive. Over the years, the bay's brilliance has dimmed due to the pollution so it is best to go see it when there is no moon.

Two of the most popular phosphorescent bays in Puerto Rico are La Parguera off the main coast and Mosquito Bay off the coast of Vieques. The island of Vieques, located ten miles off the eastern coast of Puerto Rico, possesses what is perhaps the most magnificent example of the world's few remaining bioluminescent bays. No one who visits Vieques should leave without experiencing this natural wonder. La Parguera is equally amazing but not as bright due to the damage it has suffered from pollutants in the bay. One may be interested to note that the micro-organisms in La Parguera shine a different color than those at Vieques. There are several dinoflagellate species found in oceans worldwide and each type of dinoflagella shines a different color. People say the organisms in Parguera shine silver while those in Vieques give off a blue-green color.

One must realize how important it is to preserve and protect these fragile ecosystems that support these organisms. After all, wouldn't one want others to be able to experience this natural wonder too?

### **5.2.2 Mosquito Bay**

The famous phosphorescent bay on the island of Vieques is named Mosquito Bay. It is a natural bay off the ocean containing billions of naturally occurring organisms that light up at night if they are disturbed. This causes an eerie glowing sensation that tourists,



including ourselves, find fascinating. There are two ways to visit the bay. One way is by kayak tour led by a local guide. The other is by electrically powered pontoon boat, again with a local guide. In both instances, tourists are allowed to swim in the luminescent water.

The bay is located on the south shore of Vieques Island, off the East coast of Puerto Rico. Access to the island is mainly by ferry from the mainland town of Fajardo. Once on the island, the companies that run the tours will pick-up tourists at their guesthouses. The pontoon boat tour's bus is old and beat up, most likely due to the road that it takes to get to the edge of the bay. The road is filled with ruts and potholes and it is partially overgrown by the mangrove trees that surround the bay. The "undeveloped" nature of the location is perhaps one of the charms of Mosquito Bay.

While on the tour, tourists are shown the mangrove trees, guided through the shining constellations above, and allowed to swim in the glowing water. Flotation devices are used while swimming for safety purposes, although most adults taking a kayak tour will be able to touch the mucky bottom. During the entire tour, information is given regarding why the bay glows, how it is able to support the glowing organisms, and how they are being protected from damage by pollution.

We first contacted the tour company on Vieques by telephone. They were very good about answering all of our questions. They went so far as to suggest some good guesthouses that we could stay at. The people we talked to were Americans so language was not a problem in communication.

The boat and the bay were immaculately clean. The bus, however, was not. It appeared unsafe and in need of repairs. It did seem to be in mechanically good shape, as it, in fact, got us safely to the edge of the bay and back.



Our tour was led by Mark, an American living in Puerto Rico. He was very knowledgeable about the stars, the bay, and efforts to conserve the bay. His assistant didn't have much to say but took care of landing, launching, and mooring the boat while Mark talked and drove the boat. There were no complaints about the staff of this tour.

We recommend taking this tour as close as possible to the time of the new moon. This will give the best viewing of the glowing phenomenon as moonlight reduces the effect. We suggest that tourists be encouraged to take the Saturday morning ferry from Fajardo to Vieques and spend the day on the beach, eat dinner at one of the many restaurants on the south side of the island, and then take the bay tour. By the time the tour is over, the ferries will have stopped for the night, meaning you must stay in one of the relatively inexpensive local guesthouses before taking the morning or afternoon ferry home to Fajardo. This tour is one of our most highly recommended tours.



### 5.2.2.1 Mosquito Bay - 16 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M	
1 The facility met my expectations:	[43.8]	[50.0]	[6.3]	[0]	[0]	0	
2 The following areas were clean:	NA	SA	A	N	D	SD	
Bathroom	[68.8]	[18.8]	[12.5]	[0]	[0]	[0]	0
Food area	[68.8]	[18.8]	[12.5]	[0]	[0]	[0]	0
Other areas of the facility	[37.5]	[18.8]	[43.8]	[0]	[0]	[0]	0
3 The facility staff was:	SA	A	N	D	SD		
Knowledgeable	[81.3]	[12.5]	[0]	[0]	[0]	6.3	
Friendly	[93.8]	[0]	[0]	[0]	[0]	6.3	
Helpful	[81.3]	[6.3]	[6.3]	[0]	[0]	6.3	
Bilingual	[68.8]	[6.3]	[6.3]	[0]	[0]	18.8	
4 Access to the facility was easy:	[25.0]	[43.8]	[6.3]	[12.5]	[6.3]	6.3	
5 The value for the ticket price was satisfactory:	[31.3]	[56.3]	[6.3]	[0]	[0]	6.3	
6 I will recommend this facility to a friend:	[56.3]	[43.8]	[0]	[0]	[0]	0	
7 What is the purpose of your visit:	[6.3] Family Vacation	[12.5] Business	[0] Cruise				
	[0] Honeymoon	[12.5] Spring Break				0	
	[68.8] Other						
8 Gender:	[68.8] Male	[31.3] Female	[0] Mix			0	
9 Age:	[62.5] under 21	[37.5] 21-30	[0] 31-40	[0] 41-50	[0] 51-60	0	
	[0] 61-70	[0] 71-80	[0] 81-up				
10 Salary (US\$):	[62.5] 0-10	[12.5] 10-20	[12.5] 20-30	[12.5] 30-40	[0] 40-50	0	
(thousands)	[0] 50-60	[0] 60-70	[0] 70-80	[0] 80-90	[0] 90-up		





### 5.2.2.2 Mosquito Bay Comments

#### Question #12: What did you like best about your visit to this attraction?

##### 16 out of 16 tourists responded:

- “The attraction itself (the bioluminescence).”
- “The people I came with, kayaking mosquito bay.”
- “Swimming in the bay.”
- “Swimmin' in glowy stuff.”
- “Swimming in the water where the stuff glowed.”
- “The glowing water was awesome.”
- “The guide knew everything about the bay.”
- “Going out in a kayak.”
- “The tiny city effect.”
- “The phosphorescent bay, kayaking.”
- “Relaxing.”
- “Learning about the sky (stars), microorganisms, and swimming with the microorganisms.”
- “Bars.”
- “The glowy stuff.”
- “Never seen anything like it ... "looked like the abyss".
- “The bay was amazing.”

#### Question #13: What did you like least about your visit to this attraction?

##### 12 out of 16 tourists responded:

- “How short it was.”
- “It wasn't long enough.”
- “Accessibility, the ride to the boat landing is bumpy and seems dangerous.”
- “Death ride on bus through the woods.”
- “The bus ride through the woods.”
- “That it had to end.”
- “It was a bit pricey for a 30 minute boat ride.”
- “The sunburn.”
- “Nada.”
- “Those 2 tools at the bar.”
- “Bus ride.”
- “There were jellyfish.”

#### Question #14: Describe your overall feelings concerning your visit to this attraction.

##### 16 out of 16 tourists responded:

- “An exciting time with a lot of glow :)”
- “It was the best experience so far in Puerto Rico.”
- “Interesting, the ride was bumpy but fun, the staff was friendly and knowledgeable, a definite learning experience.”
- “Good.”
- “Excellent.”
- “It was awesome, I loved it.”



"I had a really good time."  
"It was a really amazing experience."  
"Good. Very friendly atmosphere."  
"Had the best time!"  
"Relaxing and refreshing."  
"This was an interesting and unique experience."  
"Good times."  
"Great time."  
"Incredible!"  
"It was interesting and informative."

**Question #15: What did you learn about Puerto Rico from this experience?**

**13 out of 16 tourists responded:**

"That it is one of the few places in the world that is still able to preserve this natural wonder."  
"Vieques is a 4 hours ferry ride from mainland Puerto Rico."  
"Endangerment of mangrove wetlands, endangerment of species on the island (fishing industry)."  
"Not too much."  
"That it has one of the last 10 phosphorescent bay."  
"I don't remember learning about Puerto Rico."  
"The natives hate American military more than I thought."  
"It definitely broadened my perspective on how some people live in the outskirts of a city w/low incomes"  
"That Vieques is an unappreciated island."  
"That the microorganisms are cool and should be protected."  
"Not to much."  
"It has a great bioluminescent bay."  
"It has 2 phosphorescent bays. (I didn't learn how to spell phosphorescent)."

**Question #16: How would you describe your experience to a friend?**

**15 out of 16 tourists responded:**

"Something that has to be done, try the kayaking, it's a blast. I still can't believe how bright it was."  
"It was a really good time, a must-do experience."  
"Beautiful and almost amazing site to see."  
"Good times."  
"Good times."  
"I can't express how awesome it was to swim in the glowing water."  
"The bay was awesome, definitely go!"  
"Put on sunscreen."  
"You must go to Mosquito Bay--best thing I've ever seen!"  
"Relaxing and refreshing."  
"Chillin' with the cool microorganisms under the awesome sky."  
"Good times."  
"Great fun."  
"Incredible!"  
"The bay was unbelievable."

**Question #17: Other Comments:**

**16 out of 16 tourists responded:**



“Something that has to be done, try the kayaking, it's a blast. I still can't believe how bright it was.”

“It was a really good time, a must-do experience.”

“Beautiful and almost amazing site to see.”

“Good times.”

“Good times.”

“I can't express how awesome it was to swim in the glowing water.”

“The bay was awesome, definitely go!”

“Everyone should try it.”

“Put on sunscreen.”

“You must go to Mosquito Bay--best thing I've ever seen!”

“Relaxing and refreshing.”

“Chillin' with the cool microorganisms under the awesome sky.”

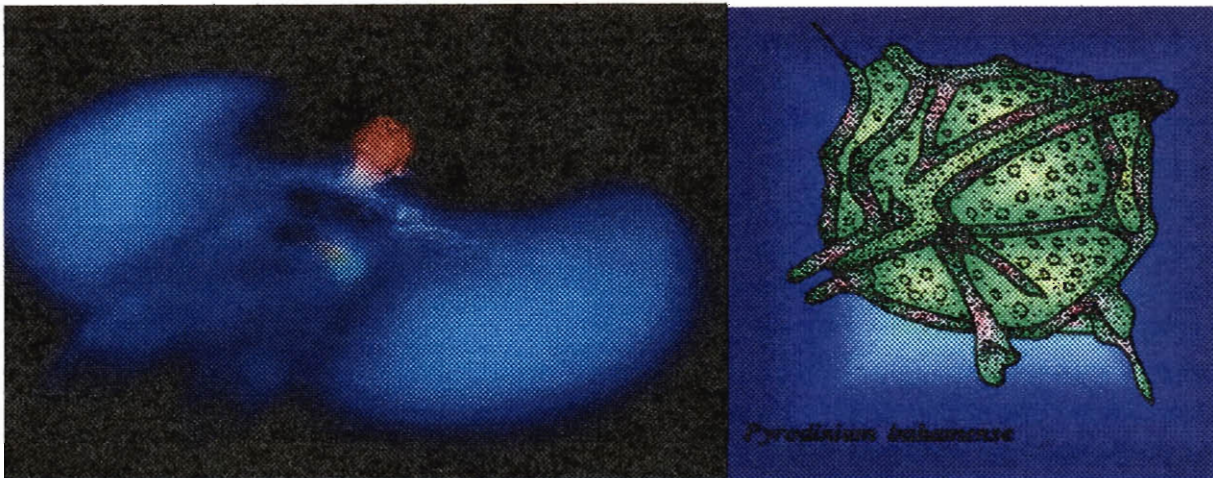
“Good times.”

“Great fun.”

“Incredible!”

“The bay was unbelievable.”

### 5.2.2.3 Mosquito Bay Pictures





### 5.2.3 La Parguera

La Parguera, the second phosphorescent bay in Puerto Rico, is located on the southern coast west of Ponce. It is a bay off the ocean that is unfortunately not as well protected from both the physical and legislative standpoints. Regulations either are not in place or are not being enforced to keep pollution from motorboats and stream runoffs to a minimum. Also, in terms of volume, the bay has a much larger water exchange with the ocean. These factors cause the bay's light intensity to be much lower than that of Mosquito Bay on Vieques. The tour is taken on a large motorboat leaving out of the town of Parguera. Dozens of tour operators take tourists out on the bay every night. Private boat owners even charter their boats for private bay tours.

Getting to La Parguera requires renting a car due to the nighttime nature of the tour. Once in the town itself, representatives from different organized commercial tour companies meet you on the main road and guide you to the main parking area and then the ticket booth.

The tour consists of an approximately 15 minute boat ride to the bay, 5 minutes in the bay while the boat hands take a bucket of the bay water and dump it on the deck, and another 15 minute ride back to the dock. We were not allowed to swim in the bay as we had expected and as is permitted at Mosquito Bay on Vieques. Additionally, the tour operators gave no information about the bay.

We were not able to contact anyone on the telephone regarding this tour as no telephone numbers are published for the Parguera tour companies. Our only information regarding the tours was gathered by talking to local Puerto Ricans who told us to simply show up there and boats would be waiting to take us out.



The boat we took was large enough to fit roughly 40 people and was powered by a diesel engine. Unfortunately, this no doubt contributed to the bay's pollution and its eventual demise. The bay itself has been polluted over time and has lost some of its phosphorescence. Overuse by local residents and lack of regulations protecting this natural phenomenon has sadly led to its deterioration.

The tour staff was very friendly, but they were not able to speak English and did not give any scientific or historical information whatsoever about the bay. It would have been nice to have been given some details about what made the water glow, why the organisms light up, or why that bay is able to support this phenomenon as opposed to other bays.

We would recommend that, if at all possible, the tourist go to the phosphorescent bay on Vieques, as it is a much more spectacular sight. However, if you are only able to see the bay at Parguera, go with the knowledge that the bay has been polluted and is only at about 10% of its original strength. We would like to challenge the tour boats at Parguera and the relevant governmental bodies to think seriously about preservation methods to save this eco-touristic resource. This tour is a good addition to a day spent touring the sights in Ponce, or the Guanica State Forest, both located nearby, provided that it is around the time of the new moon.



### 5.2.3.1 La Parguera - 15 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M	
1 The facility met my expectations:	[13.3]	[13.3]	[33.3]	[26.7]	[6.7]	6.7	
2 The following areas were clean:	NA	SA	A	N	D	SD	
Bathroom	[46.7]	[0]	[6.7]	[13.3]	[13.3]	[13.3]	6.7
Food area	[40.0]	[0]	[26.7]	[20.0]	[6.7]	[0]	6.7
Other areas of the facility	[20.0]	[6.7]	[33.3]	[33.3]	[0]	[0]	6.7
3 The facility staff was:	SA	A	N	D	SD		
Knowledgeable	[13.3]	[26.7]	[46.7]	[13.3]	[0]	0	
Friendly	[33.3]	[40.0]	[26.7]	[0]	[0]	0	
Helpful	[6.7]	[53.3]	[40.0]	[0]	[0]	0	
Bilingual	[13.3]	[26.7]	[20.0]	[40.0]	[0]	0	
4 Access to the facility was easy:	[20.0]	[73.3]	[6.7]	[0]	[0]	0	
5 The value for the ticket price was satisfactory:	[0]	[53.3]	[33.3]	[6.7]	[6.7]	0	
6 I will recommend this facility to a friend:	[13.3]	[0]	[46.7]	[33.3]	[6.7]	0	
7 What is the purpose of your visit:	[6.7]	Family Vacation	[26.7]	Business	[0]	Cruise	
	[0]	Honeymoon	[6.7]	Spring Break			0
	[0]	Other					
8 Gender:	[60.0]	Male	[40.0]	Female	[0]	Mix	0
9 Age:	[66.7]	under 21	[33.3]	21-30	[0]	31-40	
	[0]	61-70	[0]	71-80	[0]	81-up	
					[0]	41-50	[0]
					[0]	51-60	0
10 Salary (US\$):	[80.0]	0-10	[13.3]	10-20	[0]	20-30	
(thousands)	[0]	50-60	[0]	60-70	[0]	70-80	
					[0]	80-90	[0]
					[0]	90-up	6.7



### 5.2.3.2 La Parguera Comments

#### Question #12: What did you like best about your visit to this attraction:

13 out of 15 tourists responded:

- “The glowing organisms were unlike anything I've ever seen.”
- “The food.”
- “Going on the boat ride.”
- “Tour guide was very friendly and knowledgeable. The micro-organisms are cool!”
- “The ride.”
- “The boat ride and talking to the friends I was with.”
- “The glow in the bay.”
- “That there was a large group of us.”
- “The glowing water.”
- “Speaking with the locals.”
- “The phosphorescence.”
- “The boat ride.”
- “The bay was interesting.”

#### Question #13: What did you like least about your visit to this attraction?

14 out of 15 tourists responded:

- “I didn't learn a single thing, I was led to believe we could swim in the bay (I was wrong) and the boat and dock looked very old and rickety.”
- “The short stay at the bay.”
- “We couldn't go swimming in the bay.”
- “The boat ride was so short. They didn't have an explanation over a loud speaker for everyone. I learned about them (micros) by asking the guide personally. Also guide didn't speak English.”
- “The experience on the boat wasn't what I expected, and they didn't let us swim.””
- “The full moon that took away from the effect of the bay.”
- “How short it was and how no information about the bay was given.”
- “Not being able to swim in the luminescent water.”
- “The bus ride to it.”
- “The actual bay!”
- “We didn't swim with the little microorganisms.”
- “We went on a motor boat.”
- “The bay was nothing compared to the Vieques bay.”
- “The ride was short.”

#### Question #14: Describe your overall feelings concerning your visit to this attraction.

14 out of 15 tourists responded:

- “It was a waste of time.”
- “Kind of sketchy.”
- “It was not as good as everyone made it seem.”
- “The phenomenon in itself was cool, the tour to go see them did not complement this.”
- “It would have been just as fun without actually going into the bay.”
- “The staff was friendly but not very knowledgeable about the bay, still ok to see.”





“Not very interesting.”  
“It was not what I expected.”  
“Very cool experience.”  
“I had been told that Vieques Mosquito Bay was better--and yes! Paguera doesn't even compare.”  
“It was a crappy cheap thing.”  
“It was good.”  
“Let down.”  
“It wasn't bad.”

**Question #15: What did you learn about Puerto Rico from this experience?**

**10 out of 15 tourists responded:**

“Nada.”  
“There is stuff that glows in the water.”  
“They have neat micro-organisms that I haven't seen anywhere else.”  
“Pollution and urbanization is bad for those one-celled glow bugs.”  
“That they have many natural attractions.”  
“How polluted the island and its surrounding waters are.”  
“Nothing.”  
“Mangroves are important.”  
“Not much.”  
“There is a phosphorescent bay.”

**Question #16: How would you describe your experience to a friend?**

**10 out of 15 tourists responded:**

“It was a waste of time, don't bother going--but tide under a black light instead!”  
“Glad I went, but I don't think I'd go back.”  
“Try to find a better place to see them. There wasn't many here and you can only see them if water moves.”  
“No big deal experience.”  
“A little cheap but not quite a rip-off.”  
“Not very good.”  
“It was fun only because all our friends were there.”  
“Fun but its so polluted that you can't really see much.”  
“Interesting and fun.”  
“Go to Vieques!”

**Question #17: Other Comments:**

**6 out of 15 tourists responded:**

“It was a nice effort on the part of the trip coordinators. I appreciate all the work they put in to organizing the trip, they didn't know what to expect either! :)”  
“They should explain to all tourist on the way out to the bay 1. what the organisms are 2. why they glow 3. why they're found where they are.”  
“Go on plenty of road trips. Most of the time, it is the trip that is the most fun.”  
“I wouldn't go again--definitely would go back to Vieques! It's too bad that the pollution is so high!”  
“Don't waste your money.”  
“The trip was poorly timed.”



#### 5.2.4 El Yunque

Nowhere in the world will tourists observe a greater wealth of beauty than what is waiting for them in the rainforest in the Luquillo Mountains. According to ancient Indian legend, the good spirit “Yuquiya” reigned on his mighty mountaintop throne, protecting Puerto Rico and its people. The name Luquillo is derived from this spirit’s Indian name. Many of the sights seen in El Yunque are the same as those that dazzled the first Spanish explorers more than 500 years ago. There are 1,000-year-old-trees, strange plants with exotic rainbow-colored flowers, and thick vines with great masses of lush red blossoms waving in the cool breeze. From the heart of this breath-taking beauty visitors may hear the incessant, yet delightful, two-note chanting of Puerto Rico’s national mascot, the “Coqui”, the chattering of unseen tropical birds, possibly the squawk of the endangered Puerto Rican Parrot. Even if tourists have already seen all the other wondrous sights this world has to offer, they will never forget the enchantment of El Yunque.

El Yunque is the only large-scale area on the island in which the native vegetation is conserved. Old documents indicate that the island was completely covered by forests when the Spanish arrived. Though it is impossible to calculate with precision, experts estimate that the number of Tainos on the island never surpassed 30,000, and the small land areas that they cleared for farming had a minimal effect on the appearance of the island and on the extension of its forests.

The rise of Spanish civilization, the constant growth of the population, and the advances in agricultural technologies combined to deter progress of the forestry zones. Converting trees into wood for construction of buildings and fuel has contributed to the destruction of forests. In the beginning of the 19<sup>th</sup> century, three quarters of the island were



covered by forests, but with the increase in population during this century, by 1900, only 25% of the land was conserved as forests, and by 1950, this number dropped to under 10%. The erosion of the fields then became a serious problem.

Later, when emigration, economics, and technology were on the verge of clearing the island completely, these same influences began to help in the salvation of the land. At this time, mountain dwellers began their emigration into the Cordillera Central across the towns and cities of the island. The gas, electricity, and cement resources alleviated the pressure on forests to produce wood for combustion and construction. The decline of agriculture on the island made it possible for the highest areas of the mountains to rejuvenate themselves as forests. Today, forests cover only approximately one quarter of the island, and still El Yunque is the only area that is protected as and conserved to be an authentic tropical rainforest.

Before venturing out to El Yunque, our project team attempted to gather information about the attraction by calling the site. The man who answered the phone spoke only a little English and could not answer most of our questions. He seemed to have trouble understanding what we asked him, and he sometimes gave inaccurate information.

Our team visited El Yunque several times, first via Rico Suntours on March 25. This was a bus tour, not a hiking tour. We drove through the forest and the guide pointed out some of the rare plants along the way. At the end of the tour we were able to take a 10-minute hike before going home. We were disappointed by this tour. It is better geared toward the non-hiker. We would prefer being able to hike through the forest instead of being driven through it. It was tantalizing to hear about the different trails that people could



explore, but that we wouldn't have the chance to hike. We suggest this tour only to non-hikers, or to hikers who wish to have a "preview" before their actual tromp through El Yunque.

Our tour guide, Freddy, was very friendly, knowledgeable and helpful. On the way to the forest he told us interesting historical anecdotes about Puerto Rico. He also gave us plenty of information about the various plants in El Yunque. However, his chattering became excessive, especially when he started to share with us unsolicited personal information about his family. It would have been nice to enjoy the views in silence for awhile, but the guide continued talking throughout the entire trip.

On our next visit to El Yunque, our team hiked through the forest taking the Big Tree Trail to the Casacada de Minas. We found that the rainforest is great for exploration without a tour guide. Visitors can travel at their own pace, and choose trails at their own discretion. Informational signs along the trails explain the different trees and flowers that people will encounter along the way, making guides unnecessary. El Yunque is beautifully kept and is a natural splendor.

Our team recommends that the facility give every tourist a map of the forest with a description of each trail and its difficulty level. There should be a formal entrance where all tourists can receive this information, and can be warned of health and safety issues. Hiking can be a wonderful experience, but it also can be very dangerous. El Yunque does not have first aid readily available to tourists, and the facility does not track who enters and exits the forest. If someone is hurt or lost, there is no record of the incident, and no staff available to help.



### 5.2.4.1 El Yunque - Hike 11 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M	
1 The facility met my expectations:	[36.4]	[63.6]	[0]	[0]	[0]	0	
2 The following areas were clean:	NA	SA	A	N	D	SD	
Bathroom	[45.5]	[0]	[45.5]	[9.1]	[0]	[0]	0
Food area	[72.7]	[0]	[27.3]	[0]	[0]	[0]	0
Other areas of the facility	[18.2]	[27.3]	[45.5]	[9.1]	[0]	[0]	0
3 The facility staff was:	SA	A	N	D	SD		
Knowledgeable	[18.2]	[18.2]	[36.4]	[0]	[0]	27.3	
Friendly	[27.3]	[9.1]	[36.4]	[0]	[0]	27.3	
Helpful	[18.2]	[9.1]	[36.4]	[9.1]	[0]	27.3	
Bilingual	[9.1]	[27.3]	[36.4]	[0]	[0]	27.3	
4 Access to the facility was easy:	[27.3]	[54.5]	[9.1]	[9.1]	[0]	0	
5 The value for the ticket price was satisfactory:	[72.7]	[9.1]	[0]	[0]	[0]	18.2	
6 I will recommend this facility to a friend:	[72.7]	[27.3]	[0]	[0]	[0]	0	
7 What is the purpose of your visit:	[0] Family Vacation	[18.2] Business	[0] Cruise				
	[0] Honeymoon	[0] Spring Break				9.1	
	[72.7] Other						
8 Gender:	[63.6] Male	[36.4] Female	[0] Mix			0	
9 Age:	[72.7] under 21	[27.3] 21-30	[0] 31-40	[0] 41-50	[0] 51-60	0	
	[0] 61-70	[0] 71-80	[0] 81-up				
10 Salary (US\$):	[72.7] 0-10	[0] 10-20	[18.2] 20-30	[0] 30-40	[0] 40-50	0	
(thousands)	[0] 50-60	[0] 60-70	[0] 70-80	[0] 80-90	[0] 90-up		



### 5.2.4.2 El Yunque - Hike Comments

**Question #12: What did you like best about your visit to this attraction?**

**11 out of 11 tourists responded:**

- “Definitely the waterfall baby!”
- “Being outdoors and seeing things I've never seen before.”
- “I love the waterfalls!”
- “Waterfall and vines to swing on.”
- “The waterfall.”
- “Being in the clouds.”
- “The sites, especially the flowers! :)”
- “Quiet peaceful waterfall.”
- “The waterfalls and trails.”
- “El coqui y los paseos.”
- “Trees.”

**Question #13: What did you like least about your visit to this attraction?**

**9 out of 11 tourists responded:**

- “Paved trails sort of killed the ambiance.”
- “Not all of the trails were open.”
- “The number of people who went, not our group, but other tourists.”
- “The long hike.”
- “The slickness of the stairs and rocks.”
- “(The drive all the way to Fajardo)”
- “Too many people who couldn't shut up.”
- “Waterfall was too crowded, and was not allowed to drive to Pico de Este, where the cloud forest is located.”
- “Walking.”

**Question #14: Describe your overall feelings concerning your visit to this attraction.**

**10 out of 11 tourists responded:**

- “Groovy.”
- “The people were helpful and the buildings were relatively clean. I would love to go see it again.”
- “I had an awesome time and want to go back!”
- “Really good time.”
- “It was awesome to swim under the waterfall.”
- “An awesome time with a great view.”
- “I had a great time--definitely would do it again!”
- “Lovin it.”
- “Yes.”
- “Good times.”

**Question #15: What did you learn about Puerto Rico from this experience?**

**8 out of 11 tourists responded:**



“It has a forest where it rains... a lot.”  
“It is a beautiful and exotic place.”  
“Nothing really, I learned about the ecosystem”  
“That El Yunque isn't as high as I thought it was.”  
“That it has a real rainforest.”  
“That there is a rain forest and how much damage a hurricane can do!!”  
“That Puerto Rico contains a wide variety of trees, and the forest lacks animal life.”  
“Its' got nice natural resources.”

**Question #16: How would you describe your experience to a friend?**

**11 out of 11 tourists responded:**

“Pretty cool place, but won't really fill up a whole day.”  
“It was an amazing experience seeing new things.”  
“It was really interesting.”  
“It was one of my best experiences here so far.”  
“You have to see the top and the waterfall.”  
“Something that can be done over and over again. Must go.”  
“Be prepared to hike quite a bit if you intend on seeing the top! It's beautiful--a must see.”  
“Worth going to.”  
“It was excellent.”  
“Neeto.”  
“Good times.”

**Question #17: Other Comments:**

**6 out of 11 tourists responded:**

“Definitely cool.”  
“GREAT PLACE.”  
“And bring your b-suit--go to see the waterfall & go swimming.”  
“Good times!”  
“Yes.”  
“My cat's name is Mittens.”

### 5.2.4.3 El Yunque - Bus 17 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M					
1 The facility met my expectations:	[35.3]	[58.8]	[0]	[0]	[0]	5.9					
2 The following areas were clean:	NA	SA	A	N	D	SD					
Bathroom	[17.6]	[47.1]	[29.4]	[0]	[5.9]	[0]	0				
Food area	[58.8]	[11.8]	[29.4]	[0]	[0]	[0]	0				
Other areas of the facility	[11.8]	[41.2]	[0]	[0]	[0]	[0]	17.6				
3 The facility staff was:	SA	A	N	D	SD						
Knowledgeable	[52.9]	[41.2]	[0]	[0]	[0]	5.9					
Friendly	[58.8]	[35.3]	[0]	[0]	[0]	5.9					
Helpful	[52.9]	[35.3]	[0]	[0]	[0]	11.8					
Bilingual	[41.2]	[41.2]	[0]	[0]	[0]	17.6					
4 Access to the facility was easy:	[41.2]	[52.9]	[0]	[0]	[0]	5.9					
5 The value for the ticket price was satisfactory:	[29.4]	[29.4]	[17.6]	[17.6]	[0]	5.9					
6 I will recommend this facility to a friend:	[35.3]	[58.8]	[5.9]	[0]	[0]	0					
7 What is the purpose of your visit:	[52.9]	Family Vacation	[0]	Business	[17.6]	Cruise					
	[17.6]	Honeymoon	[11.8]	Spring Break			0				
	[0]	Other	_____								
8 Gender:	[41.2]	Male	[58.8]	Female	[0]	Mix	0				
9 Age:	[23.5]	under 21	[5.9]	21-30	[11.8]	31-40	[11.8]	41-50	[23.5]	51-60	0
	[11.8]	61-70	[5.9]	71-80	[5.9]	81-up					
10 Salary (US\$):	[23.5]	0-10	[0]	10-20	[5.9]	20-30	[23.5]	30-40	[11.8]	40-50	0
(thousands)	[5.9]	50-60	[0]	60-70	[0]	70-80	[0]	80-90	[17.6]	90-up	





#### 5.2.4.4 El Yunque – Bus Tour Comments

##### Question #12: What did you like best about your visit to this attraction?

16 out of 17 tourists responded:

- “Different and various vegetation.”
- “To see the other way of living.”
- “The plants.”
- “Wild rainforest.”
- “A chance to see and experience a rainforest.”
- “Rainforest flowers.”
- “Information about African descendants, being in a real rainforest.”
- “Traveling through areas where African descendants live; learning about rainforest; short hike.”
- “I liked the trail. I could see the rainforest.”
- “Beautiful flora. Admired Puerto Rico's efforts to preserve these quickly disappearing rainforests.”
- “I think that the walk through the rainforest was the best part.”
- “Talkative well-informed driver.”
- “Sights and knowledge of tour guide.”
- “Natural beauty of park area.”
- “The waterfall.”
- “The rain forest, El Yunque.”

##### Question #13: What did you like least about your visit to this attraction?

13 out of 17 tourists responded:

- “The rain.”
- “The long drive and the guide.”
- “No seatbelts.”
- “Construction on route made it difficult and time consuming for driver.”
- “Rain.”
- “A bit too much "sales information" by the driver/guide.”
- “Heavy rain.”
- “Heavy rain.”
- “I don't think there was anything I didn't like.”
- “Not much time to sightsee and take pictures.”
- “Not more stops for photos etc.”
- “The long walk without a water fountain.”
- “They should have tours guide inside the forest.”

##### Question #14: Describe your overall feelings concerning your visit to this attraction.

15 out of 17 tourists responded:

- “Driver was informative but added much needless personal conversation.”
- “Good, but need more time to take pictures.”
- “Too much talk.”
- “Enjoyed the visit.”



“Driver talk too much.”  
“Positive knowledge and memories.”  
“Positive.”  
“There was a lot of rain but it was absolutely beautiful.”  
“Very positive.”  
“I am really glad I came. I thought the tour guide was very knowledgeable.”  
“Positive.”  
“Good.”  
“Very interesting.”  
“It was beautiful.”  
“I feel in real contact with nature.”

**Question #15: What did you learn about Puerto Rico from this experience?**

**15 out of 17 tourists responded:**

“Driver was informative but added much needless personal conversation.”  
“Good, but need more time to take pictures.”  
“Too much talk.”  
“Enjoyed the visit.”  
“Driver talk too much.”  
“Positive knowledge and memories.”  
“Positive.”  
“There was a lot of rain but it was absolutely beautiful.”  
“Very positive.”  
“I am really glad I came. I thought the tour guide was very knowledgeable.”  
“Positive.”  
“Good.”  
“Very interesting.”  
“It was beautiful.”  
“I feel in real contact with nature.”

**Question #16: How would you describe your experience to a friend?**

**14 out of 17 tourists responded:**

“Pleasant country to visit.”  
“Good experience.”  
“OK.”  
“Wonderful weather, friendly people, decrepid/rundown/rusty/unkempt buildings and yards.”  
“Definitely worthwhile.”  
“Very different compared to our country, Canada.”  
“Worth the investment of time and money.”  
“Good way to visit rainforest.”  
“It was so great.”  
“I was say I had a really good time.”  
“Positive.”  
“Great!”  
“It's a must-see adventure.”  
“Exciting!”

**Question #17: Other Comments:**



**8 out of 17 tourists responded:**

“I lived on St. Croix for 12 years - I understand the island economies, and there is no reason to not control dumping more efficiently.”

“How can you buy insurance and have no seatbelts.”

“Love it - must be seen by all visitors in this area.”

“Thanks for the tour opportunity.”

“Thank you.”

“It was beautiful.”

“Tour operator needs to be more assertive regarding tourists overstaying the time allowed to visit each place.”

“Some people's lack of consideration resulted in our return being over an hour l.”

#### 5.2.4.5 El Yunque Pictures



La Mina Waterfall in  
El Yunque Rain Forest

La Coca Waterfall in  
El Yunque Rain Forest



### 5.2.5 Guanica State Forest

Puerto Rico is an island with diverse topography and several unique ecosystems. Not far from the famous rain forest, El Yunque, Guanica State Forest, a United Nations Biosphere Reserve, encompasses over 9500 acres of dry land. Over 200 million years ago, volcanic basalt formed the 5000-foot high mountains of the Cordillera Central near Guanica. Because these mountains are extremely steep, they block rain clouds coming in from the northeast trade winds, headed toward the forest. Even when thunderstorms form over the Cordillera, most of the rain will evaporate before ever reaching the south coast. El Yunque may have up to 15 feet of rainfall each year, but Guanica State Forest receives a mere 35 inches.

Rainfall is inconsistent during the year. The driest season is from December to April, in which almost half of the trees lose their leaves. These same trees flower and leaf out vigorously during the wetter season from August to November. Occasionally, the forest will receive soil, rocks, seeds, and nutrients from torrential rains that flood the dry streambeds. However, the hot tropical sun causes this precious water to evaporate quickly, allowing only a minimal amount of water to percolate through the thin soil and porous limestone bedrock, often flowing into underground streams.

The drainage patterns of Guanica State Forest create a variety of habitats. Numerous types of animals and over 700 species of plants thrive in the different environments found in the forest. For example, plants that cannot survive in the drier areas grow in the cooler, shady caves and ravines that hold moisture longer. The dry coastal flats support other plants, like cacti, which are adapted for long periods of drought.



Before our visit to the dry forest in Guanica, our project team called the facility for preliminary information. The operator was very helpful and answered all of our questions. He recommended wearing sneakers or hiking boots and light clothing and told us to bring our own water. He informed us of all of the forest rules and confirmed that there are no health risks involved in visiting the facility. He was unable to give us directions from the Marriott Hotel, but suggested that we go to their office in San Juan where we would receive directions and a map.

In the afternoon on April 12, our team visited Guanica State Forest. We had some difficulty finding the facility because there are no signs indicating that visitors are near the site, until they actually arrive at the entrance. Even after entering the forest, we had some trouble finding the visitor center, because it is very far from the main entrance to the forest.

Once at the visitor center, we found that the man working there spoke only Spanish. He was able to give us a pamphlet in English but explained where to hike only in Spanish. After a brief discussion with the guide, we were left on our own to hike the various trails of the forest.

We started with the Lluberas trail, which led us to the deciduous forest. On this trail, and the Granados trail, we were able to see a variety of plants and trees. We saw the rolled up leaves of the small Albarillo tree. The heat causes this reaction in the leaves, which are clustered at the ends of their bristly twigs. In its flowering season, this tree produces large yellow flowers, but it was not in bloom during our visit.

We saw a tree with dark orange bark and green oval leaves called the mabi tree. The bark of this tree can be fermented to make a drink. We also spotted the Indio tree, which has thin, light-green leaves with two faint parallel lines on both sides of the vein. Taino Indians



used to extract paste from its leaves and chew on it to gain courage before going into battle.

In one of the trees, we saw a large termite nest.

Our team enjoyed our hike through the forest, but it would be better if there were informational signs identifying the various plants and trees, so that tourists will not have to rely so heavily on their pamphlets. It would also be nice to have an English-speaking guide in the visitor center, so that tourists who do not understand Spanish will not be discouraged from visiting this interesting natural attraction. We suggest that the visitor center sell water in case visitors do not heed the advice of the information cards or do not call ahead, and do not bring water with them.

### 5.2.5.1 Guanica State Forest Pictures



Above: cacti in the dry forest Below: entrance to the forest







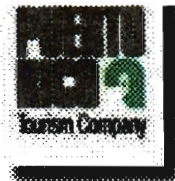
### 5.2.6 Camuy Cave System

When visitors come to see any of the caves that make up the Rio Camuy Cave System they are seeing the oldest tourist attraction on the island. It may seem unbelievable, but water is responsible for these amazing caves. Puerto Rico's Camuy River has been chemically eroding rock little by little for millions of years forming these caverns.

The tourist should not confuse the two different attractions on the island that use the Rio Camuy Cave System in Arecibo to draw thousands of tourists to their facility each year. These two attractions are the Rio Camuy Cave Park and La Cueva de Camuy. At The Rio Camuy Cave Park tourists are invited to take an educational tour through four different sections of the cave system. At La Cueva de Camuy, tourists relax at a recreational facility that has a pool and waterslide; its only connection to the caves being that it is located right next to one of the caverns that make up the system. If one wants to fully enjoy and learn about the caves, it is a better experience to visit the Rio Camuy Cave Park.

Visitors will realize the immensity of the Rio Camuy Cave Park when the tour guide informs one that it covers more than 250 acres of land. One can imagine the Taino Indians were working and living in and around these caves hundreds of years ago. It is surprising that most present day Puerto Ricans did not even know the caves existed until 1958 when they were discovered.

The cave system's claim to fame is that it is the world's third largest subterranean river. Only two rivers in the world surpass it, one in Yugoslavia and the other in New Guinea. The Camuy River has a flash flood capacity in heavy times of rain of 3000 cubic feet of water per second and can raise the water level by 80 feet. The tour guides believe that the Camuy River is now the largest subterranean river in the world because when hurricane

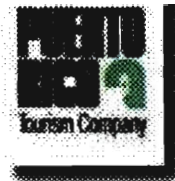


Georges hit the island, the river was flooded with about 6000 cubic feet of water per second and was raised to 170 feet high. Nothing like that had ever happened before.

When one enters the caves at either of the two tourist sites, it is like entering a whole new underground world. As visitors walk down the winding trails that lead to the caves they feel the temperature drop and the sunlight starts to disappear and finally they are in a cold world of darkness where no vegetation exists. One may initially think that nothing could exist down here in this darkness. However it is a pleasant surprise when visitors' eyes adjust to the darkness and a new world filled with cathedrals of stalactites, staggering stalagmites, colossal columns, and dramatic draperies of sparkling crystal is surrounding them. Original assumptions that caves are just holes in the ground filled with rock are proven wrong when tourists realize that this rock actually forms a majestic gallery of art. One must understand that the artist is not man but rather Mother Nature and it took her millions of years to finish this wonderful sculpture.

The three parts of the Rio Camuy Cave Park that visitors will see are the Clara Cave, Tres Pueblos Sinkhole, and the Spiral Sinkhole. These sites only represent 7% of the entire cave system.

The first stop on the tour at the Rio Camuy Cave Park is the Clara Cave. One's neck may cramp from gazing at the 170-foot high ceiling covered with beautiful rocky formations. Walking around the cave one notices the stalagmites, those projections hanging from the ceiling, and stalactites, those rising from the floor. One particular projection that the guide points out looks like an Indian profile. While trying to make out the figure, one can imagine the Taino Indians in the cave, cooking by a fire. Looking down onto the cavern floor there are pools of water that are so calm they make perfect mirrors. Living within these pools are



tiny crustaceans that are unique to Puerto Rico. They look like a tiny shrimp, only 2 millimeters long, and are almost transparent and blind. There are also other animals in the cave too. It is eerie to think that over 10,000 bats are hanging in the crevices above and making faint screechy sounds. Guides assure tourists that the bats only come out at night and sleep during the day. If it is quiet, the sweet melody of crickets can also be heard echoing throughout the cave.

The next stop on the tour is the Tres Pueblos sinkhole. This is a huge depression in the earth, 400 feet deep and about 650 feet wide. Tourists stand on the observation deck, and stare down into the sinkhole to admire its size and beauty. This could make those who are afraid of heights feel a bit nervous. The third stop is at another sinkhole. Hopefully tourists are not too tired from their tour at this time because they have to walk down, and walk back up, 205 steps to see it.

At La Cueva de Camuy the tourist will have an entirely different experience. There is only one cavern here and it is very small when compared to the one at the Cave Park. Also, there are no guides to help the tourist fully understand its natural history. The cave is left to speak for itself.

### **5.2.7 Rio Camuy Cave Park**

The Rio Camuy Cave Park is a 297-acre cave system, where tourists can come to explore the caverns and sinkholes on their two-hour tour. The park is equipped with a snack bar, picnic area, gift shop, walking trails, exhibition hall and theater. To get to the Rio Camuy Cave Park tourists need to rent a car. The drive takes fewer than two hours from San Juan. The directions are clear on the informational card and the entrance is hard to miss.



The admittance price of the caves is \$10, which is a fairly reasonable price for the experience. Tourists should be aware that the caves are only open from Wednesday to Sunday and that there is a tourist capacity limit, so they should plan to arrive early. There is also a two-dollar charge for parking. The lot is large so parking availability should not be a problem.

Our first encounter with the Rio Camuy Cave Park was a telephone conversation we had. Originally we called on a Monday but could not reach anyone because the facility was closed. The person who answered the phone was very polite, answered all of our questions, and gave clear directions. This gave us the impression that this site was very well organized.

We went to the caves with a group of 15 students from our university. We administered tourist surveys to this group and a few other people on our tour. Because the students represented the majority of our sample, the demographics may seem a bit skewed for this site. Nevertheless, the students provided valuable comments and opinions for our project.

The Rio Camuy Cave Park facility and tour are very well organized. Tourists enter the facility at the visitor center. The center is very clean and nicely landscaped. While waiting for the tour, it is nice to stay there and see the gift shop or have a snack at the cafeteria. The tour begins with a short, informational video that also has safety tips and the rules and regulations of the park. There are no bathrooms once you leave the visitor center for this 2-hour tour, but tourists are warned of this before leaving. Well-maintained and spacious trolleys are used for transportation around the facility except for at the sinkholes. Tourists should be aware that at the sink holes there are 205 stairs to walk up. This may be a



problem for some people, especially during the hot day but there are water fountains and rest spots along the staircase.

When the tour is completed, the trolley then returns tourists to the visitor center. We noticed that there are no informational signs around the facility, but they are not necessary the way the tour is set up. There is a tour guide present for the whole tour except for the sinkholes. Here there is an informational recording that plays on the observation deck while tourists admire the views.

Tourists at the Rio Camuy Cave Park are very well attended to. There are trolley operators, tour guides, ticket sales persons, a cafeteria staff, and cashiers in the gift shop. Tourists will spend most of their time with their tour guide. On most tours the guide also drives the trolley, but that is not the case here. When we arrived at the park we did not have to wait in line for tickets. We ate a nice breakfast at the cafeteria while we waited for the tour to begin. When the trolley arrived they brought us to our first stop where we met our tour guide. The guide was very friendly and had a great personality. His sense of humor captured everyone's attention and he kept us laughing throughout the entire tour. He was able to answer all of our questions and gave us plenty of interesting information on our tour. The guide spoke clearly and loudly and attended to everyone's needs. For the most part, his presentation was flawless.

The Rio Camuy Cave Park is an excellent experience; it is educational and fun. The facility provides a fine service and there is little room for improvement.

### 5.2.7.1 Rio Camuy Cave Park - 9 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M	
1 The facility met my expectations:	[44.4]	[44.4]	[0]	[11.1]	[0]	0	
2 The following areas were clean:	NA	SA	A	N	D	SD	
Bathroom	[22.2]	[33.3]	[44.4]	[0]	[0]	[0]	0
Food area	[0]	[44.4]	[44.4]	[11.1]	[0]	[0]	0
Other areas of the facility	[0]	[44.4]	[55.6]	[0]	[0]	[0]	0
3 The facility staff was:	SA	A	N	D	SD		
Knowledgeable	[44.4]	[44.4]	[11.1]	[0]	[0]	0	
Friendly	[66.7]	[33.3]	[0]	[0]	[0]	0	
Helpful	[22.2]	[44.4]	[33.3]	[0]	[0]	0	
Bilingual	[44.4]	[44.4]	[0]	[11.1]	[0]	0	
4 Access to the facility was easy:	[33.3]	[44.4]	[0]	[22.2]	[0]	0	
5 The value for the ticket price was satisfactory:	[11.1]	[44.4]	[11.1]	[22.2]	[11.1]	0	
6 I will recommend this facility to a friend:	[55.6]	[33.3]	[11.1]	[0]	[0]	0	
7 What is the purpose of your visit:	[11.1] Family Vacation	[22.2] Business	[0] Cruise				
	[0] Honeymoon	[0] Spring Break				22.2	
	[44.4] Other						
8 Gender:	[66.7] Male	[33.3] Female	[0] Mix			0	
9 Age:	[66.7] under 21	[22.2] 21-30	[11.1] 31-40	[0] 41-50	[0] 51-60	0	
	[0] 61-70	[0] 71-80	[0] 81-up				
10 Salary (US\$):	[66.7] 0-10	[11.1] 10-20	[22.2] 20-30	[0] 30-40	[0] 40-50	0	
(thousands)	[0] 50-60	[0] 60-70	[0] 70-80	[0] 80-90	[0] 90-up		



### 5.2.7.2 Rio Camuy Cave Park Comments

**Question #12: What did you like best about your visit to this attraction?**

**7 out of 9 tourists responded:**

- “The section of the caves that we were able to walk through.”
- “The caves”
- “The view of the caves.”
- “The trolley thing, groovy tour! :-)”
- “Duh, the caves were quite groovy.”
- “Seeing the caves.”
- “The cavern and being able to walk around it.”

**Question #13: What did you like least about your visit to this attraction?**

**6 out of 9 tourists responded:**

- “Variety of food.”
- “Food variety.”
- “Not enough space covered in caves.”
- “Waiting for tour to start.”
- “10 bucks is a rip. Would have preferred to walk through it myself without the useless tour guide.”
- “The sinkholes and just being dropped off at them.”

**Question #14: Describe your overall feelings concerning your visit to this attraction.**

**8 out of 9 tourists responded:**

- “I enjoyed it.”
- “I am satisfied.”
- “Disappointed.”
- “Interesting.”
- “Groovy.”
- “It was worth it to see.”
- “Very awesome site, real cool, got me in touch with nature.”
- “Very enjoyable for the most part, a little disappointed a few times.”

**Question #15: What did you learn about Puerto Rico from this experience?**

**5 out of 9 tourists responded:**

- “PR is much higher above sea level than I had believed.”
- “I thought that the main attractions were only the beaches, but there are other more interesting places.”
- “It has big caves.”
- “Natural beauty is abundant.”
- “That PR might have one of the largest underground rivers in the world.”

**Question #16: How would you describe your experience to a friend?**



**6 out of 9 tourists responded:**

“It was great and different from any other place I've visited before.”

“Very exciting.”

“Interesting.”

“A good time. Probably not to miss when in PR.”

“A unique and fun experience.”

“An interesting time underground.”

**Question #17: Other Comments:**

**2 out of 9 tourists responded:**

“WAY WAY WAY too expensive for what we got.”

“Good times.”



### 5.2.7.3 Rio Camuy Cave Park Pictures



Left: Tres Pueblos Sinkhole

Right: Clara Cave Entrance

Below: Clara Cave





### **5.2.8 La Cueva De Camuy**

The other attraction within the cave system is La Cueva de Camuy. This is a tourist and recreational area that claims one of the caverns that make up the Rio Camuy Cave System as one of its main attractions. The facility also has a pool, water slide, go-karts, pony rides, gift shop, game room, machine rides, cafeteria, meeting facilities, a tiny zoo, and a pool hall. On the premises is also a small hotel. The informational brochure from this facility claims that tourists are guided through the cavern to watch an educational slide show on the caves during their visit. We found this not to be the case. When visitors come, they pay the admission price of \$3 and are left to explore the facility on their own and must pay extra to enjoy any of the other previously mentioned attractions the facility has to offer.

The park is located in Camuy, about a two-hour drive from San Juan. To visit the facility, renting a car is necessary. The main route is easy to follow, but tourists will have to leave the main road to travel on a small, country road. The roads are very winding and difficult to drive and there are no signs for the park. It is easy to become lost on these country roads so visitors may need to ask for directions several times.

Our first encounter with the park was a telephone conversation. The operator who answered the telephone could not speak English and we waited for 5 minutes while she found someone who could. The person who finally answered the phone spoke softly and was difficult to understand. She had difficulty answering the questions we had prepared on our telephone survey/questionnaire and could not give us directions. Finally, the operator seemed to be rushed to end the conversation. This experience may discourage visitors from coming to the park. The facility should understand that this is their first chance to make a good impression on their customer, so it should be a pleasant one.



We visited La Cueva de Camuy on the morning of March 26, 1999. We were the only tourists there when we arrived; it seemed like a ghost town. When we asked the cashier in the gift shop, the only staff member available, if other tourists were coming, she explained that a school group would be arriving shortly. After we quickly toured the facility, we waited for the students to arrive. These students were here on a class trip for the day. We decided to administer our survey to them, however many did not speak English very well and had to be coached by their more bilingual classmate. Some of the students did not answer all of the questions on the survey honestly and others responded with silly answers. Although their responses may have skewed our data greatly, we felt that some of their comments were very valuable so we have included them in our report. It seems as though the facility does not see much outside tourism and is rather geared for internal tourism, so the high school group did represent its true audience making their opinions important to us.

We were not impressed by this facility. First of all, the tour and tour guide for the cavern was non-existent. Tourists are left to find the cavern on their own; it is not visible from the entrance so its location on the facility is not obvious. The cavern is very small and has an unsightly boardwalk running through the cave that greatly disrupts the view. There is also a small man-made waterfall that looks obnoxious within the natural setting of the cave. Lighting in the cave is poor, the floor is slippery and in fact one of us even fell. There are no informational signs in the cavern and any informational and directional signs on other parts of the premises are only in Spanish. At the end of the cavern there is a trail leading out. Because there are no signs we were not sure if it was for tourists to follow. We decided to try it out and after walking for ten minutes, we found that it ended abruptly because the overgrowth of the trail made it too difficult to continue.



After we returned from the cave, we investigated the rest of the facility. The facility is not the kind of place the pictures on the brochure suggest it to be. The facility is run down and poorly maintained. Visitors should be aware that the admission fee does not cover these recreational activities, each one is at an extra cost. Many of the rides were broken, the pool was dirty, the waterslide was not even operating, and we did not see any go-karts. The pony rides consisted of one old pony and there was no staff there to run the rides. The zoo here consisted of several empty, run-down cages, except for one, which was filled with parakeets. The meeting facilities appeared dirty and the cafeteria was not set up neatly. The food at the cafeteria was acceptable; they serve typical Puerto Rican dishes.

The facility needs many improvements. It appears as though when it opened, it was nice, but it has had no upkeep over recent years. The brochure is very misleading and tourists would not want to come here if they really knew what it looked like. The site is geared for internal tourism. It is a place for Puerto Ricans to relax and enjoy the day rather than for outside tourists who thought they were coming to see the cave.



### 5.2.8.1 La Cueva De Camuy 19 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M					
1 The facility met my expectations:	[10.5]	[5.3]	[52.6]	[5.3]	[26.3]	0					
2 The following areas were clean:	NA	SA	A	N	D	SD					
Bathroom	[21.1]	[52.6]	[0]	[0]	[5.3]	[21.1] 0					
Food area	[15.8]	[57.9]	[5.3]	[5.3]	[0]	[15.8] 0					
Other areas of the facility	[21.1]	[52.6]	[0]	[5.3]	[0]	[21.1] 0					
3 The facility staff was:	SA	A	N	D	SD						
Knowledgeable	[57.9]	[5.3]	[5.3]	[0]	[21.1]	10.5					
Friendly	[52.6]	[10.5]	[10.5]	[0]	[26.3]	0					
Helpful	[52.6]	[5.3]	[10.5]	[0]	[21.1]	10.5					
Bilingual	[10.5]	[52.6]	[5.3]	[0]	[21.1]	10.5					
4 Access to the facility was easy:	[52.6]	[10.5]	[10.5]	[5.3]	[21.1]	0					
5 The value for the ticket price was satisfactory:	[31.6]	[10.5]	[5.3]	[31.6]	[21.1]	0					
6 I will recommend this facility to a friend:	[5.3]	[47.4]	[5.3]	[5.3]	[31.6]	5.3					
7 What is the purpose of your visit:	[15.8]	Family Vacation	[5.3]	Business	[5.3]	Cruise					
	[10.5]	Honeymoon	[52.6]	Spring Break			5.3				
	[5.3]	Other	_____								
8 Gender:	[68.4]	Male	[26.3]	Female	[0]	Mix	5.3				
9 Age:	[84.2]	under 21	[5.3]	21-30	[0]	31-40	[0]	41-50	[5.3]	51-60	0
	[0]	61-70	[0]	71-80	[5.3]	81-up					
10 Salary (US\$):	[26.3]	0-10	[10.5]	10-20	[0]	20-30	[10.5]	30-40	[5.3]	40-50	5.3
(thousands)	[0]	50-60	[0]	60-70	[0]	70-80	[5.3]	80-90	[36.8]	90-up	



### 5.2.8.2 La Cueva De Camuy Comments

**Question #12: What did you like best about your visit to this attraction?**

**15 out of 19 tourists responded:**

- “The cave and the swings.”
- “The cave.”
- “The cave and the swings.”
- “The cave.”
- “Nothing.”
- “The cave and the swings.”
- “The cave.”
- “The cave.”
- “La cueva.”
- “La cueva.”
- “Las cavernas.”
- “Nada.”
- “Toda.”
- “The girl.”
- “Nothing.”

**Question #13: What did you like least about your visit to this attraction?**

**14 out of 19 tourists responded:**

- “The horses.”
- “The horses.”
- “The horses.”
- “The horses.”
- “The horses.”
- “The horses.”
- “The horses.”
- “The horses.”
- “Los caballos.”
- “Los caballos.”
- “Go-Karts.”
- “Nada.”
- “La cueva.”
- “The caves were too small and the facilities were poor.”

**Question #14: Describe your overall feelings concerning your visit to this attraction.**

**10 out of 19 tourists responded:**

- “We got drunk so it was cool.”
- “We got drunk so it was cool.”
- “We got drunk so it was cool.”
- “It cool.”
- “This visit stinks.”
- “We got drunk so it was cool.”



“Beautiful.”  
“Good.”  
“Poqueria.”  
“Irie.”

**Question #15: What did you learn about Puerto Rico from this experience?**

**12 out of 19 tourists responded:**

“It's beautiful.”  
“It's beautiful.”  
“It's beautiful.”  
“It's beautiful.”  
“That not all places are good in P.R.”  
“It's beautiful.”  
“It's beautiful.”  
“It's beautiful.”  
“Que hay coasa unicas en Puerto Rico.”  
“That it is beautiful.”  
“Que PR esta grande.”  
“Not acceptable.”

**Question #16: How would you describe your experience to a friend?**

**12 out of 19 tourists responded:**

“It's a two.”  
“It's ok to visit once.”  
“It's ok to visit once.”  
“It's cool to see the cave.”  
“Don't go to Las Cuevas.”  
“It's ok to visit once.”  
“Don't go.”  
“It's ok to visit once.”  
“Es buena para l sola vez.”  
“Es bueno para verlo.”  
“Good.”  
“Es agradable.”

**Question #17: Other Comments:**

**1 out of 19 tourists responded:**

“It's cool.”



### **5.2.9 Ramon Power y Giralt House**

For the tourist who is in touch with the environment and has a concern for its preservation, the Conservation Trust of Puerto Rico, located within the historic Ramon Power and Giralt House, is an excellent quick stop for a tour around the one-room museum and a well presented video. The museum is geared toward not only tourists but also the locals. The goal of this attraction is to help people become aware of how fragile and unique Puerto Rico's environment is and the steps we need to take to preserve it.

Upon entrance to the museum, the visitor will first watch an excellent video called "Ojo Isla" which means "watch out for the Island". The video helps one understand that we live, move, and breathe inside another body; our environment. This interesting metaphor helps one to understand how important our environment is to our survival as an individual as well as to our species as a whole. For Puerto Ricans, that environment is the Island.

It is amazing to realize that this land which contains so much diversity is only 35 miles wide by 100 mile long. The tiny island is very delicate and has its limits, just like our own body has its limits. If people look closely, they can see themselves as a part of their own environment; a body within a body. One is an echo of the other. We are aware of our bodies limitations and we know when it needs rest and food. In contrast, we ask too much of our environment body. In the case of Puerto Rico, the environment body is extremely fragile. After seeing all the construction that has been done in just a short period of time, we can see that the face of Puerto Rico has changed drastically within the past few years. Like reckless athletes push their bodies to their limit, people are pushing Puerto Rico to its limits, exhausting the island's resources and jeopardizing its future.





One is shocked to realize that this small island supports 3.6 human beings. With a car for every two people, that makes 1.8 cars driving in a road network four times as dense as in the U.S. and burning about one billion dollars worth of gas each year. After taking in those numbers, it seems ridiculous to think that such a small land could withstand all that abuse.

Whatever damage we inflict on the environment we inflict on ourselves. Before we pollute the water that runs through the rivers and streams we should remember that it is the water we drink to help sustain our own lives. If we don't rescue this island body, it will no longer be able to sustain life. By understanding that our environment is a part of us, we understand that we must take extreme measures to preserve it now, before we push it too far.

The Conservation Trust of Puerto Rico is a tour which helps people make a connection with their environment by giving them the chance to interact with some exhibits and see different parts of the unique environment that exists in Puerto Rico. The experience helps people become aware of deterioration and reminds us to wisely use the precious resources we have available.

There are several ways we can connect with our environment. One can walk through a stream, smell the grass, or feel the rough bark on a tree. The exhibits at the museum also help us to harmonize with our environment. The honeybee exhibit here is used to represent the unification between human beings and the environment that surrounds them. As one watches these diligent bees working together in their colony, a similarity should be noticed between the bee and ourselves as well as the colony and our community. As the bee works hard to accomplish his particular job for the betterment of the colony as a whole, so do human beings. All people perform a particular job each day that benefits the community as a



whole whether they are a doctor, a mailman, or a teacher, each job works for the improvement of the community.

In 1996, the historic Ramon Power y Giralt House on Tetuan Street in Old San Juan was restored and now serves as the headquarters for the Conservation Trust of Puerto Rico. The Trust is a non-profit organization that works to protect and preserve natural and historical sites all across Puerto Rico. The Ramon Power and Giralt House is not only the headquarters of the trust, but it is also a museum. Here visitors can take a self-tour around the one-floor museum and watch the educational video, “OJO-ISLA” in the small theater. The exhibits in the museum are interactive and in order to fully appreciate each one, visitors will have to use more than one of their five senses. There are sounds to hear, and odors to smell. It takes no more than forty minutes to thoroughly tour the museum and there is a small gift shop to visit afterwards.

Our first encounter with the museum’s staff was by telephone. Our team called the Ramon Power and Giralt House to administer the telephone survey/questionnaire. The experience was a very positive one. The telephone was answered by a live operator who answered all of our questions completely and thoroughly. The operator spoke English very well and understood all of the questions. The directions they gave for finding the facility were clear and easy to follow.

The museum is small, but it was relatively easy for us to find with the Old San Juan map. It is best for tourists to walk to the facility from a nearby parking lot because it is difficult to find parking on the street. We first noticed that the facility is set up nicely and is very clean. The brief OJO-ISLA video tourists watch before they explore the museum is



very well presented and is worthwhile to watch. Moving on to the exhibit room, we noticed that the informational signs were only in Spanish. When we told a staff member that we could not speak Spanish, she provided us with a brochure that had the informational signs translated to English. So non-Spanish speakers should remember to ask for the English brochure. There are only a handful of exhibits but each one is fun and interesting.

At the time we went to the museum, we were the only tourists present. Staff at the facility was very low. When we entered, only one woman was present working behind the front counter. When we asked for her assistance, she explained that she did not normally work at the front desk. We had to wait about five minutes before we could speak with someone who could assist us. The guide that came was very helpful and answered all of our questions.

The museum is a nice visit if done in conjunction with other attractions available in Old San Juan. Though it is not the most exciting exhibit in Old San Juan, the museum will certainly hold the visitor's attention long enough to see the entire exhibit. This facility would interest tourists who are concerned about the environment. The facility targets locals who need to be more aware of the environment, and not necessarily tourists. Informational signs in the museum should be in English and Spanish and a more attentive staff should be present. Besides these minor flaws, the Ramon Power y Giralt House is nice museum that has an important message to share with its visitors and presents that message very well.

### 5.2.9.1 Ramon Power y Giralt House - 2 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M					
1 The facility met my expectations:	[0]	[50.0]	[50.0]	[0]	[0]	0					
2 The following areas were clean:	NA	SA	A	N	D	SD					
Bathroom	[100]	[0]	[0]	[0]	[0]	[0]	0				
Food area	[100]	[0]	[0]	[0]	[0]	[0]	0				
Other areas of the facility	[0]	[0]	[50.0]	[0]	[0]	[0]	50.0				
3 The facility staff was:	SA	A	N	D	SD						
Knowledgeable	[50.0]	[50.0]	[0]	[0]	[0]	0					
Friendly	[50.0]	[50.0]	[0]	[0]	[0]	0					
Helpful	[50.0]	[50.0]	[0]	[0]	[0]	0					
Bilingual	[50.0]	[50.0]	[0]	[0]	[0]	0					
4 Access to the facility was easy:	[0]	[50.0]	[50.0]	[0]	[0]	0					
5 The value for the ticket price was satisfactory:	[50.0]	[0]	[0]	[0]	[0]	50.0					
6 I will recommend this facility to a friend:	[50.0]	[50.0]	[0]	[0]	[0]	0					
7 What is the purpose of your visit:	[50.0]	Family Vacation	[0]	Business	[0]	Cruise					
	[0]	Honeymoon	[50.0]	Spring Break			0				
	[0]	Other	_____								
8 Gender:	[50.0]	Male	[50.0]	Female	[0]	Mix	0				
9 Age:	[50.0]	under 21	[0]	21-30	[0]	31-40	[50.0]	41-50	[0]	51-60	0
	[0]	61-70	[0]	71-80	[0]	81-up					
10 Salary (US\$):	[50.0]	0-10	[0]	10-20	[0]	20-30	[0]	30-40	[0]	40-50	0
(thousands)	[0]	50-60	[50.0]	60-70	[0]	70-80	[0]	80-90	[0]	90-up	



### 5.2.9.2 Ramon Power y Giralt House Comments

**Question #12: What did you like best about your visit to this attraction?**

**1 out of 2 tourists responded:**

The bird sounds and display.

**Question #13: What did you like least about your visit to this attraction?**

**1 out of 2 tourists responded:**

All of the descriptions were in Spanish.

**Question #14: Describe your overall feelings concerning your visit to this attraction.**

**1 out of 2 tourists responded:**

Interesting, but not worth going out of your way to see.

**Question #15: What did you learn about Puerto Rico from this experience?**

**1 out of 2 tourists responded:**

They need to recycle.

**Question #16: How would you describe your experience to a friend?**

**1 out of 2 tourists responded:**

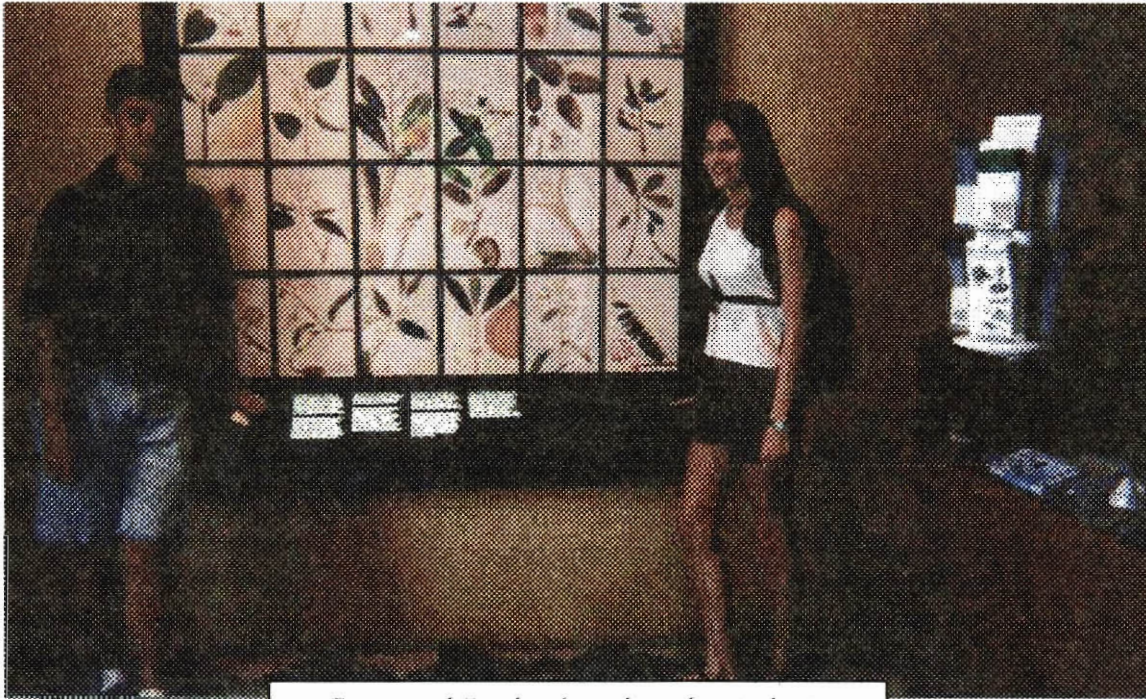
A lesson designed for islanders.

**Question #17: Other Comments:**

**1 out of 2 tourists responded:**

It was interesting however, a better audience may be Puerto Ricans themselves.

### 5.2.9.3 Ramon Power y Giralt House Pictures



Corry and Jessica learning about plants



Corry observing a bird exhibit at Ramon Power y Giralt House

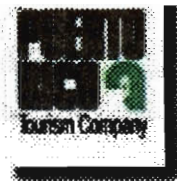


### 5.2.10 Hacienda Buena Vista

Hacienda Buena Vista is a nineteenth-century agricultural estate restored by the Conservation Trust of Puerto Rico. At the estate tourists enjoy breathtaking views and step back 150 years into time, when the Vives family ran one of the most important haciendas on the southern part of the Island. As tourists arrive at the hacienda, they are greeted by their tour guide who takes them on a two-hour time warp to 1821, when Salvador de Vives left his home in Venezuela and headed for Puerto Rico. Vives started a new life here with his family working for the Spanish government in Ponce. He labored profusely and saved enough money to invest it in 482 acres of land in the hills north of Ponce. Tourists can imagine the look on Vives' face as he surveyed his newly bought land and stumbled upon the breathtaking waterfall found nearby on the Canas River. Looking at this beauty it is easy for one to understand why Vives named his property "Buena Vista".

Taking a quick glance around, one can immediately determine that this land was used as an agricultural estate. There are farm animals wandering around freely and antique farm equipment. The tour guide explains that in the beginning, Hacienda Buena Vista used simple horse-powered machinery to run these machines. One may also notice that this estate is nestled within lush green hills. While these hills make for beautiful scenery, they made it difficult to grow sugarcane. For this reason, Vives planted crops like cacao, corn, plantains, mafafos, yams, pineapple, and coffee while nearby haciendas cashed in on king sugar.

If tourists use their imaginations as the guide speaks, they will see visions of Ponce back then, a bustling vibrant city, its sophisticated upper classes prospering from the flourishing sugar industry. It is easy to picture the fashionable citizens walking the dirt roads of Ponce dressed in the most recent fashion from Madrid. As the sugar industry grew,



Ponce's port became the busiest one on the Island. At mid-century, Ponce consisted of about 20,000 residents, a quarter of them slaves working on the sugar plantations.

Before one can realize how ingenious Vives was for his time, one must remember that electricity was not available back in the 1840's. In order to increase production, Carlos Vives would have to use waterpower and abandon his horse-powered machinery. Looking around the hacienda and seeing the abundance of rivers and streams one can understand that this was a logical decision. Carlos made use of his resources, that is, his land. As we need government permission to start any major construction today, so did Vives back then. However, this process probably was much quicker for him since many of the environmental laws we have today did not exist back then.

It was Vives's plan to dam and divert the Canas River, which runs through his property and to use these waters to run mills and other machines. The water would then be returned to its source. As one walks along the trails of the hacienda, one notices a narrow canal filled with about one to two feet of water. This is part of an elaborate canal system built by Vives to bring water from the waterfall to his hydraulically operated machinery and return it to the river. With this new technology at his disposal, Vives bought a corn mill, rice husking machine, a cotton gin and a coffee depulper. The object that really put Vives ahead of his time was the reaction turbine he purchased. This turbine, invented by Whitelaw of Scotland, was a new invention in the 1840s and helped Vives increase his production of corn meal and led the Hacienda into one of its most successful periods.

Even with all this technology one must remember that the 1800s was still an era of manpower, or more specifically, slave power. Although Vives was a man of technology, his slaves carried out the great majority of the work on his farm. Upon entrance to the estate one





may have noticed a small, two-story gray cabin. It may come as a great shock to visitors when the guide reveals that this small cabin was originally used to house all 57 of Vives' slaves. It is difficult to imagine how so many people could fit into such a small structure.

Slaves planted and harvested crops, ran and maintained the machinery and built several of the structures on the Hacienda. We may assume that Vives treated his slaves in a humane manner because many stayed on Buena Vista and worked for Vives as wage laborers when the Puerto Rican slaves were freed in 1873.

Tourists may wonder why, up to this point, the guide had not mentioned much about coffee when they were under the assumption that the Hacienda was a large coffee plantation. Visitors then discovered that the coffee boom did not occur in Ponce until after Carlos Vives died in 1872. It was after this time that coffee began to transform the local economy. Vives must have passed on his enthusiasm and work ethic to his son because Salvador further expanded the estate, adding the new coffee depulping machine we see displayed on so many postcards and tourist books in Puerto Rico. He also added a coffee bean husking and polishing machine. Although we can still see the old corn mill here, beautifully restored, back then, Salvador had in fact stored it away to make room for his new coffee equipment. Salvador, like his grandfather, was also interested in technology and made a considerable investment in the local trolley and electricity companies.

As we know from our history classes, all great human enterprise must come to an end. In 1899, the year after the U.S. invaded Puerto Rico, economic disaster struck when hurricane San Ciriaco hit the Island, destroying 60% Puerto Rico's coffee crops. To make matters worse, the international market in coffee collapsed. We can only imagine how devastated the Vives family was to see their great coffee empire coming to a fall.



In spite of the hardships, the Hacienda survived due to the imagination and determination of the Vives family. Again the family diversified its crops. The tour guide informs us that by 1904, thousands of orange trees were planted on the estate. In 1950, the plantation saw its end when the government of Puerto Rico expropriated most of the land and distributed small lots to local farmers.

Although tourists probably focused mainly on the history of the estate while on the tour, they should not be oblivious to the beautiful environment in which it is situated and from which it received its name. During the tour it is common to see little lizards scurrying along the ground, hear the sweet song of a variety of birds hidden in the trees, or even be frightened by the large silver spider of Puerto Rico. It has been so at Buena Vista for twenty years.

Hacienda Buena Vista, one of the properties of the Conservation Trust of Puerto Rico, is a nineteenth-century coffee plantation and corn mill. The Hacienda has been restored by the Trust after years of careful research and hard work. The land, buildings, and machinery represent examples of Puerto Rico's natural, cultural, and technological heritage. Tourists can come here to take a two-hour guided tour around the plantation. There is a small visitor's center where people can buy drinks or some souvenirs from the small gift shop.

To visit Hacienda Buena Vista, tourists in San Juan have to rent a car and travel 1 ½-hour trip south to Ponce. The main road to Ponce is route 52 and it is easy to follow. One will have to exit from 52 onto smaller roads before reaching the site. We found the roads here to be very windy and difficult to drive. The directional signs for the plantation are very



small so tourists should keep a sharp eye out for them. Once they are at the plantation, there is limited parking within the grounds and no parking on the street, so visitors will need to arrive early. The only way to get a tour at Hacienda Buena Vista is by reservation, and because this is a popular site, reservations should be made at least a week in advance.

Our first contact with Hacienda Buena Vista was by telephone. We had trouble administering the telephone survey/questionnaire because it was difficult to get through to a live operator, which was very frustrating. Because tourists need to make reservations, this phone call is the first impression most tourists will make. Therefore the facility should guarantee that this impression will be a good one. When we called, an automated operator answered. The message gave a brief history and description of the site and some confusing directions. When we dialed the extension to reach the operator to make a reservation, it was difficult to get a live operator to answer. There was an answering machine that asked us to leave our number. It took six telephone calls on different days to get through to a live operator to make reservations. The operator spoke English well, was very nice, and answered all of our questions. The telephone service at this facility should be consistently like this.

We visited Hacienda Buena Vista on April 16, 1999 during a sunny afternoon. When we arrived at the site we first had to drive through the gate, manned by a strict guard who assured that our name was on the reservation list before permitting us to enter. Once in the parking lot we were greeted with bad news. Apparently, they had tried to call us all morning to tell us that our English tour was canceled. Because Ponce is 1 ½ hour drive, we had probably left before they had a chance to call. We were invited to either join the high school group, present at the time, to take the tour in Spanish, or wait for the English tour that would



run again at 3:30. We felt that we knew enough Spanish to get by, so we opted for the Spanish tour. Because the students we were with only spoke Spanish, we were unable to survey anyone. We were visibly upset, but the staff did not do much to try to ease the situation.

The grounds of Hacienda Buena Vista are very well maintained and organized. The buildings and machinery are freshly painted and well preserved. Tourists walk on dirt roads through the hacienda. These roads are covered with small rocks that we found made it very slippery, so good sneakers should be worn on the tour. The plantation has a very authentic appearance, so visitors will feel as though they have traveled back in time. Also, as the name suggests, the views from Hacienda Buena Vista are lovely. The facility is only lacking in informational signs, which are in Spanish only.

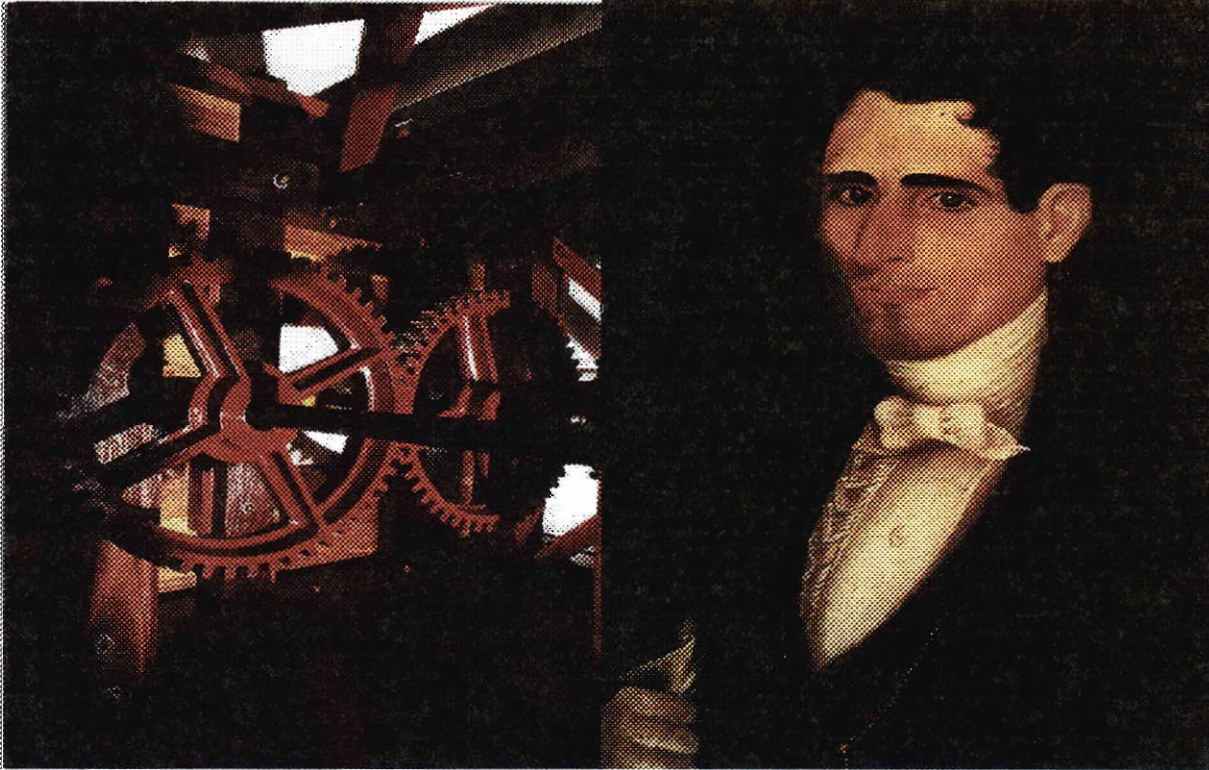
Our experience with the staff here was not as pleasant. Our tour guide was not very enthusiastic. This may have been because we were on a tour with about 40 high school students who were not listening to anything she said. She spoke softly and could not manage to capture their attention. She did, however, translate part of the tour for us in English. The tour guide seemed tired and annoyed by the end of the tour, in fact, we feel she may have cut the tour short.

We hope our experience with the staff was a unique one because the Hacienda has so much of value to offer visitors. Tourists should call the day of their tour to assure that it has not been cancelled. We also suggest that tourists be sure they are not going with a school group, because it could make the experience entirely different. Again, informational signs should be in both English and Spanish so more visitors can learn from them. We also recommend that the info-cards warn tourists to begin calling at least two weeks in advance in



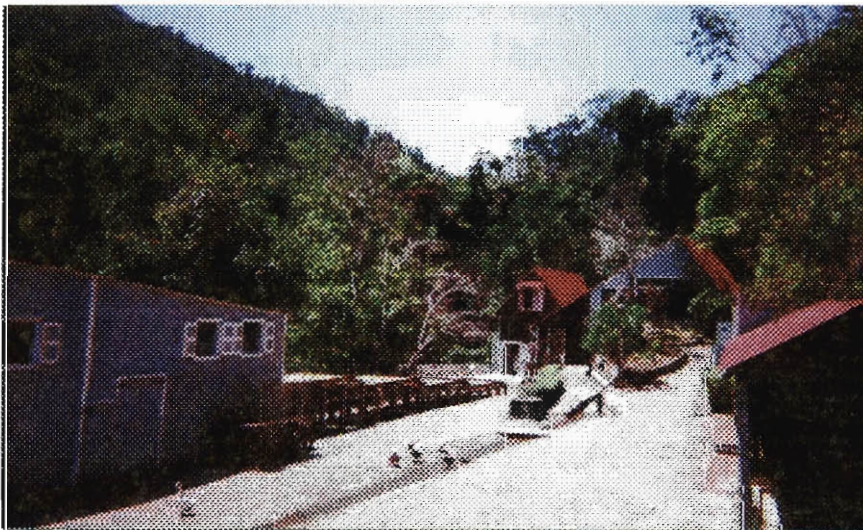
order to make reservations due to the limited space available and the difficulty reaching the staff by phone. We have heard very positive things about Hacienda Buena Vista and we feel that the incident that occurred with our reservation was an isolated one and not a common practice of the facility.

### 5.2.10.1 Hacienda Buena Vista Pictures



Machinery used to depulp  
coffee

Salvador de Vives, founder  
of Hacienda Buena Vista



Farm  
houses at  
Hacienda  
Buena  
Vista



### **5.2.11 Las Cabezas De San Juan**

The Conservation Trust of Puerto Rico is a nonprofit group that helps to protect Puerto Rico's ecological, cultural, and historical treasures. When visitors come to Las Cabezas de San Juan, they experience all of these features of the Puerto Rican heritage. Las Cabezas de San Juan is 316 acres of land acquired by the trust in 1975. If visitors have seen the view of Las Cabezas de San Juan from El Yunque previously, they will understand why it is named Las Cabezas de San Juan or "the heads of San Juan." The head-like shapes of the promontories of land extend into the Atlantic Ocean at the northeastern tip of the island. Historically, this location has been recognized for its strategic importance since pre-Columbian times. The reason being that the view from here allowed soldiers to see oncoming ships that were miles away. Las Cabezas de San Juan is also the historical site of a lighthouse built by the Spaniards in 1880 to guide ships through the Vieques and Culebra Passages. Today it is important for its ecological uniqueness because so many different ecological communities flourish in close proximity. The visitor is amazed to see a lush mangrove forest right next to a barren dry forest or a sandy beach on one side of the road and a swamp on the other. These habitats are the homes for a variety of animals; many of them endangered. By the end of the visit, the tourist will understand just how fragile and unique these ecosystems are and how the animals that inhabit them depend on them for survival.

Amazingly, visitors actually see seven different marine ecosystems here in less than two hours. The ecosystems that the tour takes you through are the sandy shore, thalassia bed, and coral reef at the Seven Seas Beach, the rocky shore at Los Liros Beach, the mangrove forest and lagoon in the Laguna Grande, and the dry forest found at several locations in the reserve. Visitors learn plenty in these two hours about how organisms live and adapt within



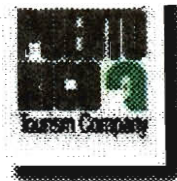
each of these environments. Along the way there are also breathtaking views, a great opportunity to add to one's Puerto Rican photo album.

The first stop the tour makes is at the Seven Seas Beach. Here one can appreciate the different colors of the ocean: the dark royal blue, aqua, and green colors sparkling as the sun reflects off the ocean's surface. At this shore that alone, one can see three different ecosystems. The sandy shore is the first ecosystem one encounters. Some visitors may be surprised to learn that the sandy shore is considered an ecosystem because of the abundant amount of accumulation of organisms on the shoreline. Here one sees first-hand how the ecosystems work together. This is a low impact beach because two other ecosystems are protecting the shore from the strong, crashing waves seen on the horizon.

Although it is not visible from the shore, the guide informs tourists that there is another ecosystem beneath the foamy water called the coral reef. The coral reef is made of organisms that absorb calcium carbonate and create the external skeleton we call coral. One type of coral found here is called stag's horn. This external skeleton is home to other organisms, such as myriad types of multicolored fish. One has the chance to see a colorful parade of these fish by snorkeling while in Puerto Rico. The reef also serves to protect the shore from the wave action. That is why the waters here are clear and calm and the sand is so fine, one of Puerto Rico's great claims to fame.

Looking carefully at the shoreline, one will see some dark patches, which is the thalassia bed. The thalassia bed is also called turtle grass because the green turtle comes to eat here. Unfortunately it would take perfect timing to actually be able to see the green turtle feasting here. There is also a plant called brown-colored algae, which is really not an algae. At first one may think it looks somewhat disgusting, but after learning that it is really a rather





complex plant, having real fruits and producing flower blossoms that look like white tiny flowers, one acquires a new appreciation for it. This algae is also food for the sea manatee. The manatee is an endangered species that comes occasionally to feed at the Seven Seas Beach. Again, it would be a rare sight for tourists to see the manatee here, but one can always hope to be lucky!

The next stop the tour trolley makes is the Laguna Grande. This lagoon is a phosphorescent bay full of bioluminescent organisms, the same organisms covered in the Vieques and Parguera sections of the report. The color the organisms emit here is green. There are different species at each Puerto Rican bioluminescent bay, and each reflects a different color. For example, in Vieques the organisms appear blue and green. In La Parguera they are more of a silver color. Unfortunately, there are no tours offered here to see these organisms at night. Because it is difficult for visitors to conceive that the bay glows due to the presence of these organisms, tourists should make a point to travel to Vieques or Parguera so they can fully understand and witness this spectacular phenomenon.

All around the Laguna Grande grows the red mangrove which makes up part of the mangrove forest. It is interesting to note how close the different ecosystems are to each other here. On one side of the road you see the mangrove forest and on the other, the dry forest. Branching off from the mangrove forest one can see the dry forest. The precipitation on the dry forest is only 40 to 60 inches which is low compared to the precipitation in El Yunque which is about 150 to 200 inches. Such large differences in rainfall cause the vegetation to develop different adaptations to its environment. For example, the plants in the dry forest strive to contain water and limit evaporation and that is why the leaves are small. They have roots that grow very deep into the soil so they can drink the water that accumulates there.



Another structure that helps to reduce water evaporation is the thorn, which is really like a small leaf. The smaller the area of the leaf, the less evaporation will occur.

In this forest are about 307 different species of plants. One of the most common is the wild tamarind tree or mamosa tree. This tree has brown colored fruits, which are not edible. The tamarind tree is a very aggressive plant and is considered a pioneer tree, that is, it can grow in various locations of the forest. There is a cactus here that many people confuse for aloe vera, but it is not. It has more thorns. Because of this characteristic, many people in Puerto Rico use it as a fence. It was often used to keep the cattle from wandering off a farmer's property. Another plant is the sea grape, which has very large leaves that are not good for preventing evaporation so it has developed another adaptation - a waxy layer on the surface of the leaf.

Just when visitors think they have seen all there is to see, they are surprised to find out that there are yet three more stops to be made. The next stop is the rocky shore at Los Lirios Beach. Here there is a fantastic view of several small islands. The large island is called Ecacos, which is also the name of a plant that grows there. There are also the small keys called Islas Ratones and Lobos, which are privately owned. Far off in the horizon one can also see Culebra Island and St. Thomas.

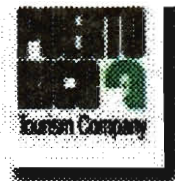
Tourists will immediately notice the sharp contrast between this shore and the sandy shore. All the rocks and ocean debris are present because there is no coral reef here to protect the shore. It is fun to explore and search for natural treasures along the shore. There are three kinds of rocks: gray stone, sandstone, and volcanic rock. There are also beautiful shells and coral fragments just waiting to be discovered.



The theme of the tour changes from environmental to historical at the next stop. Tourists take the trolley to the old lighthouse. The structure is a fine example of Spanish colonial architecture and has been beautifully restored by the Trust. Construction of the lighthouse was completed in 1880. In 1882, light shined out across the water for the first time. The green and gray colors of the lighthouse are original; they were the colors used by the Spanish. From this point high above the bay one can take in a fantastic view. Tourists can see Palomintos Island from here; this is a public island owned partially by El Conquistador Resort. One can also see Vieques. Vieques, along with Culebra, are municipalities of Puerto Rico.

The final and longest stop on the tour is at the boardwalk. Tourists should drink plenty of water before they walk out into the sweltering swamp along the boardwalk. On this part of the tour, visitors will learn about the different types of mangroves that exist in this ecosystem. There are 35 different species of mangrove around the world that grow in tropical areas, seven different species exist in the Caribbean and four live in Puerto Rico. These are the red, white, black, and also the buttonwood mangroves. Each species grows in a different part of the swamp. This is because some are more tolerant to the salt than others. The red mangrove grows in the water while the buttonwood grows in the high part of the forest. In the middle of the forest the black mangrove grows. The first tree that visitors see when they enter the forest is the buttonwood mangrove. It is called buttonwood because its little berries look like buttons.

The buttonwood grows in the external part of the forest. Some people refer to this as the transition tree because it grows in the area of the forest where there is a transition from one ecosystem to another. In this case, it is growing between the dry forest and the



mangrove forest. Actually, it is not a real mangrove tree because it does not develop the adaptations of other mangroves. In this area there are other trees too, like the sea grape tree and tamarind tree, which the Puerto Ricans used for a Christmas tree many years ago. In the transition area there are also some curious holes in the ground. These are the homes of the great land crab. In this area there are eight species of crabs, including the fiddler and mangrove crab.

When the tide is high, the water from Laguna Grande goes into the swamp, but when the tide is low, the water evaporates and leaves just salt behind. This place is therefore called a salt flat because it has great concentrations of salt. Only the black mangrove can live in this area. All around the salt flat there are little trees. Their leaves have two colors: light green on the back of the leaf and dark green on the face. The first thing one notices is that the trunk is black; that is why they are called black mangroves.

The black mangrove is most tolerant to the salt so it can grow in the salt flat. One interesting fact about this mangrove concerns the adaptation it has made to grow here. Tourists are invited to look and taste the salt on the leaf. The black mangrove exudes the salt through pores on its leaves. Its roots are another adaptation of the black mangrove. Around the bottom of the mangrove are little sticks protruding from the ground. Those sticks are roots that exchange gasses by exposing themselves to the air. Sometimes this area is under water but at other times it is dry and the soil is thick and compact so there is little ventilation. The black mangrove needs to have its roots above the soil so it can breath.

One of the more impressive adaptations of mangroves is that the red mangrove tree has fruit. The fruit and seed germinate on the same tree. The seed germinates and produces a seedling, a primary root. When it is ready, it drops to the soil below and begin to grow. If



it hits water instead of ground, it will float. It can float about one year conserving its resources until it finds a spot to grow.

Water from the lagoon covers apart of the boardwalk, intentionally built underwater so that people can walk out to feel and taste it. Many people are under the false impression that the mangrove forest is polluted due to the dark color, the strong odor, and the sediment floating in the water, but the Laguna proves them wrong. The visitor has a chance to see and interact with the water to know that it is really very clean. If one is daring enough to taste the water, one will realize that there is much more salt in this water than in ocean water. Here it is about 40 parts per million of salt while in the ocean it is about 30 parts per million.

Walking around in the forest, one may think that the trees are short, but this has been caused by hurricane damage from Hugo, not Georges. Georges passed through the southern part of the island, while Hugo passed right through this area. The forest is still recovering from this damage and the trees are short because they are fairly young trees.

The last mangrove that the guide presents is the white mangrove. The white mangrove is the second most tolerant to the salt. It has developed similar adaptations to the black mangrove: it exudes salt through the leaf and has roots that protrude from the soil. Different from the black mangrove are the two glands one can see by looking closely at the plant's leaf. These glands are used to exude more salt. It is called the white mangrove because its trunk is lighter than the others, and is the least common mangrove in this forest.

Unfortunately about 75% of the mangroves throughout the island of Puerto Rico were lost due to development. Many tourists staying at hotels in the Condado area may find it hard to believe that this now highly populated area was originally a mangrove forest. After a visit to Las Cabezas Natural Reserve, the tourist will surely reflect upon the unique



ecological diversity in Puerto Rico's land. Hopefully, they will also join the ongoing battle to protect and preserve the fragile ecology of the island.

The facility at Las Cabezas de San Juan has a visitor's center, small gift shop, and a nice sitting area on the porch of the facility. Admission to the reserve is by reservation only so tourists should be sure to call several weeks in advance because this is a popular attraction and spots fill up quickly. The price of admission is \$5, which is well worth it.

Getting to Las Cabezas de San Juan is a bit confusing. Tourists need to rent a car to get there, using Route 3 to Fajardo. The winding roads that lead to the reserve cut through the town's center where it is very easy to get lost. People here are friendly so it should not be a problem to stop and ask for directions. The tour leaves exactly at the time it is scheduled, so tourists should leave plenty of time for getting there and getting lost. If they are even a few minutes late, the tour will leave without them.

Getting in touch with the people at Las Cabezas de San Juan was a challenge. We called several times to make reservations. We had trouble administering the telephone survey/questionnaire because it was difficult to get through to a live operator, which made it somewhat frustrating. Because reservations are required to go to Las Cabezas de San Juan, this phone call is the first impression most tourists will make, therefore the facility should do more to facilitate communications. When we called, an automated operator answered. The message gave a brief history and description of the site and some confusing directions. When we dialed the extension to reach the operator that will make a reservation, it was difficult to get a live operator to answer. There was an answering machine that asked us to leave our number. Most tourists however are not likely to wait around for a return call. It



took six telephone calls on different days to get through to a live operator to make reservations. When we did get through, the operator spoke English very well, was very nice, and answered all of our questions. The telephone service at this facility should be consistently like this.

We visited Las Cabezas de San Juan on a warm afternoon in April. We arrived only a few minutes late because we got lost in Fajardo and the tour almost left without us. Luckily the staff was aware we were on the reservation list and ran kindly out to the parking lot to tell us that they were waiting for us. Only people who have reservations and that are on the tour are admitted into the park, so these were the people we surveyed for our report.

The facility at this attraction is outstanding. There is not one piece of litter on the grounds and the buildings are well kept. The trolleys that take tourists around the facility are in good working condition and they are spacious. The lighthouse that the tour stops at is amazing. It has been beautifully restored in the Spanish colonial style. Inside is a well presented, but small museum. The informational plaques within the museum are in Spanish only, which is a shame for non-Spanish speakers who are interested. Along the boardwalk through the mangrove forest there are also informational signs that again are only in Spanish. Tourists can drink water from fountains at several stops of the tour and there is also a chance for a bathroom break in the middle of the tour during the lighthouse visit. The visitor's center has a beautiful porch that wraps around the building. Tourists can sit in the wicker rocking chairs and enjoy the shade here after the tour. The gift shop is small and only drinks are for sale at the reserve, so tourists should bring a lunch.

The staff here is also very proficient. They made sure we got on the tour by



running out to the parking lot to tell us to hurry when we were late. The tour guide was also excellent. She was able to answer any question that was thrown at her. In fact, there was a tourist who seemed very knowledgeable about the reserve and she was able to answer his complex scientific questions. The guide had a great personality and she was full of energy. It was noticeable that she enjoyed her job. She was also able to attend to special needs. One of the tourists slightly burned his hand and on the exhaust pipe of the trolley and she quickly took out the first aid kit and gave him ice and a bandage. She also made sure that everyone had plenty of water before the long, hot walk on the boardwalk. The only problem perhaps with the guide was her weak bilingual abilities; at times she was difficult to understand, and at one point was explaining something in Spanish she could not say in English.

The experience tourists have at Las Cabezas de San Juan is excellent. Our only suggestion is that the telephone service should be improved and that signs should be presented in both English and Spanish. Also there should be a quicker tour available for tourists with a short attention span; the tour currently offered takes two hours and the information given to a weary tourist could fill an encyclopedia.



### 5.2.11.1 Las Cabezas de San Juan - 11 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M					
1 The facility met my expectations:	[45.5]	[45.5]	[9.1]	[0]	[0]	0					
2 The following areas were clean:	NA	SA	A	N	D	SD					
Bathroom	[36.4]	[36.4]	[18.2]	[0]	[0]	[0]	9.1				
Food area	[36.4]	[0]	[27.3]	[0]	[0]	[0]	36.4				
Other areas of the facility	[9.1]	[36.4]	[36.4]	[0]	[0]	[0]	18.2				
3 The facility staff was:	SA	A	N	D	SD						
Knowledgeable	[63.6]	[36.4]	[0]	[0]	[0]	0					
Friendly	[63.6]	[36.4]	[0]	[0]	[0]	0					
Helpful	[72.7]	[18.2]	[0]	[9.1]	[0]	0					
Bilingual	[63.6]	[9.1]	[27.3]	[0]	[0]	0					
4 Access to the facility was easy:	[36.4]	[54.5]	[9.1]	[0]	[0]	0					
5 The value for the ticket price was satisfactory:	[72.7]	[9.1]	[0]	[0]	[0]	18.2					
6 I will recommend this facility to a friend:	[81.2]	[18.2]	[0]	[0]	[0]	0					
7 What is the purpose of your visit:	[54.5]	Family Vacation	[9.1]	Business	[0]	Cruise					
	[0]	Honeymoon	[0]	Spring Break			0				
	[36.4]	Other									
8 Gender:	[36.4]	Male	[54.5]	Female	[9.1]	Mix	0				
9 Age:	[0]	under 21	[0]	21-30	[63.6]	31-40	[0]	41-50	[27.3]	51-60	0
	[9.1]	61-70	[0]	71-80	[0]	81-up					
10 Salary (US\$):	[0]	0-10	[0]	10-20	[9.1]	20-30	[9.1]	30-40	[9.1]	40-50	9.1
(thousands)	[9.1]	50-60	[18.2]	60-70	[9.1]	70-80	[9.1]	80-90	[18.2]	90-up	



### 5.2.11.2 Las Cabezas De San Juan Comments

**Question #12: What did you like best about your visit to this attraction?**

**10 out of 11 tourists responded:**

- “Natural state of reserve.”
- “The views, the beaches.”
- “The light house.”
- “Rocky coast, beach views, lighthouse.”
- “Learn about nature on this area.”
- “I get the opportunity to know species and plants I've never seen.”
- “Lighthouse and rocky coast.”
- “The vistas were great and the guide was 1st class.”
- “Spectacular vistas.”
- “The view, the colors of water.”

**Question #13: What did you like least about your visit to this attraction?**

**8 out of 11 tourists responded:**

- “Would like to spend more time here.”
- “Rock beach.”
- “Obnoxious guard and \$ collectors.”
- “Entrance, attitude of the guard!”
- “It was truly HOT!”
- “The guard had a really obnoxious, unfriendly attitude. Was unhelpful to the point of almost making us want to leave.”
- “The heat and lack of cold water.”
- “Stove pipe exhaust pipe on the tour vehicle burned hand!”

**Question #14: Describe your overall feelings concerning your visit to this attraction.**

**9 out of 11 tourists responded:**

- “Good value, interesting.”
- “I liked it very much.”
- “I like it a lot. You learn about the ecosystem.”
- “Very good.”
- “Very nice, you should give it more publicity.”
- “This attraction is great, however the place needs friendlier guards and \$ collectors, and perhaps the guides should know better English.”
- “Great afternoon.”
- “Very positive and pleasant and informative.”
- “It was beautiful.”

**Question #15: What did you learn about Puerto Rico from this experience?**

**6 out of 11 tourists responded:**



“Variety of trees and plants.”

“That is a beautiful island.”

“It's hot, but beautiful, a lot of variety in a small area.”

“It's varied and beautiful.”

“Appears that the government is attempting some conservation of natural resources.”

“Variety of terrain. Eco-system well maintained.”

**Question #16: How would you describe your experience to a friend?**

**9 out of 11 tourists responded:**

“Worthwhile spending a day here.”

“I recommend this place to my friends.”

“That is a great place to visit.”

“A nice afternoon.”

“Should come and see.”

“Overall, a very satisfactory, worthwhile experience.”

“Be prepared for heat and entertaining and educational tour.”

“Pleasant and informative beautiful area.”

“Puerto Rico is a beautiful island.”

**Question #17: Other Comments:**

**5 out of 11 tourists responded:**

“Have a nice day.”

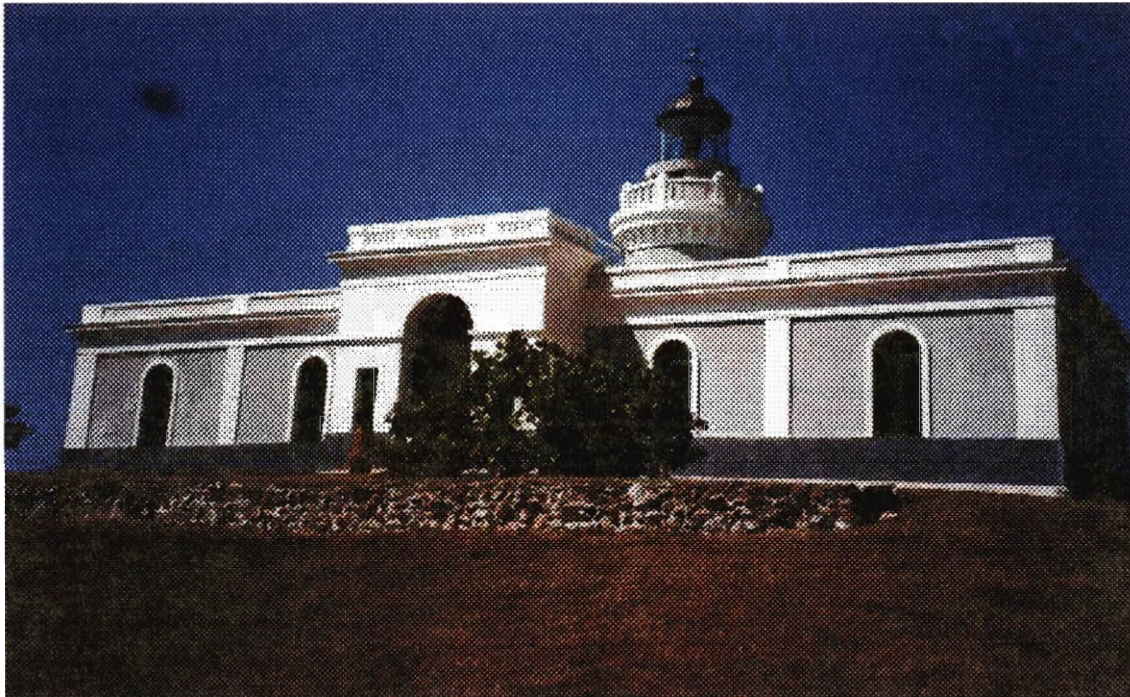
“Reservations is a pain!”

“Wish the tours were available during the week in the AM.”

“Guide was informed and informative!”

“Try our beaches, our food, and our people are good.”

### 5.2.11.3 Las Cabezas de San Juan Pictures



Historic lighthouse at Las Cabezas de San Juan



Boardwalk through the mangrove forest



### **5.2.12 Botanical Garden**

The Botanical Garden of the University of Puerto Rico is not only a recreational area for the thousands of people who come to visit each year, but it is also a scientific, educational, and cultural center. Arturo Roque founded the Botanical Garden on March 10, 1971, with the support of the president of the University of Puerto Rico, don Jaime Benitez. The garden was designed so that its botanical collections, lakes, waterfalls, and rest areas are harmoniously interconnected by footpaths, trails, and alleys allowing visitors to better appreciate the importance of native and tropical flora.

From a scientific point of view, the Botanical Garden is a center for the study and conservation of Puerto Rican flora and other exotic plants, including many species in danger of extinction. This scientific function is consistent with the current need to protect and conserve natural resources from the negative effects of urban growth, overpopulation, environmental contamination, and deforestation. Its location in the middle of the San Juan metropolitan area exemplifies how it is possible to establish a sound balance between nature and the development of modern civilization. This center carries out a variety of botanical studies, with special emphasis on Systematic Botany. It has a Herbarium of Documentation and Research with over 36,000 specimens available for study by national and foreign scientists, professors, and students.

Along with its scientific function, education is another one of the Botanical Garden's chief objectives. The Botanical Garden is a living laboratory where anyone may go to obtain information about the native flora and plants that are grown in this country. Visitors may also attend workshops, conferences, and exhibits to expand their knowledge.



In order to have a large impact on the public, the garden's scientific and educational functions must be framed within the cultural context of the Puerto Rican community, to whom this garden belongs. With this in mind, the Botanical Garden staff has launched a socio-cultural program aimed at creating awareness of the aesthetic and socio-historical values that stem from knowing and appreciating the Botanical Garden flora. This program also seeks to arouse in visitors the desire to preserve and protect the environment, which is part of the purpose of the Botanical Garden. These activities may include music, poetry, fine arts, hiking, and workshops on flower arrangement and plant cultivation.

As an essential part of this larger socio-cultural task, the Botanical Garden has identified a new public need: promoting better health habits. In order to achieve this purpose, the garden staff has a professionally-supervised hiking and calisthenics program, aimed at giving UPR employees and the general public the opportunity to improve their quality of life in a uniquely beautiful, pollution-free, natural environment.

The best way to explore the Botanical Garden is with a tour guide who can help tourists learn about the beautiful plants they are seeing. Palm trees line the first path we walked along with our tour guide, Victor Balbon. They are not only very interesting for both botanists and horticulturists, but they are also very valuable for the economy. They are used to produce food, oil, fiber, wax, dyes, paper pulp, and building materials. Many tropical communities, especially agricultural communities, depend on wild palm trees for their sustenance. There are approximately 2,800 species and 235 genera of palm trees in the world.



Next we entered the Aquatic Garden, a collection of plants that usually grow in swampy environments and on riverbanks. Victor pointed out the papyrus plant, with which Egyptians used to make paper.

Victor also brought us to the Bamboo chapel, where some couples have their weddings. Bamboo trees, which are native to Asia, may grow up to four feet in one day. They flower once in a lifetime and die after they bear their seed. Many Eastern nations use Bamboo as raw material to build houses, utensils, and furniture, and to make paper. They are also a good source of food and medicine.

We next explored the Botanical Garden's version of Monet's Garden, portrayed in his famous water lily paintings. In 1883, Impressionist painter Claude Monet established his residence forty miles northwest of Paris in a town called Giverny. There he planted the beautiful garden that attracts thousands of tourists and artists from around the world. The Botanical Garden has adapted Monet's garden, where he painted most of his work, to a tropical setting in order to provide local artists with an inspiring place to work.

Before visiting the Botanical Garden, our team attempted to call the facility several times in order to gather preliminary information about the site. However, we were unable to reach an operator each time we called, nor was there a recording with information. This could be a problem for the Botanical Garden if tourists are discouraged from visiting because they cannot obtain answers to their questions.

Our team visited the Botanical Garden under the guidance of Victor Balbon. On this sunny morning, we explored the grounds and listened as Victor described the various plants



that we encountered. He walked us through several different areas of the garden and taught us about each one.

Overall, we enjoyed the tour. Victor was friendly and knowledgeable about the many different plants in the gardens. He was very informative in explaining how the different plants are used and where they originated. As we walked through the gardens, he pointed out all the different plants along the way and answered all of our questions.

The Botanical Garden is very beautiful. Plant lovers would enjoy wandering the grounds to see a huge variety of plants from all over the island. However, there are no informational signs and very few identification plates for the various plants. The Botanical Garden should add these signs to help tourists identify what they see.



### 5.2.12.1 Botanical Garden Pictures



Monet's Gardens at the Botanical Garden





## 5.3 Art Essays

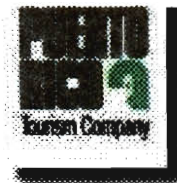
Brilliant colors and imaginative shapes characterize Puerto Rican artwork. Puerto Rican art is not only the fine pieces one may see in museums but it is also the hand crafts one may see being sold on the streets like roses made from palm leaves or brightly colored wooden masks. The following sections describe our experiences at the Ponce Museum of Art and La Princesa, two art museums that feature fine examples of work by Puerto Rican artists.

### 5.3.1 Ponce Art Museum

The works of art housed in the Museo de Arte de Ponce represent the finest collection in Puerto Rico. The artwork here is a part of the Don Luis A. Ferre collection started in 1950. There is no other art museum in Puerto Rico comparable to the size and collection of this. The exhibits here are from various important schools of painting and sculpture from Europe and the Americas. There are also many exhibits by Puerto Rican and other Latin artists.

The Muses of Greek mythology are largely depicted in much of the museum's artwork. Muses like Thalia and Melpomene are shown in their tragedies and comedies; Terpsichre displaces her graceful dance movements. Another prevailing theme at the museum is Christianity. There are many paintings depicting the Last Supper and celestial portraits of angels, as well as beautifully carved crucifixes. A favorite is the "Cruz Processional" which is delicately designed with small, brightly colored ceramic chips with a hint of gold.

Although one would have a difficult time determining one's favorite painting here based on beauty alone, it is a bit easier to choose based upon the stories that go along with



them. Some show Cupid mischievously trying to make people to fall in love while others depict King Arthur on his death bed.

Tourists should not leave the museum without seeing the beautiful piece by Fredric Lord Leighton, The “Flaming June,” one of the most famous paintings at the museum. “June” was originally drawn nude; however, Lord Leighton felt that her lower body, particularly her thighs, were not proportional to her upper torso. To correct this, Leighton painted the flowing dress that June wears today over her body. Another interesting detail about the painting is that a figure of the Greek god Erato can be seen discreetly hidden in the orange folds of her dress.

Art lovers could spend an entire day gazing with awe and wonder at all of the exquisite pieces in the museum. The experience at the museum provides not only aesthetic pleasure but also is very educational. All artwork is an expression of culture and history. The pieces at the Ponce Art Museum help visitors better understand other cultures, and particularly, the complex aesthetic synthesis that characterizes so much of Puerto Rican art.

The Ponce Museum of Art is the home of 850 paintings, 800 sculptures, and 500 prints representative of five centuries of art from all over the world. It has earned its distinction as Puerto Rico’s best art museum. The museum is located about two hours from San Juan in the southern part of the island. If tourists are not traveling with a tour operator, they will need to rent a car and take Highway 52 from San Juan. The route is easy to follow and directions are straightforward. The parking lot is large so there should be plenty of spaces available. The facility is equipped with a gift shop and café in the garden area. Tourists take a self-guided tour here but are assisted by the readily available staff if they have



any questions. Admission is \$4, which is not at all costly for the rich experience visitors will receive.

Our first contact with the museum was a telephone conversation we had on March 15, 1999. The person who answered the phone was very polite and was able to answer all of our questions thoroughly; in fact they scored perfectly on our telephone survey/questionnaire. The staff member also gave good suggestions as to what was the best time to visit the museum and gave excellent directions.

Because we had the services of a tour operator to bring us to the museum, finding the facility and parking was not an issue. One is impressed on first sight of the museum. The building itself is a piece of art. The facility is decorated with a water fountain, chandeliers, and an impressive spiral staircase. There is also a beautiful garden behind the facility where tourist can relax. The paintings are tastefully placed throughout the museum, no where is it too cluttered or too barren. Not all of the informational plaques are in both English and Spanish which may be a disappointment for non-Spanish speakers. Also the lighting is very low in some areas of the building, making it difficult to read the information. The gift shop at the museum is very complete. We spent about 20 minutes thumbing through art books and looking at reproductions of our favorite pieces. Overall, the facility is very neat and well maintained.

The museum is well staffed. There is an employee at the entrance of each gallery so tourists do not have to look far if they have any questions. When visitors enter the museum, they receive a greeting, a brief orientation, and a map that tells them where all of the exhibits are located. All of the employees at the museum were friendly and helpful.



The Ponce Museum of Art is an excellent facility and tourists should make a point to visit here during their stay in Puerto Rico. Besides assuring that all signs are presented in both English and Spanish, there is little room for improvement at this well presented facility.

### 5.3.1.1 Ponce Museum of Art - 6 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M					
1 The facility met my expectations:	[83.3]	[16.7]	[0]	[0]	[0]	0					
2 The following areas were clean:	NA	SA	A	N	D	SD					
Bathroom	[16.7]	[50.0]	[16.7]	[16.7]	[0]	[0]	0				
Food area	[66.7]	[16.7]	[0]	[16.7]	[0]	[0]	0				
Other areas of the facility	[50.0]	[33.3]	[0]	[16.7]	[0]	[0]	0				
3 The facility staff was:	SA	A	N	D	SD						
Knowledgeable	[50.0]	[33.3]	[0]	[0]	[0]	16.7					
Friendly	[66.7]	[33.3]	[0]	[0]	[0]	0					
Helpful	[50.0]	[33.3]	[0]	[0]	[0]	16.7					
Bilingual	[50.0]	[33.3]	[0]	[0]	[0]	16.7					
4 Access to the facility was easy:	[50.0]	[50.0]	[0]	[0]	[0]	0					
5 The value for the ticket price was satisfactory:	[50.0]	[0]	[33.3]	[0]	[0]	16.7					
6 I will recommend this facility to a friend:	[100.0]	[0]	[0]	[0]	[0]	0					
7 What is the purpose of your visit:	[83.3]	Family Vacation	[16.7]	Business	[0]	Cruise					
	[0]	Honeymoon	[0]	Spring Break			0				
	[0]	Other	_____								
8 Gender:	[33.3]	Male	[66.7]	Female	[0]	Mix	0				
9 Age:	[16.7]	under 21	[33.3]	21-30	[0]	31-40	[16.7]	41-50	[16.7]	51-60	0
	[0]	61-70	[16.7]	71-80	[0]	81-up					
10 Salary (US\$):	[16.7]	0-10	[16.7]	10-20	[0]	20-30	[16.7]	30-40	[0]	40-50	33.3
(thousands)	[0]	50-60	[0]	60-70	[0]	70-80	[0]	80-90	[16.7]	90-up	

### 5.3.1.2 Ponce Museum of Art Comments

**Question #12: What did you like best about your visit to this attraction?**

**6 out of 6 tourists responded:**

- “The museum is excellent.”
- “Everything.”
- “The variety of art pieces.”
- “The vastness of exhibition areas.”
- “The collection of paintings.”
- “Museum.”

**Question #13: What did you like least about your visit to this attraction?**

**3 out of 6 tourists responded:**

- “Lighting.”
- “Lighting.”
- “Not much time to explore.”

**Question #14: Describe your overall feelings concerning your visit to this attraction.**

**6 out of 6 tourists responded:**

- “Time too short, second visit is hoped for.”
- “It was interesting for me because I never been to an art museum.”
- “The veranda area.”
- “Very satisfactory.”
- “Satisfying and pleasing.”
- “Very good and it was a feast to my eyes.”

**Question #15: What did you learn about Puerto Rico from this experience?**

**5 out of 6 tourists responded:**

- “So many talented artists.”
- “The way they expose art.”
- “P.R.'s interest in art.”
- “Surprised to see this elegant museum in this part of the country.”
- “Different periods of paintings and art.”



**Question #16: How would you describe your experience to a friend?**

**5 out of 6 tourists responded:**

“It's beautiful.”

“As great as ever!!”

“Make a special effort to see it.”

“Wide range of antique paintings.”

“Make sure that he/she visits the museum to understand and enjoy the talents, detail description of the period paintings.”

**Question #17: Other Comments:**

**3 out of 6 tourists responded:**

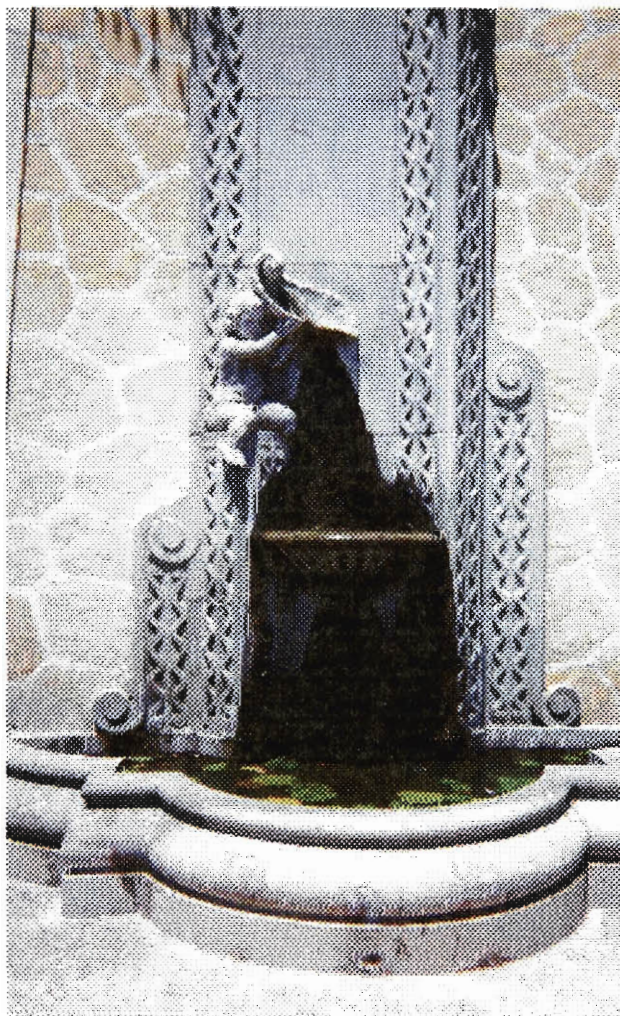
“Have lockers inside the museum.”

“Nice place to visit again.”

“Interesting, informative.”

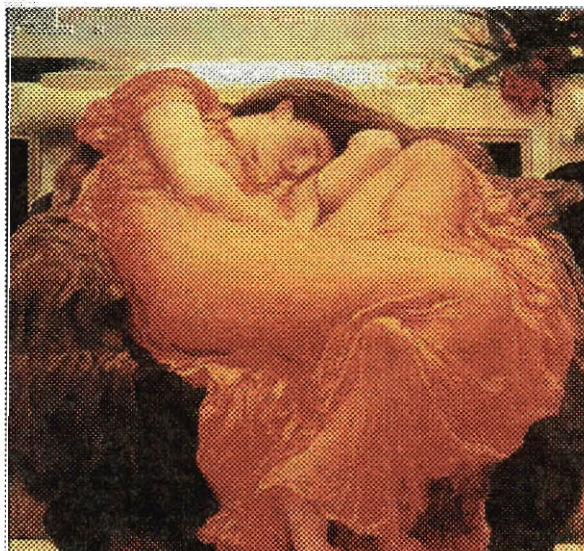


### 5.3.1.3 Ponce Museum of Art Pictures



Water fountain in the garden at the museum

“Flaming June” by Frederick Lord Leighton





### 5.3.2 La Princesa

Just downstairs from the offices of the Puerto Rico Tourism Company, a large collection of Puerto Rican art awaits visitors at La Princesa. This art museum boasts of nearly 200 pieces of art, exploring various art movements from the 1950s to the present day.

The location of the museum makes one wonder how many employees of the Puerto Rico Tourism Company pass through the gallery each day, without ever stopping to marvel at the artwork surrounding them that depicts their own culture. Tourists who visit La Princesa will realize a difference in theme of the art here from the Spanish artwork housed in other museums. Gazing at the various pieces may help tourists begin to develop a sense of who Puerto Ricans are as people. Visitors will experience a plethora of emotions as the story behind each art piece unravels for them one by one.

The museum is open on weekdays from 9am to 12pm and from 1pm to 4pm, and admission is free. Inside the museum is a collection of work from five generations of artists, and outside is a promenade that displays a series of fountains and sculptures. The gallery is located in Old San Juan on the Paseo de La Princesa, and there is parking available in the lot just across the street.

Our team conducted our telephone survey of La Princesa. The phone system is automated, but we were also able to speak with a live operator. She was very knowledgeable and was able to answer all of our questions with ease. Tourists who call the museum before visiting should have no problem finding answers to all of their questions.

One afternoon, our team visited La Princesa. The gallery is open so that visitors can tour individually and at their own pace. We found the site to be clean and well organized,



and the artwork is very interesting. There was plenty of staff around to answer tourists' questions, however it is up to the tourist to initiate communication with the staff. The signs are in Spanish only, so many tourists will not be able to read them.

Overall, we found the museum to be a good facility and certainly worth a visit while tourists are in Old San Juan. Our only recommendation is that the gallery should consider having signs in English so tourists can appreciate the artwork more fully.

### 5.3.2.1 La Princesa - 13 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M					
1 The facility met my expectations:	[53.8]	[46.2]	[0]	[0]	[0]	0					
2 The following areas were clean:	NA	SA	A	N	D	SD					
Bathroom	[76.9]	[15.4]	[0]	[0]	[0]	[7.7]	0				
Food area	[100]	[0]	[0]	[0]	[0]	[0]	0				
Other areas of the facility	[30.8]	[46.2]	[23.1]	[0]	[0]	[0]	0				
3 The facility staff was:	SA	A	N	D	SD						
Knowledgeable	[92.3]	[7.7]	[0]	[0]	[0]	0					
Friendly	[92.3]	[7.7]	[0]	[0]	[0]	0					
Helpful	[92.3]	[7.7]	[0]	[0]	[0]	0					
Bilingual	[92.3]	[7.7]	[0]	[0]	[0]	0					
4 Access to the facility was easy:	[69.2]	[23.1]	[7.7]	[0]	[0]	0					
5 The value for the ticket price was satisfactory:	[0]	[0]	[0]	[0]	[0]	100					
6 I will recommend this facility to a friend:	[61.5]	[38.5]	[0]	[0]	[0]	0					
7 What is the purpose of your visit:	[38.5]	Family Vacation	[0]	Business	[38.5]	Cruise					
	[7.7]	Honeymoon	[15.4]	Spring Break			0				
	[0]	Other	_____								
8 Gender:	[46.2]	Male	[53.8]	Female	[0]	Mix	0				
9 Age:	[7.7]	under 21	[23.1]	21-30	[7.7]	31-40	[23.1]	41-50	[23.1]	51-60	0
	[15.4]	61-70	[0]	71-80	[0]	81-up					
10 Salary (US\$):	[7.7]	0-10	[7.7]	10-20	[7.7]	20-30	[7.7]	30-40	[0]	40-50	23.1
(thousands)	[15.4]	50-60	[0]	60-70	[15.4]	70-80	[0]	80-90	[15.4]	90-up	



### 5.3.2.2 La Princesa Pictures

Question #12: What did you like best about your visit to this attraction?

9 out of 13 tourists responded:

“The historic site.”

“The cells and the cuatro exhibition.”

“Discovering a new example of San Juan architecture about which I had known nothing.”

“Renovation and keeping with original structure.”

“Explanation of all the instruments.”

“Modern paintings.”

“The old history.”

“Architecture.”

“Everything was neat, tidy and very clean.”

Question #13: What did you like least about your visit to this attraction?

5 out of 13 tourists responded:

“No public bathrooms, no handicap facilities, no water fountain.”

“I like it all.”

“N/A.”

“Inability to use bathroom (locked).”

“Cells were unpleasant.”

Question #14: Describe your overall feelings concerning your visit to this attraction.

7 out of 13 tourists responded:

“It was satisfactory.”

“Serendipitous.”

“Very interesting; with there were more local art.”

“Interested and curious.”

“Interested.”

“Interesting.”

“It's lovely and cool.”

Question #15: What did you learn about Puerto Rico from this experience?

5 out of 13 tourists responded:



“How interesting is the history of this country.”

“Architecture. Certain works of art y modern Puerto Rican artists on display.”

“The melding of African and Spanish influences into music that is uniquely Puerto Rican.”

“Very friendly people here.”

“History.”

Question #16: How would you describe your experience to a friend?

7 out of 13 tourists responded:

“A very interesting one with a lot of history and a beautiful city.”

“Very interesting.”

“Happy discovery made on impulse.”

“Interesting and attractive architecture; quite elegance.”

“Interesting.”

“Interesting collections but small.”

“Surprising.”

Question #17: Other Comments:

5 out of 13 tourists responded:

“I love the weather!”

“No handicapped access to the cuatro exhibition or the cells. And no water fountain.”

“Beautifully renovated and maintained gallery.”

“My son graduated from WPI!”

“NO”



## 5.4 Religious Essays

Because of the long epoch of Spanish rule, Catholicism is the predominant religion in Puerto Rico. Some famous sites in Puerto Rico that represent the Catholic religion are the San Juan Cathedral and the Christ Chapel. One must remember that while these sites draw tourists due to their amazing architecture, they should be regarded as places of worship and not as tourist attractions. The following sections contain information concerning our research done at the Christ Chapel and San Juan Cathedral.

### 5.4.1 Christ Chapel

In 1927, Isabel Alanso de Mier put forth a huge effort to save the Christ's Chapel, which can be found at the end of Calle de Cristo in Old San Juan. The original chapel was constructed in 1753. Its founding is based in the legend of how Baltazar Montanez was saved from certain death when he lost control of his horse. In the early 18<sup>th</sup> century young men celebrated the day of San Juan Bautista, patron saint of the city, with characteristic exuberance racing their spirited horses from the top of Cristo street down to the corner of Fortaleza, then galloping up Cristo again. But young Montanez could not hold his horse at the designated corner and impelled by momentum, both went over the city wall at the end of Cristo street and plunged into the abyss. "Santo Cristo de la Salud save him!" cried government secretary, General Mateo Pratt, as he watched the tragedy unfold from his balcony. The horse perished on the rocks below but its rider miraculously lived long enough to receive the last sacraments. That was time enough for Pratt to confirm and document the miracle with a chapel and painting of Christ on the cross.



Over the years, veneration waned to the point where the church became an empty shell housing the city's derelicts. City authorities made plans to raze the historic chapel. But Isabel Alonso de Mier prevailed upon them to save the shrine and the 1929 restoration began. Isabel Alonso was supported in her quest by Rafael Carmoega, architect of the capital building and by the wife of Horace M. Towner, governor of Puerto Rico from 1923-1929. Both women were members of the club, Civico de Damas, the women's civic club. In 1974 the club, presided by Carmen Lockhermer, placed the plaque in Cristo Chapel, in honor of Isabel Alonso, the year she died. Isabel Alonso de Mier sparked the movement to conserve the island's patrimony. In 1941, San Juan bishop, Edwin V. Byrne authorized Hermandad del Cristo de la Salud, to care for the conservation of the antique and venerable chapel. Angelita Usera de Hernandez, Maria Hernandez de Real, Lolita Hernandez de Pons, and Isabel Alonso de Mier were granted the license. As founder and first executive director of the Institute of Puerto Rican Culture, Alegria became the Hermandad's historical advisor. Alonso also convinced the women to support Cristo Chapel. Her friend San Juan Mayor Felisa Rincon de Gautier facilitated grills to protect the church from encroachment by prostitutes on Tetuan Street. Alonso was also chosen Mujer de las Americas, Woman of the Americas, for her works. Revered by the sisterhood and honored by the pope, she died in 1974. Her daughter, Isabel Mier Pons, who oversaw further repairs, restorations, and fundraising, continued her mission.

Since her death, other women have continued to support the chapel. Despite their thinning ranks, these elderly women open the church once a week out of friendship and devotion. The church chapel is also open during Holy Week and again for traditional psalm procession marking the fiesta de Salvador on August 6<sup>th</sup>. Each Tuesday morning they meet





at the chapel to keep their vows as church custodians and to collect donations. In exchange they tell tourists the history of the church, which is actually a religious museum. They point out the Virgin del Rosario and the Imaculada Concepcion, original oil paintings by Jose Campeche, the famous 18<sup>th</sup> century Puerto Rican painter who was born on Cruz Street and lived on San Sebastian Street. They show tourists the irreplaceable 18<sup>th</sup> century relics, a medallion which is supposed to contain fragments of bones of Saint John the Baptist, and the cabinet to store the relics acquired by Isabel Alonso on her trip to Spain. Isabel Alonso always brought back a gift for the chapel. One of her legacies is a pure silver cross she acquired in Madrid. The women of her sisterhood marveled once again at the majesty of the altar, which shimmers, with the fervor of the anonymous artists. The altar is covered like armor by thousands of silver and gold offerings melted down. The offerings represent arms, legs, torsos, breasts, and hands -- every human organ cured from injury by the divine intervention of Santo Cristo de Salud. The women of the sisterhood sit dutifully at a bridge table that serves as a type of platter holding photographs and postcards of the chapel. The table also holds a basket to collect donations for the chapel's upkeep. They know that the basket will rarely brim over the top with dollar bills but their faith also tells them to continue with their mission, honoring the faith of Isabel Alonso.

Before visiting the Christ Chapel, our team tried to call to conduct our telephone survey. However, we could never reach anyone when we called. The explanation for this soon became evident when we arrived at the site. The small chapel is a place of prayer and worship, not a "tourist attraction." We observed the chapel quietly as people wandered in

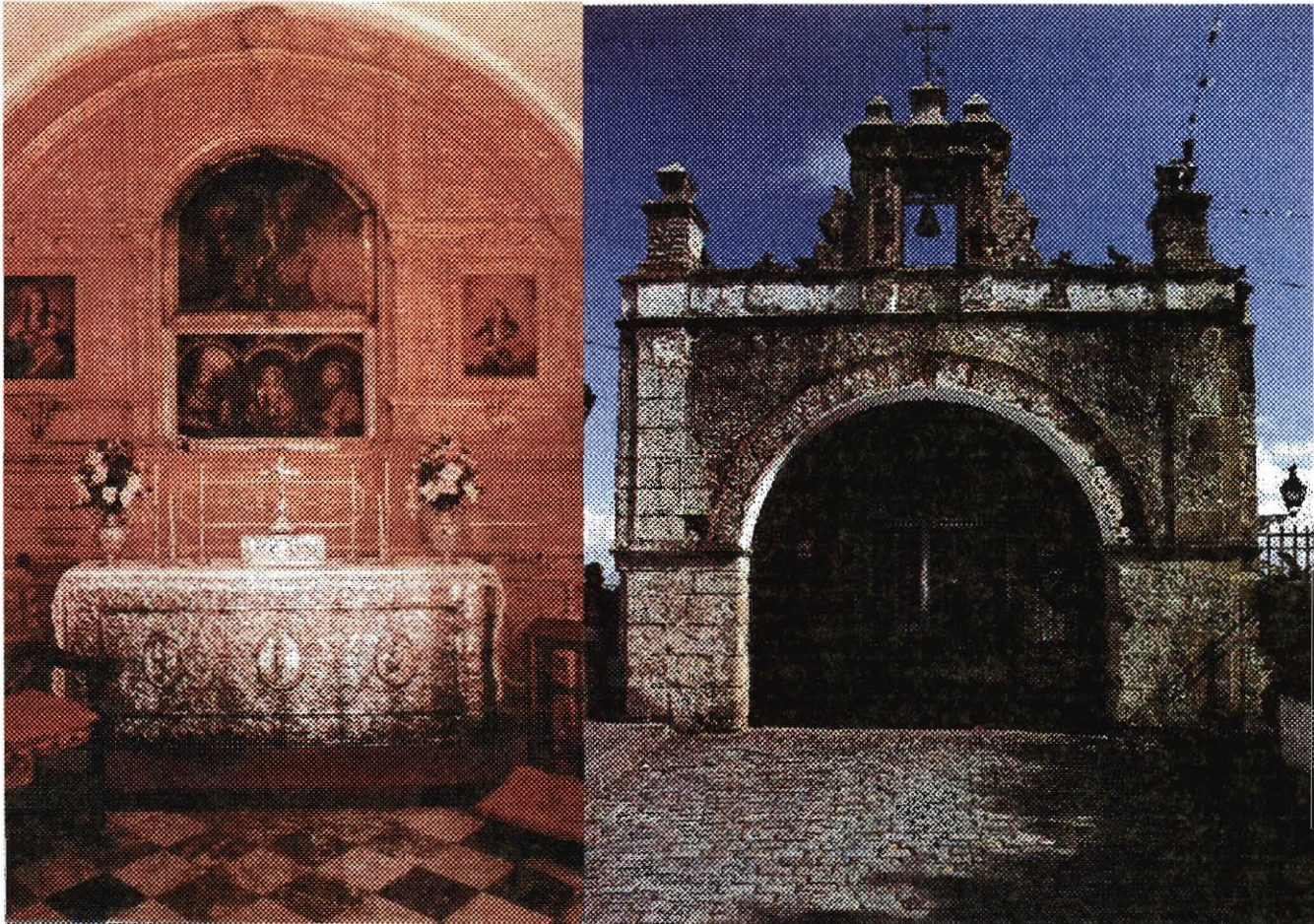


and out to pray. Out of respect for those praying we decided to abstain from conducting tourist surveys.

The women sitting at the entrance of the chapel were very friendly. They told us about the legend of Baltazar Montanez and explained why the silver trinkets of different body parts lined the walls. The chapel itself is very beautiful; the intricate detail of its interior is amazing. Our team enjoyed our visit to this facility and suggests that all tourists who are in Old San Juan on a Tuesday should stop by the chapel to learn about its interesting history and see its quaint interior.

Christ Chapel is open only on Tuesdays and takes only a short time to be fully appreciated. Tourists should be aware that people go to the chapel to pray, so they should be quiet and respectful during their visit. The facility is clean and well maintained.

### 5.4.1.1 Christ Chapel Pictures



Left: Inside view of Christ Chapel    Right: Outside view of Christ Chapel



#### **5.4.2 San Juan Cathedral**

Found near the center of Old San Juan, the Metropolitan San Juan Cathedral represents an important part of the island's cultural and religious history. The Cathedral was based upon the design of the Metropolitan Cathedral of Seville, Spain. The first bishop of the island, Bishop Alonso Manso, envisioned the church to be even more impressive than the original. Around 1521, he began building his dream—a wooden church with a thatched roof. Unfortunately, five years later, a hurricane struck the island, destroying the cathedral on October 4, 1526. Builders used stone from the quarries of Toa to reconstruct the church, which they completed in 1529. Between 1577-1587, priest Diego de Salamanca added the front steps to the building.

When Dutch troops invaded the city in 1625, the San Juan Cathedral was vandalized and destroyed. Bishop Bernardo de Balbuena donated part of his estate to the reconstruction of the cathedral, and Bishop Juan Alejo de Arizmendi greatly enhanced its construction and beautification. By 1917, time had taken its toll on the cathedral, and Bishop William Jones began the first restoration and cleansing of the cathedral. H.E. Luis Cardinal Apunte, the present incumbent of the Metropolitan See of San Juan, completed the second and most recent restoration. At his request, Pope Paul VI declared the cathedral to be a Minor Basilica, the only church in Puerto Rico to hold such a distinction. On November 19, 1977, the cathedral was re-inaugurated in its present condition.

The cathedral is unlike most of the other sites we have visited because it is not per se a tourist attraction; rather it is a place of worship. A small booth selling postcards in the



back corner of the church is the only hint of tourism. We walked around quietly to observe the serene beauty of the religious statues and sculptures of the cathedral.

Inside the church, we saw the tomb of Don Juan Ponce de Leon, first governor of Puerto Rico, and the famous searcher for the fountain of youth. Members of the Casino Espanol de Puerto Rico donated the monument when the discoverer's remains were transferred from an enclave in the San Jose Church to the present site in this cathedral. Next to the tomb, there is a statue of Our Lady of Providence, the Patroness of Puerto Rico. This statue is surrounded by a spectacular display of intricately crafted gold pillars. Throughout the church there are many beautiful stained glass windows: one depicting the Holy Spirit, another of St. John, several baptismal symbols, and one large window portraying the poor souls in Purgatory, carried to Heaven by the holy angels. The central dome over the main altar has a very elaborate 19<sup>th</sup> century Italian painting of the four Evangelists.

The intricate craftsmanship and rich history of the San Juan Cathedral impressed our team. We recommend to all tourists who visit Old San Juan that they should stop by the cathedral to marvel at its beautiful statues, amazing ceiling and stained glass windows. However, all visitors should be respectful of the local church members who pray and worship daily inside the cathedral.

### 5.4.2.1 San Juan Cathedral - 14 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M					
1 The facility met my expectations:	[0]	[0]	[0]	[0]	[0]	0					
2 The following areas were clean:	NA	SA	A	N	D	SD					
Bathroom	[0]	[0]	[0]	[0]	[0]	[0]	0				
Food area	[0]	[0]	[0]	[0]	[0]	[0]	0				
Other areas of the facility	[0]	[0]	[0]	[0]	[0]	[0]	0				
3 The facility staff was:	SA	A	N	D	SD						
Knowledgeable	[0]	[0]	[0]	[0]	[0]	[0]	0				
Friendly	[0]	[0]	[0]	[0]	[0]	[0]	0				
Helpful	[0]	[0]	[0]	[0]	[0]	[0]	0				
Bilingual	[0]	[0]	[0]	[0]	[0]	[0]	0				
4 Access to the facility was easy:	[0]	[0]	[0]	[0]	[0]	[0]	0				
5 The value for the ticket price was satisfactory:	[0]	[0]	[0]	[0]	[0]	[0]	0				
6 I will recommend this facility to a friend:	[0]	[0]	[0]	[0]	[0]	[0]	0				
7 What is the purpose of your visit:	[35.7] Family Vacation [0] Business [7.1] Cruise [7.1] Honeymoon [7.1] Spring Break [7.1] Other					35.7					
8 Gender:	[35.7] Male [64.3] Female [0] Mix					0					
9 Age:	[0] under 21	[7.1] 21-30	[14.3] 31-40	[50.0] 41-50	[7.1] 51-60	[21.4] 61-70	[0] 71-80	[0] 81-up	0		
10 Salary (US\$): (thousands)	[7.1] 0-10	[0] 10-20	[0] 20-30	[7.1] 30-40	[0] 40-50	[21.4] 50-60	[7.1] 60-70	[0] 70-80	[7.1] 80-90	[28.6] 90-up	21.4

#### 5.4.2.2 San Juan Cathedral Comments

**Question #12: What did you like best about your visit to this attraction?**

**13 out of 14 tourists responded:**

“The architecture--the old world detail.”

“Silence architecture.”

“The history.”

“Clean/beauty very old look.”

“We enjoy stopping in churches wherever we are. Wonderful architecture.”

“The beautiful interior the calm atmosphere.”

“The ornamental molding detailing.”

“House of God and prayer.”

“Being Easter Monday, a visit to a church was appropriate. Church dedicated for Easter Time and place for reflection.”

“The history and religious background.”

“Historic building.”

“Spanish style catgono!”

“Our tour of ---- of cross.”

**Question #13: What did you like least about your visit to this attraction?**

**9 out of 14 tourists responded:**

“No negatives.”

“We think it's first a church and not an attraction!”

“I like it all.”

“None”

“It can be cleaner.”

“None.”

“Nothing.”

“Architecture.”

“Heat.”

**Question #14: Describe your overall feelings concerning your visit to this attraction.**

**12 out of 14 tourists responded:**

“Awesome—grandeur.”

“We feel to be in Spain.”

“Good.”



- “Cool and calming.”
- “Very different to a Danish protestant church.”
- “It is a religious place of worship. That is and should be its purpose "not an attraction."
- “Humility.”
- “2nd visit here -- beautiful historic church.”
- “Felt very comfortable being in this surrounding.”
- “Very light and inviting.”
- “Excellent.”
- “Very warm and inspiring.”

**Question #15: What did you learn about Puerto Rico from this experience?**

**11 out of 14 tourists responded:**

- “Strong Christian heritage--very strong catholic ties.”
- “It's a part of Europe in Caribbean.”
- “Very old religious, care about past.”
- “A very religious culture.”
- “That they take their religion seriously.”
- “Puerto Rico is a warm Friendly place w/a lot of potential.”
- “Christianity is very important.”
- “Reminder of importance of religion in PR culture.”
- “People are wonderful.”
- “Not much.”
- “Very religious.”

**Question #16: How would you describe your experience to a friend?**

**11 out of 14 tourists responded:**

- “Worth stopping to see--some Christian heritage revealed but need guide to explain statues in some areas.”
- “Same things.”
- “People are great.”
- “Very good.”
- “Pleasant church--nice site.”
- “See 14 +15.”
- “Beautiful clean island.”
- “Encourage spending time in Old San Juan--historic; gives perspective of culture in PR.”
- “Fantastic.”
- “A worthwhile historic building well worth a visit.”
- “People.”





**Question #17: Other Comments:**

**6 out of 14 tourists responded:**

“La Casita--need to be more helpful to tourists or find another profession--these people are the greeters to sometime "1st time" visitors to San Juan or even Puerto Rico. Put the island people to work to clean up the trash to show true pride & respect for it.”

“ATILBA”

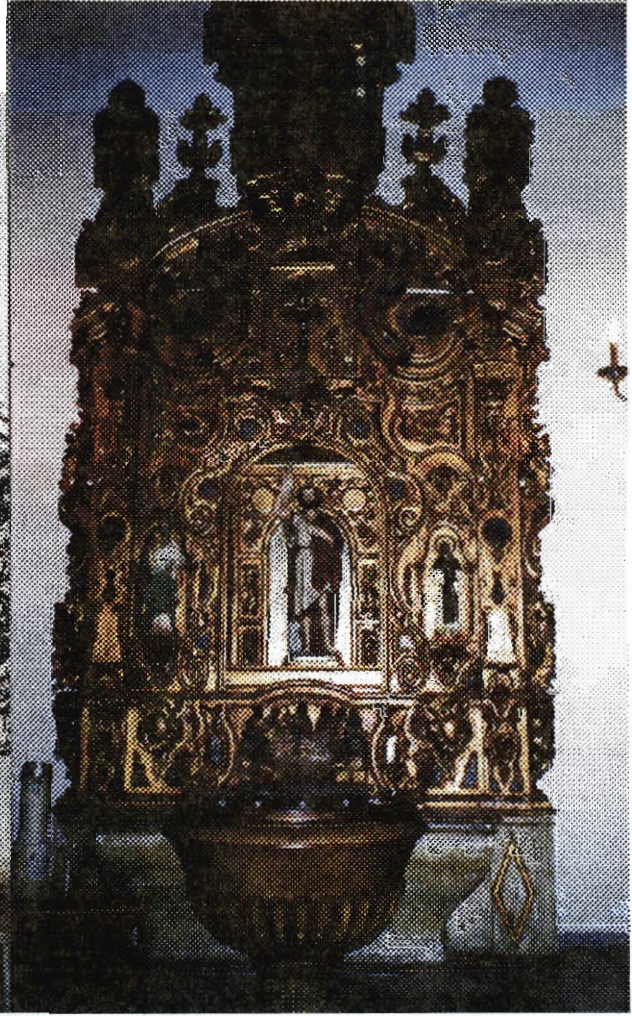
“NO.”

“Good luck w/your surveys.”

“Look forward to coming back.”

“Beautiful church; great artwork; beautiful flowers.”

### 5.4.2.3 San Juan Cathedral Pictures





## 5.5 Scientific Essays

Aside from the rich history and diversity of Puerto Rico, the island of enchantment also offers scientific attractions. The Arecibo Observatory, featured in many modern-day films, is the famous radio-telescope in Arecibo. This section of our report contains the research we did at the Observatory.

### 5.5.1 Arecibo Observatory

It is of course in the nature of curious students of science to be fascinated by the Arecibo Observatory. However, anyone visiting the immense radio telescope at Arecibo cannot help but stare at it with awe and wonder. Nestled deep in the picturesque mountains of Arecibo, Puerto Rico, is the Arecibo Observatory, the world's largest, most powerful radio telescope. The diameter of this huge dish is a thousand feet. Looking down 500 feet below on the dish, one cannot help but be impressed by its immense size and anyone even slightly afraid of heights will grasp onto the bars of the observation platform tightly. After the feeling of amazement passes, one may wonder, what does this thing do? There are a variety of answers to this question. Within the observatory's grounds there is a modern museum that has a ton of information about astronomy and atmospheric science. The museum is full of so many facts and compact exhibits that it would be impossible to read and listen to them all in just one visit.

At the observatory there is a wide span of interesting information ranging from how hurricanes are formed to the types of rocks found on the surface of Mars. Visitors with a limited amount of time may want to restrict themselves to the exhibits that relate more closely to the huge radio telescope that they came to see. Reading these well presented



informational exhibits one learns that, unlike the traditional optical telescopes that detect the light given off by stars and galaxies, a radio telescope tunes into radio waves. It may seem peculiar to the amateur astronomer to note that stars and other celestial objects naturally give off radio noise. The Arecibo Observatory Telescope has 305-meter diameter fixed reflectors that collect these radio waves, providing important new information about our earth's atmosphere, our solar system, and the universe itself.

Because it is so big, Arecibo can pick up objects that are extremely faint and far away. As one gazes upon the huge dish, it is amazing to think that the disk is hearing things that we cannot even imagine exist. Arecibo is the first voice from earth to echo across a limitless universe. Most people cannot even conceive that the universe has an edge, but it is said that you can "see" all the way to it with this telescope.

Our amazement was further compounded by the fact that something so technologically over-the-head was built back in 1960. Originally it focused radio signals from space onto a long spiny projection, actually an antenna. Now, signals bounce into a huge white dome that looks like a disco ball. The dome is used because it has extra reflectors that concentrate the radio waves making them ten times stronger than before.

An initial reaction to learning about how the radio telescope works is to wonder why these signals might be useful and why do we want to hear them? For the sci-fi nut, the most interesting reasons, is that it is possible that one of them could be a communication from some other life forms out there. These signals are broken down into thousands of channels and analyzed by a computer. The computer knows that nearby strong signals are from cell phones, satellites, or stars. It is the faint, distant signals that are of special interest to the



scientists here. Obviously, contact from another life form would be the biggest event in human history.

The idea of communicating with another life form is not a new one. Hollywood has glorified these ideas over the years. In fact, the reason many people may know about Arecibo is from its appearances in movies like Contact, Golden Eye, Deep Impact, Armageddon, and X-Files. In Contact, one will remember that it was Jody Foster who heard the all important radio signal from Arecibo. In Golden Eye, one remembers James Bond sliding down Arecibo's huge dish.

One may have also watched the TV show "X-Files" where FBI Agents Scully and Mulder investigate the possibility of the existence of life forms from other planets. Many shows have featured Arecibo and they even talk about an on going project here called SETI. SETI, or the Search for Extra Terrestrial Intelligence is a project that uses radio waves to seek for evidence of other civilizations. No messages are transmitted but rather the telescope is used to eavesdrop on signals that have been sent our way, either deliberately or unintentionally by other beings. The first SETI project was in 1960 when Frank Drake, a young radio astronomer used a small radio telescope in West Virginia to search for extra terrestrial transmissions. Since that pioneering experience, approximately 70 other searches have been made. To date, no experiment has discovered a message from another civilization. There is no reason to be discouraged by this. Efforts have only begun to sample the millions of stars where signals may be found, or as Mulder would say "the truth is out there."

In the movie Deep Impact, the message heard from the radio telescope takes on a much different meaning. In this story the big event is a huge, six-mile wide asteroid heading towards earth. A nightmare like this is not at all far-fetched. One may be frightened to know



that Arecibo is used to detect potential disasters as big as the one portrayed in this movie. Work is presently being done at Arecibo to catalog by radar all asteroids that are invisible to optical telescopes. With this data it is possible for scientists to produce 3-D models of the asteroid so that if we had to knock an asteroid off course, like in the movie Armageddon, knowing its exact shape would be crucial. One day we may all be very happy Arecibo exists.

The Arecibo Observatory, directed by the National Science Foundation and Cornell University, is a 20.4-acre dish and receiver comprising the largest radio telescope in the world. At the observatory tourists are free to walk around the museum and enjoy the exhibits on their own, and they can watch a short video clip from “Scientific Frontiers” that gives some information about the radio telescope. After seeing the museum, visitors can go outside onto the observation deck and take in all of the wonder of the radio telescope. Before visitors leave, they may want to browse in the gift shop, conveniently located just outside the observation deck.

We administered our telephone survey/questionnaire to the staff at Arecibo on March 15, 1999. The survey went very smoothly. The phone was answered on the first ring and the operator was very knowledgeable about the facility and completely answered all of our questions.

The facility at Arecibo Observatory is comprised of a museum, a mini-theater, an observation deck, and a gift shop. The site is very clean and well maintained. The museum’s exhibits, perhaps because the viewing area is so small, seem a bit cluttered and lack organization. Also, the print on the informational signs is very small so visitors have to get close to the exhibit in order to read them. Perhaps a happy problem is that there is so



much information in the museum that it becomes difficult to absorb it all at once. Also, the layout of the observatory is somewhat complicated; the location of the ticket booth is not immediately obvious. Further, when exiting the observation deck, the visitor has to go around the entire building to re-enter the building.

### 5.5.1.1 Arecibo Observatory - 7 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M					
1 The facility met my expectations:	[42.9]	[57.1]	[0]	[0]	[0]	0					
2 The following areas were clean:	NA	SA	A	N	D	SD					
Bathroom	[42.9]	[28.6]	[28.6]	[0]	[0]	[0]	0				
Food area	[71.4]	[0]	[14.3]	[14.3]	[0]	[0]	0				
Other areas of the facility	[0]	[71.4]	[28.6]	[0]	[0]	[0]	0				
3 The facility staff was:	SA	A	N	D	SD						
Knowledgeable	[57.1]	[14.3]	[28.6]	[0]	[0]	0					
Friendly	[71.4]	[28.6]	[0]	[0]	[0]	0					
Helpful	[57.1]	[14.3]	[14.3]	[14.3]	[0]	0					
Bilingual	[57.1]	[14.3]	[28.6]	[0]	[0]	0					
4 Access to the facility was easy:	[28.6]	[42.9]	[28.6]	[0]	[0]	0					
5 The value for the ticket price was satisfactory:	[42.9]	[42.9]	[14.3]	[0]	[0]	0					
6 I will recommend this facility to a friend:	[71.4]	[28.6]	[0]	[0]	[0]	0					
7 What is the purpose of your visit:	[14.3]	Family Vacation	[0]	Business	[0]	Cruise					
	[0]	Honeymoon	[0]	Spring Break			28.6				
	[57.1]	Other									
8 Gender:	[71.4]	Male	[28.6]	Female	[0]	Mix	0				
9 Age:	[85.7]	under 21	[14.3]	21-30	[0]	31-40	[0]	41-50	[0]	51-60	0
	[0]	61-70	[0]	71-80	[0]	81-up					
10 Salary (US\$): (thousands)	[85.7]	0-10	[0]	10-20	[14.3]	20-30	[0]	30-40	[0]	40-50	0
	[0]	50-60	[0]	60-70	[0]	70-80	[0]	80-90	[0]	90-up	



### 5.5.1.2 Arecibo Observatory Comments

#### Question #12: What did you like best about your visit to this attraction?

6 out of 7 tourists responded:

“Everything!”

“Seeing the dish and learning about the science behind it (i.e. the museum thingy).”

“Getting to see the largest radio telescope.”

“The exhibits.”

“It was big. A couple of the museum displays were cool.”

“Everything.”

#### Question #13: What did you like least about your visit to this attraction?

6 out of 7 tourists responded:

“Not going out on the catwalk.”

“It was all good.”

“We couldn't walk on the catwalk.”

“Not being able to go out on the catwalk.”

“Couldn't get close enough to the dish. Couldn't really judge how big it was, it shoulda been free.”

“How small the inside information was.”

#### Question #14: Describe your overall feelings concerning your visit to this attraction.

6 out of 7 tourists responded:

“Awesome—WOW!”

“It kicked ass.”

“Good times!”

“Well worth the \$3.50 ticket.”

“OK.”

“A great place that really gives you a smile.”

#### Question #15: What did you learn about Puerto Rico from this experience?

4 out of 7 tourists responded:

“Nothing, but lots about space.”

“That there are things in Puerto Rico in the middle of nowhere.”

“Jack.”

“How it contains the world's only "radar telescope.”

#### Question #16: How would you describe your experience to a friend?

6 out of 7 tourists responded:

“Go--definitely worth it, educational and fun.”



“One of the most awesome sites I've ever seen. Reminded me of X files.”

“An interesting and invigorating experience.”

“Good times!”

“A must see experience. The information is great, the sight is awesome and its great for almost all ages.”

“It was great and different from any other place I've visited before.”

**Question #17: Other Comments:**

**4 out of 7 tourists responded:**

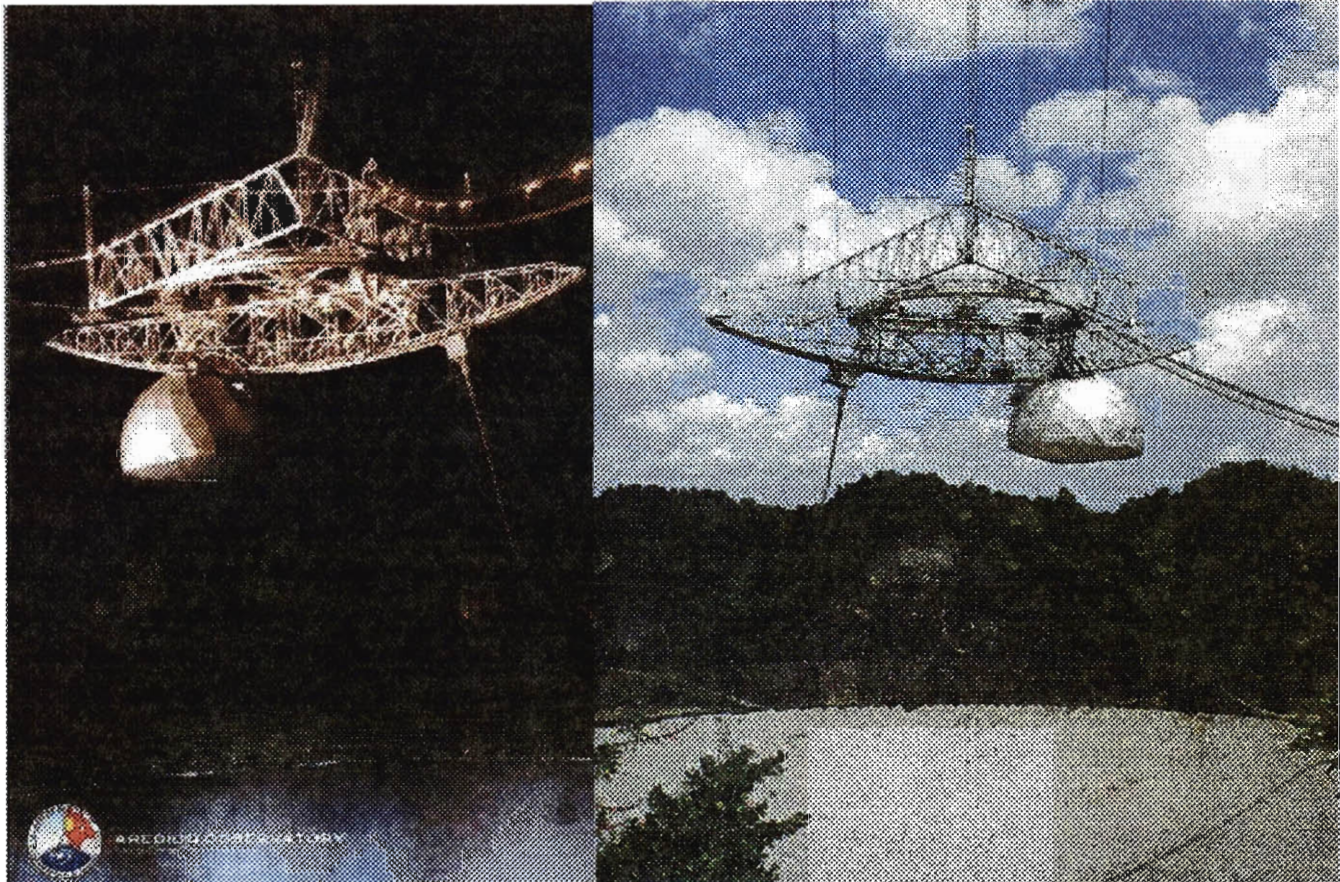
“The ticket guy can't be bribed to let people out on the catwalk.”

“Ya gotta see it.”

“Good times.”

“Great place.”

### 5.5.1.3 Arecibo Observatory Pictures



Night and day views of the radio telescope at Arecibo Observatory



## **5.6 Recreational Essays**

Popular activities for tourists in Puerto Rico are horseback riding and snorkeling. Puerto Rico provides a beautiful setting for both. Many ranches take riders on horse trails along the beaches, mountains, rain forests, and cliffs. For snorkelers, Puerto Rico has some of the most beautiful coral reefs in the world. This section of our report deals with our study of East Wind II and Hacienda Carabali, recreational sites we visited in Puerto Rico.

### **5.6.1 Hacienda Carabali**

Riding through the foothills of El Yunque, one could feel the power of the Spanish gallants when they first arrived in Puerto Rico over 500 years ago. The grand stature of a horseman must have impressed the Tainos when they saw the conquistadors riding along the horizon approaching them with swift speed. Tourists may experience this same feeling of power as they ride Puerto Rican Paso Fino horses at Hacienda Carabali.

Riders can enter the foothills of El Yunque, where even the Spaniards were forbidden to go. The Tainos had declared all areas of El Yunque to be sacred, and the Spanish explorers never dared to enter its premises.

As riders gallop along the trail, they can see the beautiful trees and flora unique to Puerto Rico and its rain forest. The Mameyes River will tempt riders to swim while their horses rest for the return trip. Tourists can enjoy the cool, refreshing water after a pleasant ride in the hot sun.

Hacienda Carabali is a ranch with Puerto Rican Paso Fino horses. The cost is \$40 for adults and \$25 for children to ride a two-hour trail through the foothills of El Yunque, which



may be considered expensive for the experience. The facility also has a small eating area with reasonably priced food. The ranch is relatively clean.

Our project team called Hacienda Carabali before visiting the site. The woman who answered the phone was able to answer all of our questions. She advised us to wear long jeans and boots or sneakers and to bring a bathing suit. The directions she gave were a bit vague, and she rushed the conversation, but she did an excellent job of explaining health and safety issues.

We visited the facility on April 13. We arrived early to our noon reservation only to find out that we wouldn't begin until after 12:30. At that time, we were given a brief lesson on how to mount and ride a horse. The guides helped each of us mount, and then we set out on the trail. The riding was fun and the scenery was beautiful. Partway through the trip, we stopped at the Mameyes River for swimming and refreshments. After resting we circled back to the ranch to complete our tour. The advertisement of the tour is misleading. Tourists may think that they will have two hours of riding time, but actually a significant portion of this time is spent swimming in the River.

Overall, our team enjoyed our visit to Hacienda Carabali. However, we suggest that they stagger their tours so that fewer people ride the trail at once. Our tour seemed crowded for such a narrow trail; we were actually bumping into other riders with our horses. We also recommend that the guides give water to the horses during our rest break, and allow time for the horses to rest between tours. The horses seemed overworked and tired. The guides may also want to consider describing some of the plants and trees as the tour passes through the foothills of El Yunque.

### 5.6.1.1 Hacienda Carabali - 43 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M	
1 The facility met my expectations:	[23.3]	[60.5]	[4.7]	[4.7]	[0]	7.0	
2 The following areas were clean:	NA	SA	A	N	D	SD	
Bathroom	[9.3]	[18.6]	[32.6]	[16.3]	[7.0]	[7.0]	9.3
Food area	[4.7]	[16.3]	[44.2]	[18.6]	[7.0]	[0]	9.3
Other areas of the facility	[0]	[16.3]	[48.8]	[16.3]	[4.7]	[0]	14.0
3 The facility staff was:	SA	A	N	D	SD		
Knowledgeable	[55.8]	[41.9]	[0]	[0]	[0]	2.3	
Friendly	[53.5]	[37.2]	[2.3]	[0]	[0]	7.0	
Helpful	[51.2]	[34.9]	[7.0]	[0]	[0]	7.0	
Bilingual	[39.5]	[46.5]	[2.3]	[0]	[0]	11.6	
4 Access to the facility was easy:	[25.6]	[51.2]	[11.6]	[11.6]	[0]	0	
5 The value for the ticket price was satisfactory:	[7.0]	[67.4]	[14.0]	[9.3]	[0]	2.3	
6 I will recommend this facility to a friend:	[25.6]	[51.2]	[18.6]	[2.3]	[0]	2.3	
7 What is the purpose of your visit:	[23.3] Family Vacation	[16.3] Business	[48.8] Cruise				
	[0] Honeymoon	[0] Spring Break				0	
	[11.6] Other						
8 Gender:	[48.8] Male	[51.2] Female	[0] Mix			0	
9 Age:	[7.0] under 21	[20.9] 21-30	[25.6] 31-40	[37.2] 41-50	[7.0] 51-60	0	
	[0] 61-70	[0] 71-80	[2.3] 81-up				
10 Salary (US\$):	[0] 0-10	[7.0] 10-20	[11.6] 20-30	[16.3] 30-40	[9.3] 40-50	11.6	
(thousands)	[4.7] 50-60	[4.7] 60-70	[4.7] 70-80	[4.7] 80-90	[25.6] 90-up		



### 5.6.1.2 Hacienda Carabali Comments

#### Question #12: What did you like best about your visit to this attraction?

33 out of 43 tourists responded:

“Being with my friends.”  
“Great horse.”  
“Learning to ride a horse.”  
“Fellowship.”  
“Horseback riding.”  
“Riding a gaited horse.”  
“Hadn't done it before.”  
“Hotel Rio Mar.”  
“Quality of friendly horses.”  
“People of Puerto Rico in general.”  
“The horses.”  
“The area was beautiful and lush.”  
“Probably the river swimming.”  
“Knowledgeable staff.”  
“Horse ride.”  
“Not having trail ponies that would just walk.”  
“Beautiful, horses well trained.”  
“The experience, the trail.”  
“Everything.”  
“Being away from ship.”  
“I enjoy riding horses.”  
“The people.”  
“Riding horses.”  
“Horses. Riding.”  
“Very friendly and fun staff.”  
“Horse ride.”  
“Everyone friendly.”  
“Horses.”  
“Scenery.”  
“The water hole part. Good horses.”  
“The horses were well trained. People were curious.”  
“The river.”  
“Riding.”

#### Question #13: What did you like least about your visit to this attraction?

26 out of 43 tourists responded

“Horses over-worked.”  
“No rainforest.”  
“My crazy uncooperative horse.”  
“Horses tired and not gaited.”  
“Dirty, but you can't expect too much with all the horses around.”  
“Hot.”  
“Horse didn't do what I wanted.”  
“Sick dog.”



“Cost.”  
“The time.”  
“The construction was a little disappointing. There was a lot of construction.”  
“Bathrooms.”  
“Humidity.”  
“Poor housing on the way and trash.”  
“Wanted to see more rain forest, trails in thicker vegetation.”  
“Should be longer.”  
“They were not ready for us when we arrived. We had to wait 20 min.”  
“Too many people.”  
“Bus trip 1 hour.”  
“The wait.”  
“Horses seemed thirsty. Got no water during ride.”  
“The wait before actually riding.”  
“Not long enough at water hole.”  
“Wait before the ride. (30 minutes)”  
“Waiting.”  
“The bathrooms.”

**Question #14: Describe your overall feelings concerning your visit to this attraction.**

**29 out of 43 tourists responded:**

“Good.”  
“Good times had by all.”  
“A little disappointed.”  
“Good times.”  
“It was fine.”  
“Good, definitely cool.”  
“Great.”  
“Well worthwhile.”  
“Fair.”  
“It was a great feeling cause the adrenaline is getting up all the time.”  
“It was really enjoyable and the staff was excellent.”  
“Fun, leisurely day.”  
“I had a good time.”  
“Felt I got my monies worth.”  
“Good.”  
“Good, A lot of fun.”  
“Terrific.”  
“Too many non-experienced riders.”  
“Excellent. Fun. Informative.”  
“Great time.”  
“Should be a little less money.”  
“Very enjoyable.”  
“Very nice.”  
“Good, nice ride.”  
“Fun day.”  
“I felt that it was the most relaxing excursion I went on. Very friendly people.”  
“Great.”  
“I enjoyed it very much.”  
“Fun.”





**Question #15: What did you learn about Puerto Rico from this experience?**

**22 out of 43 tourists responded:**

- “Friendly.”
- “Treat horses differently.”
- “People at tourist place are friendly and helpful.”
- “Friendly helpful people.”
- “The nature. The mountain, El Yunque, and the people are great!”
- “The staff was very helpful and really nice and pleasant.”
- “The termites in the palm trees.”
- “That there's a rainforest.”
- “The land is very nice.”
- “Learned names of different vegetation.”
- “Beautiful country. Very poor areas also.”
- “Very diversified.”
- “Hot”
- “Rainforest.”
- “It was more industrialized than I realized.”
- “It is very beautiful.”
- “A lot. Bus driver was very knowledgeable.”
- “Poor country.”
- “No work, no pay.”
- “It's very beautiful on this side.”
- “Beautiful country.”
- “Historical facts.”

**Question #16: How would you describe your experience to a friend?**

**30 out of 43 tourists responded:**

- “Pleasant except horses need to rest and be watered.”
- “Lots of fun.”
- “Fun for the whole family.”
- “Hotter than they told us.”
- “Good times.”
- “Fun.”
- “Great times!!!”
- “Great!”
- “Fun and new type horses. Small but perky.”
- “A good one.”
- “Great!”
- “It was a lot of fun and the forest was absolutely gorgeous.”
- “Fun, leisurely day.”
- “If you never rode a horse, ride one.”
- “Fun.”
- “Good/Well trained horses.”
- “Good.”
- “Fun.”
- “Too far from ship.”
- “Excellent. Fun. Informative.”
- “OK to Puerto Rico.”
- “It was a great time.”
- “Horses were very fun.”



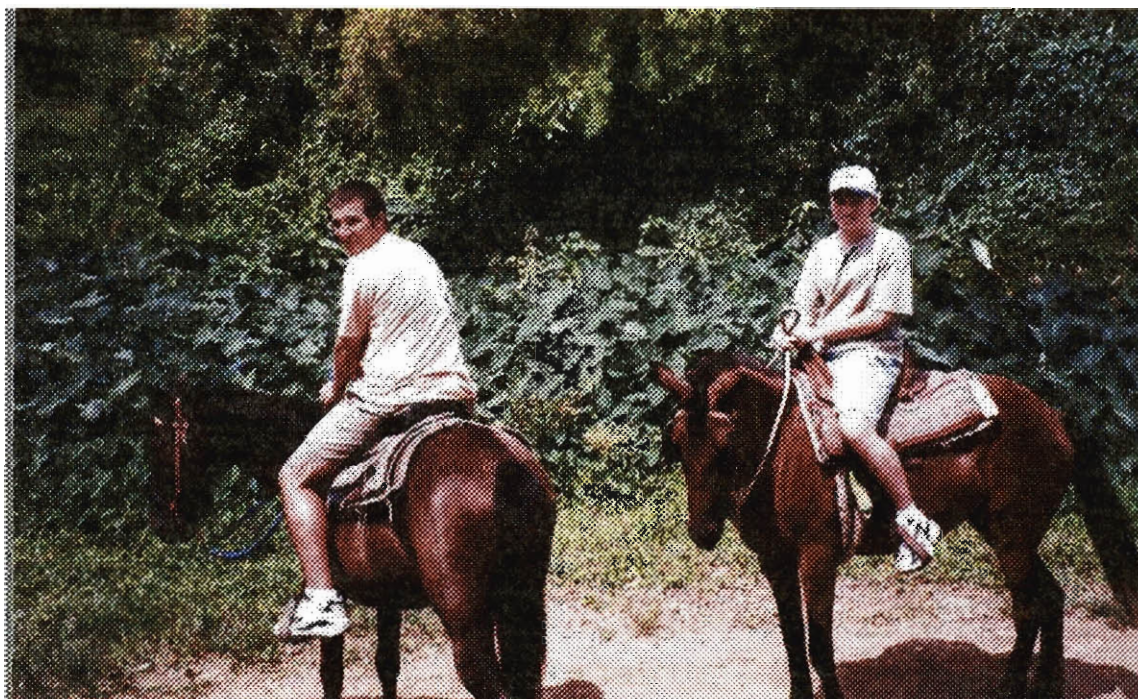
“Relaxing, fun.”  
“Great.”  
“Fun time.”  
“Paradise.”  
“Great and fun.”  
“Wonderful.”  
“Fun, educational.”

**Question #17: Other Comments:**

**7 out of 43 tourists responded:**

“Also, one of the workers tried to get us to push someone in the water. Totally uncalled for.”  
“Getting here we missed turns, need better markers besides a sign with a horse on it. Maybe stable name on main road.”  
“Hope to repeat.”  
“I will recommend this trip to all my friend.”  
“The facility was really dirty and stunk a lot. But that's what you'd expect at a horse place.”  
“People make the difference. Excellent staff.”  
“Very nice horses.”

### 5.6.1.3 Hacienda Carabali Pictures



Eric White and Al Pappo at Hacienda Carabali



### 5.6.2 East Wind II

When many people go to the white sandy beaches of Puerto Rico they only come to catch some rays. One should realize that just off the coast of these beaches and under the aqua blue waters lies an amazing display of living color. Believe it or not, the coral reef is a living animal and they build the earth's largest structures, even larger than the skyscrapers built by man. The coral reef is a complex ecosystem that needs warm, clear, shallow waters to grow and survive. The only other ecosystem that surpasses the coral reef in complexity is the rain forest, which we also find here in Puerto Rico.

The white coral reef we know is actually the outer skeleton of an animal living within. This animal forms the reef by depositing calcium. A vast array of brilliantly colored fish and invertebrates live within the labyrinth of coral skeletons, depending on it as their main source of food. The fish do not eat the coral, but rather they feed off the algae and marine plants that grow on the coral. The plants use the coral as an anchor to prevent them from being washed away by the oceans strong tides.

Not only does the reef provide food for the animals, but its complicated network of cracks and crevices make for excellent hiding spots for predator and prey alike. Because so many different organisms live in such close proximity within the reef, it is considered a constant battled field between predator and prey. Many of the animals that dwell here have unique defense mechanisms such as camouflage, ink-like secretions, or being able to change in size, shape, or color at any given moment.

The best way to observe this community of animals is by snorkeling. While underwater, it feels like the world above no longer exists, it is just the fish and you. The clear, warm waters are so relaxing that one will forget the hustle and bustle of the world



above and concentrate on this new world below. While snorkeling, one will see new colors they never thought existed and a wide range of unique patterns. Swimming quietly above the coral community, one can witness the bustling activity of the wide range of animals living here. The more timid fish quickly dash for cover when they see snorkelers come near while other more aggressive fish had no problem swimming alongside snorkelers or even come right up to one's mask. One must pay attention at all times because around every coral there is a new discovery to be made.

Like many other small catamaran services, The East Wind II is a vessel that brings tourists out to the coral reef for a day of exploration. Experienced snorkelers on the boat know exactly where to bring tourists to see the most amazing fish. The tour includes the experience of sailing, snorkeling, an all you can eat lunch, and all you can drink. The trip costs \$57 including transportation from San Juan.

We did not call this location before attending as it was set up by one of the classmates with whom we traveled. He commented that they were very friendly and easy to talk to. He had no problem getting reservations.

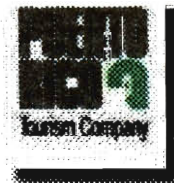
When we took the tour, we found the boat to be very clean and professionally run. The beaches and reefs we visited were flawlessly clean. The boat hands showed us how to snorkel and made the day enjoyable. We stopped at the Icacos reef and the Cayo Lobos reef. The boat hands made sure that all of the tourists felt comfortable with swimming in the ocean away from the boat.

There were absolutely no complaints about the staff on this tour. Additionally, when one of the tourists had a diabetic attack, they took good care of her and had an ambulance



waiting at the nearest marina. They were able to do all this while making sure the rest of the passengers were having a good time.

We found this to be a very enjoyable experience. The East Wind II is to explain some of the fish and coral that the tourists will be seeing while snorkeling.



### 5.6.2.1 East Wind II - 19 Respondents

These are the results of the data analysis that we performed. Each number is a percentage of the tourists that responded by selecting that particular answer.

SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, NA means Not Applicable, and M means Missing.

	SA	A	N	D	SD	M	
1 The facility met my expectations:	[63.2]	[36.8]	[0]	[0]	[0]	0	
2 The following areas were clean:	NA	SA	A	N	D	SD	
Bathroom	[31.6]	[5.3]	[26.3]	[10.5]	[21.1]	[5.3]	0
Food area	[15.8]	[10.5]	[63.2]	[5.3]	[5.3]	[0]	0
Other areas of the facility	[15.8]	[10.5]	[73.7]	[0]	[0]	[0]	0
3 The facility staff was:	SA	A	N	D	SD		
Knowledgeable	[52.6]	[42.1]	[0]	[5.3]	[0]	0	
Friendly	[78.9]	[21.1]	[0]	[0]	[0]	0	
Helpful	[63.2]	[36.8]	[0]	[0]	[0]	0	
Bilingual	[84.2]	[15.8]	[0]	[0]	[0]	0	
4 Access to the facility was easy:	[57.9]	[31.6]	[10.5]	[0]	[0]	0	
5 The value for the ticket price was satisfactory:	[31.6]	[47.4]	[15.8]	[5.3]	[0]	0	
6 I will recommend this facility to a friend:	[63.2]	[21.1]	[15.8]	[0]	[0]	0	
7 What is the purpose of your visit:	[0] Family Vacation	[26.3] Business	[0] Cruise				
	[0] Honeymoon	[5.3] Spring Break				0	
	[68.4] Other						
8 Gender:	[89.5] Male	[10.5] Female	[0] Mix			0	
9 Age:	[68.4] under 21	[31.6] 21-30	[0] 31-40	[0] 41-50	[0] 51-60	0	
	[0] 61-70	[0] 71-80	[0] 81-up				
10 Salary (US\$):	[78.9] 0-10	[5.3] 10-20	[5.3] 20-30	[10.5] 30-40	[0] 40-50	0	
(thousands)	[0] 50-60	[0] 60-70	[0] 70-80	[0] 80-90	[0] 90-up		



### 5.6.2.2 East Wind II Comments

#### Question #12: What did you like best about your visit to this attraction?

19 out of 19 tourists responded:

- “The second snorkeling dive.”
- “Being away from it all.”
- “The snorkeling was great. There were lots of beautiful fish.”
- “It was a true vacation experience.”
- “Snorkeling.”
- “All you can drink.”
- “The quality of the service”
- “The reefs.”
- “The scenery.”
- “All you can drink/eat.”
- “Can't decide--everything was absolutely fabulous.”
- “The snorkeling, the sun, the cat, the free food/drinks.”
- “Seeing the coral.”
- “The islands and the cruise.”
- “The boat ride.”
- “Something I've never done before. Great Time!”
- “The people were really friendly.”
- “The snorkeling.”
- “The free visit to the ER.”

#### Question #13: What did you like least about your visit to this attraction?

18 out of 19 tourists responded:

- “The bathroom.”
- “Having to come back.”
- “I wish I had known the names of the fish I was looking at.”
- “There were a lot of people on the boat.”
- “Pretended to give us alcohol. This upsets me greatly.”
- “Sunburn.”
- “We could have had more time to go snorkeling.”
- “The bathroom.”
- “No breakfast.”
- “My sunburn.”
- “Nothing!”
- “Nothing!”
- “I wish we went to the nicer reef first.”
- “The resulting sunburn.”
- “Alcohol is weak.”
- “It was expensive.”
- “The sun.”
- “Not being able to finish my beer.”

#### Question #14: Describe your overall feelings concerning your visit to this attraction.





**19 out of 19 tourists responded:**

- "I liked it, I liked it a lot."
- "Extremely positive."
- "I had fun, but I'm not sure it was worth the \$\$\$. It would have been better if it was cheaper and less."
- "The people were lots of fun and very helpful."
- "Good times."
- "Great time, well worth it."
- "Overall I was satisfied, but ticket price could have been a bit cheaper."
- "Very good."
- "It was a great time."
- "I had a good time."
- "Isn't it obvious by now?"
- "Incredible."
- "It was a good time."
- "Enjoyable and relaxing."
- "I had a good time."
- "It was great!"
- "I had a really great time."
- "It was fun. Quite a unique experience. Postcards don't do them justice."
- "Awesome!"

**Question #15: What did you learn about Puerto Rico from this experience?**

**16 out of 19 tourists responded:**

- "Nothing, they have really colorful fish."
- "That it is more beautiful than I ever thought."
- "Nothing."
- "There are lots of exciting islands surrounding it."
- "Coral Reefs aren't as nice as Mexico's. Less fish too."
- "The snorkeling in Puerto Rico is great."
- "The fact that there were so many small islands off of Puerto Rico."
- "The beauty of PR."
- "It's a lot nicer outside of San Juan?"
- "That it's fun?"
- "The natural beauty of the island."
- "The variety of land type and coast on the island."
- "Nothing."
- "That it has good places to go snorkeling."
- "Not much."
- "It is definitely the place to relax."

**Question #16: How would you describe your experience to a friend?**

**19 out of 19 tourists responded:**

- "It was the best experience I've had so far, here."
- "Exhilarating!"
- "It was fun but not the least bit educational."
- "Well worth the money."
- "Good Times"
- "Very cool."



“Exciting and relaxing yet educational.”

“Very nice.”

“The people are cool and you'll have a relaxing fun time.”

“It was a good time.”

“One of the best things you can do.”

“Incredible, one of the most relaxing and awe-inspiring things I've ever done.”

“Swimming with a great view.”

“Fun, relaxing.”

“Peaceful and Enjoyable.”

“Highly recommended. Great time.”

“Like watching the discovery channel but much better.”

“It was fun. Quite a unique experience. Postcards don't do them justice.”

“Definitely a trip to take.”

**Question #17: Other Comments:**

**6 out of 19 tourists responded:**

“The most perfect, relaxing way to spend a day immersed in sun, waves, ocean breezes & pina coladas.”

“The fat guy dancing on the front of the boat was a bit disturbing.”

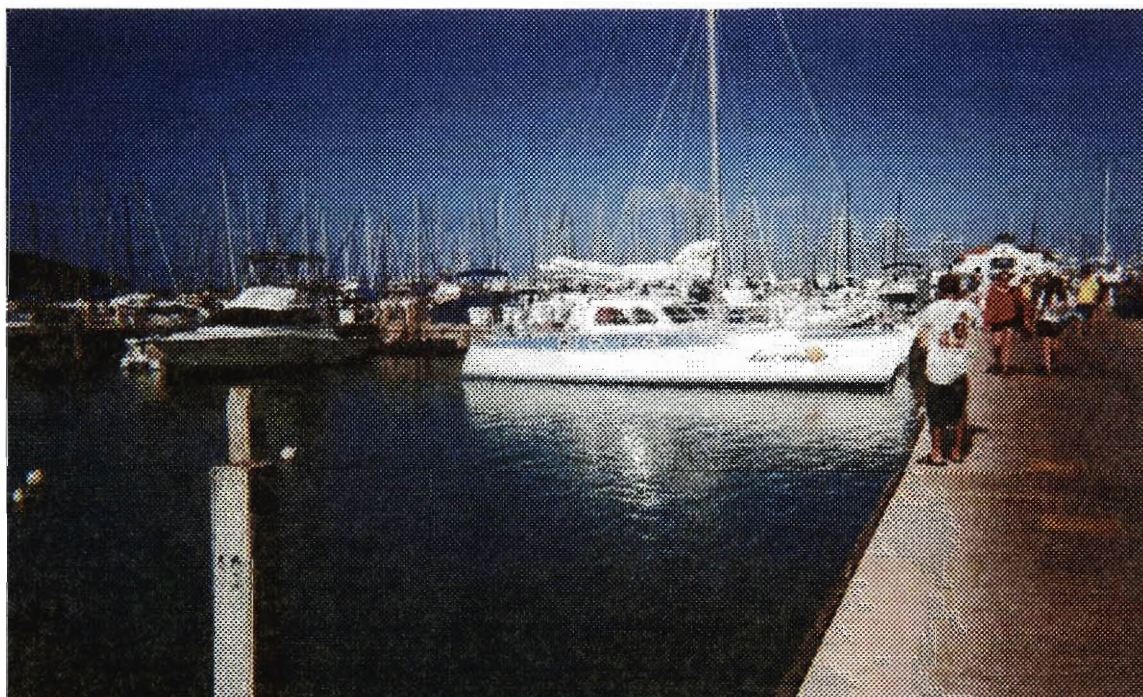
“Next time, they should put Rum in the Rum bottle instead of water.”

“I liked how I didn't have to exert any effort.”

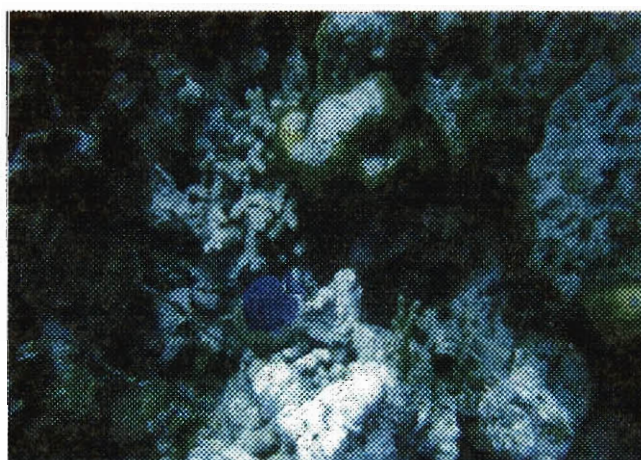
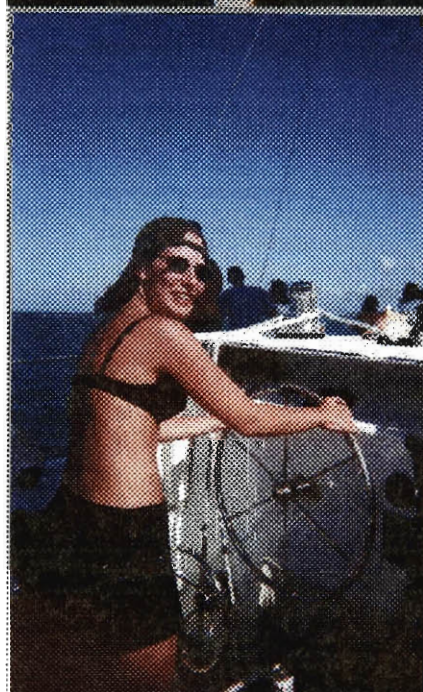
“2.”

“I'm sending my parents.”

### 5.6.2.3 East Wind II Pictures



East Wind II, the 50' catamaran that took us out to snorkel





## 5.7 Tour Operators

There are several tour companies that provide transportation and a tour guide to various sites in Puerto Rico. Two of these companies are the Castillo Watersports Tour Company and the Rico Suntours Tour Company. The main targets of these companies are hotel guests. The companies pick tourists up from their hotels, bring them to various tourist attractions throughout Puerto Rico, occasionally stopping for lunch, and returning tourists to their hotels. The tours are a bit pricey, ranging from \$30 to \$60 per person. Tourists should realize the places they visit are very cheap to enter so most of this money goes directly into the tour companies' coffers. Some may consider this service to be convenient because tourists do not need to go through the hassle of renting a car and finding the attractions they wish to visit. They also do not need to worry about driving the winding roads of Puerto Rico.

We evaluated four different tours, one with the Castillo company, one with Victor Balbin, and two with Rico Suntours. These tours pick up and return tourists to their respective hotels. Usually consisting of up to 24 tourists, these tours run various times and lengths, generally between the hours of 8 AM to 5 PM.

The Ponce Tour run by the Castillo Watersports company takes visitors to the Tibes Indian Ceremonial Center, the Ponce Museum of Art, and Serralles Castle (see pages 28, 166, and 85 respectively for commentary on these attractions). The guide also stops at the Firehouse and at other monuments in the town of Ponce for picture taking. This tour is very interesting both historically and culturally. It allows visitors to see many sites in just one day.



The tour guide for the Ponce tour was very sociable. He gave us plenty of interesting bits of information during the two-hour trip to Ponce, for instance, he told us that the fruit that appeared to be hanging in the trees at the Taino Indian Ceremonial Center was actually gourds that the Indians used to make cups and plates. He also pointed out areas of interest along the way. He relayed this information with charisma and style rather than just reciting memorized facts. The tour guide also provides the service of taking care of all the tickets so at each attraction tourists can enter without the hassle of waiting in line. The only complaint we had about the tour guide was that he decided where the bus would eat, which was a pricey restaurant. We could not eat somewhere else because there were no other restaurants close by and he made no attempt to take us elsewhere when we indicated that we did not want to eat at the chosen restaurant. Besides this dissatisfaction with lunch, our overall impressions of the tour were positive.

The tour we took with Victor Balbin was a tour that he is trying to increase in popularity. He runs his own tour company called Countryside Tours and he is trying to create new tours with the eco-tourist in mind. This particular tour consists of the campus of the University of Puerto Rico, the house of Luis Munoz Marin, and the grounds of the Botanical Gardens (see page 163 for commentary on the gardens). It combines the history of the island with the first governor's house, the future with the visit to the university, and the attraction of the island's natural resources. It gives a good rounded experience.

Our guide Victor was very friendly and full of knowledge. He was highly recommended as evidenced by the fact that he was able to answer all of our questions but wasn't too talkative. All of the locations that we went to on this tour were free. The entire \$50 cost was therefore profit. Because the tour only lasts two and a half to three hours, it is a



good tour for people waiting at the airport for a flight who might not have time for the other popular tours or they want to do something in the eco-tourist area. If this tour was to get better publicity, we think it would be popular as long the tour guides are as knowledgeable as Victor is.

One of the two tours we took with Rico Suntours was the Bacardi Factory Tour. It was a half day tour that shows tourists around Old San Juan stopping at the San Cristobal Fort after visiting the Bacardi Rum Factory (see pages 54 and 87 respectively for commentary on the locations). This tour gives a good overview of the history of the island, both new and old. The Spanish history at San Cristobal Fort and the recent history of the Bacardi factory tell a lot about the island.

Our tour guide Hector was friendly; however, it seemed as if he was reciting a list of memorized facts. When we asked him questions, on occasion he couldn't answer them. Additionally, when he gave his information in English and Spanish, he would sometimes say one thing in Spanish and another in English or he would start a sentence in English and finish in Spanish. Beyond those observations, the guide was very nice and was helpful when we told him what we were doing. This is a good tour, although it is slightly overpriced at \$20.

The last tour we took was the half day El Yunque tour, also with Rico Suntours. This half day tour takes tourists to the rainforest and up the mountain while the guide shares information about the plants of the rainforest. A visit to Luquillo beach is advertised to occur at the end of the tour; however, our tour did not stop there due to time restraints. Our tour guide spoke of many interesting things on the way to the rainforest but rambled on about current events after he had run out of things to say about the forest. The tour is good for



people who don't want to hike, or for people wanting a preview of the park so they can return to hike. The tour is otherwise relaxing and enjoyable.

The tours are generally well organized except for the pick up and drop off process. Tourists have to wait at least 20 minutes before the tour begins because the tour picks up tourists from hotels in the Condado and Isla Verde areas. The process takes even longer if tourists with reservations are not on time. The drop off process can also be lengthy since they have to stop again at each hotel. Although the tour bus is a very nice vehicle with comfortable seats and air conditioning, it can be a long day and it is usually not pleasant to have to wait to get home. Perhaps some measures can be taken to expedite pick-ups and drop-offs.



## 5.8 Closing Thoughts

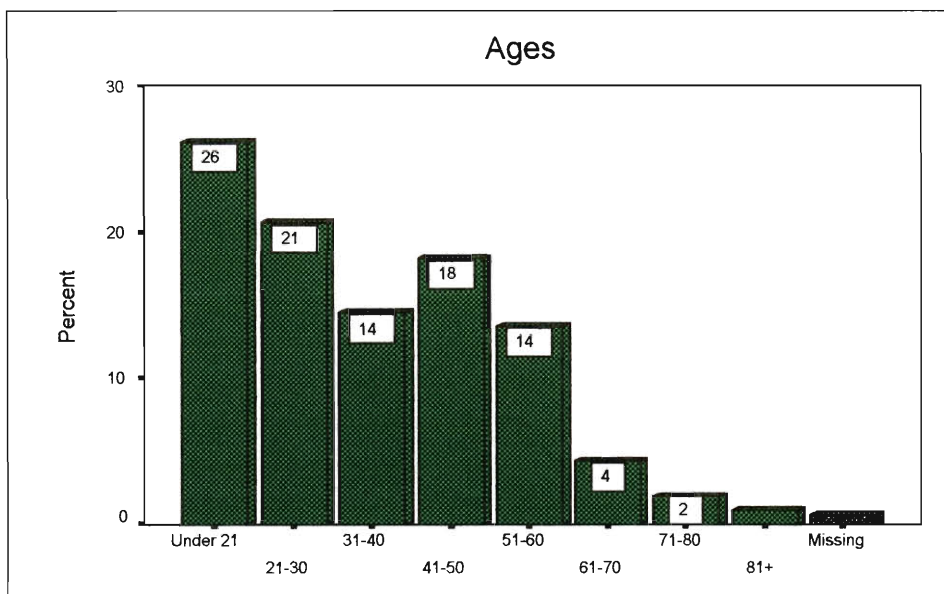
After reading through all the information about the history and culture each of these sites has to offer, one really grasps the concept of Puerto Rico. To really know Puerto Rico, however, it will take more than reading. The only way to feel the enchantment of Puerto Rico and understand its people is to go out and experience the island. While in Puerto Rico eat rice and beans, dance meringue, and practice Spanish. Only after this should one go to the picturesque beaches to soak up sun and relax.



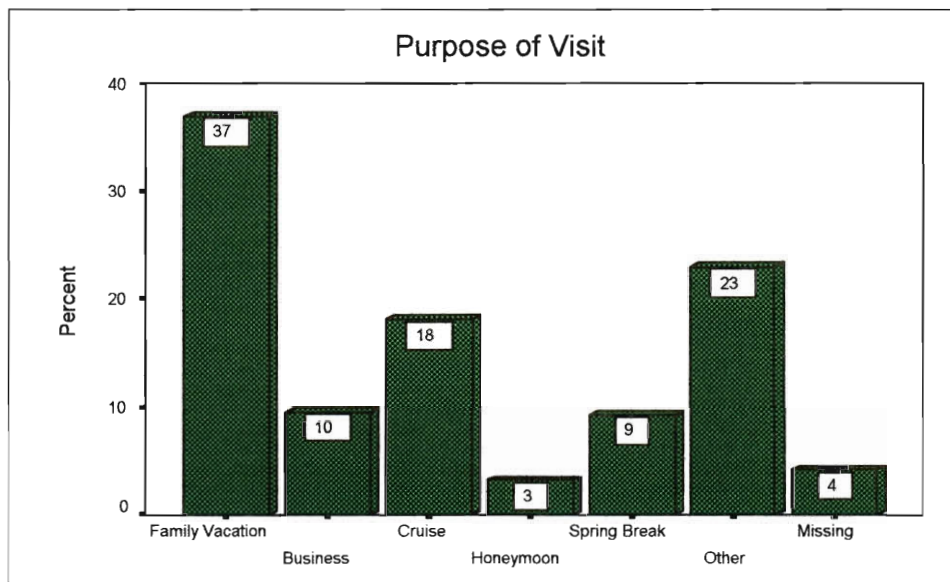
## 6.0 Analysis, Recommendations, & Conclusions

After visiting the many attractions the island has to offer, analyzing the data we collected, and discussing our experiences, we formulated several specific conclusions and some general observations about tourism in Puerto Rico. This section discusses our quality assessment of the different types of tourist attractions on the island and other tourist issues not directly related to any particular site.

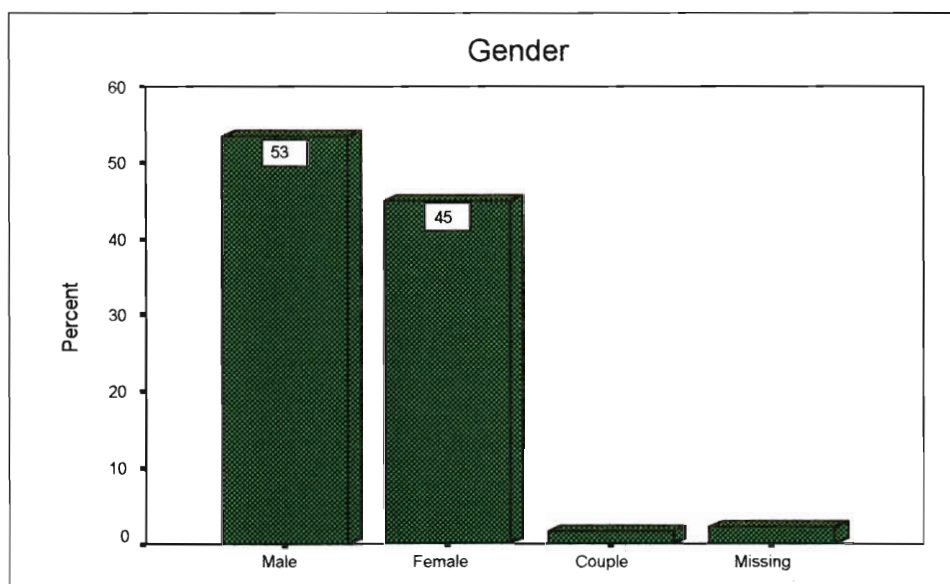
We found that across the island, when we put all the respondents together, the ages varied across the entire range. Our data was slightly skewed by the group of classmates that we traveled with to several locations. However, ignoring the large group of 20-21 year olds, the ages were concentrated between 20 and 60, the prime range for families.



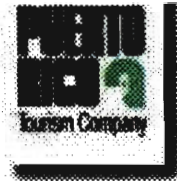
We found this to be the case in the question where we asked what their purpose for visiting was. The strongest response was “Family Vacation.” The next highest percentage was “Cruise” at approximately half of the family vacation percentage.



The gender split was almost half and half, lending credibility to our findings.



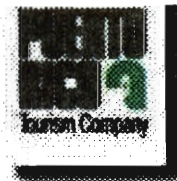
When analyzing our results, we categorized the locations according to their type of activities. The categories were historical, eco-tourist, religious, art, recreational, and scientific. This method allowed us to evaluate the tourists in larger groups for better statistical analysis. Additionally, we were able look at all respondents together to find out the overall feeling of the tourism industry on the island. When looking at the demographics, we tried to ignore the



large percentage of respondents under the age of 21 and those earning between zero and ten thousand-dollar incomes. We ignored these cases because many of our classmates, who belonged to these categories, joined us when we visited several locations, and we surveyed them each time, thereby skewing the demographic data.

When looking at the historical sites, it is noticeable that of 125 respondents, none were strongly dissatisfied with the staff in any way. Additionally not a single respondent answered negatively to the questions about value for the ticket price or whether the respondent would recommend this facility to a friend. This indicates that ticket prices could be raised without much complaint and the experience tourists received was good enough to recommend highly to a friend. In the question regarding whether the facility met the tourist's expectations, the majority of the people agreed that their expectations were met. It is interesting to note the salaries are evenly distributed across the entire range while the ages are concentrated from 21-60.

At the eco-tourist areas, 81 surveys were taken. When asked about the facility staff, over 40 percent of the respondents marked "Strongly Agree" in every category. When comparing the responses to the value for the ticket price with other categories, there is a slightly larger percentage of negative responses. It seems that the ages of tourists visiting these sites are concentrated below the age of thirty. Additionally, the salaries of the respondents were located in the 10-40 thousand-dollar range. When asked if the facility met expectations, over 80 percent responded positively, while only 7.4 percent answered negatively. This does not mean that the respondents were dissatisfied with their visit, it is probably more of a measure of how accurately the site reflects its advertising.



At the religious locations, we decided to collect only demographic data and free-response data, because the other questions on our survey did not apply. Due to the delicate nature of the situation, we collected only 14 surveys at these locations. We were sensitive to those that were praying in the church and felt it was inappropriate to survey them. The majority of the respondents can be best described as people in their 40s who make over 90 thousand dollars and are on a family vacation. Our sample was small for these locations and we suspect this demographic picture to be in error. From the comments made on the back of the surveys, the visits seem to be positive. However, more informational signs telling about the shrines would enhance the experience. These results might be inaccurate due to the small number of respondents. We would like to point out that these locations are not what one would typically think of as

While looking at the results of the art location surveys, where we collected 19 surveys, we noticed that there were no negative responses except one single respondent found a bathroom dirty. As far as the staff was concerned, over 75 percent of the respondents answered “Strongly Agree” in every category. The sentiment toward these facilities, gathered from the free-response questions, is that they are of high quality and good value.

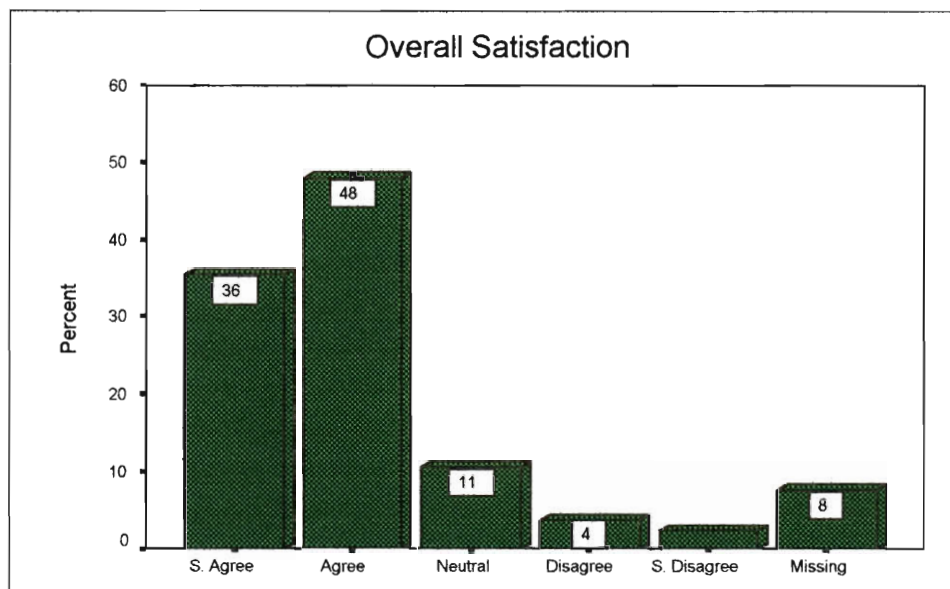
The recreation category, where we collected 81 surveys, consists of horseback riding and snorkeling. When compared to other categories, the staff at these facilities are viewed a bit less favorably because the percentage of “Strongly Disagree” responses is higher than in other categories. We believe this can be attributed to the guides at Hacienda Caribali who did not speak English and therefore could not communicate well with the tourists. When looking at the demographics, we find that a large number of the people surveyed made more than 90 thousand dollars. The ages of these respondents centered in the range of 21-50. This



indicates that the wealthier tourists on cruises and family vacations like to visit the purely recreational sites. The comments we received from these sites told us that the educational quality was extremely low.

The scientific category consists of the Arecibo Observatory, which was in a category of its own because it did not fit into any of the other categories. We collected 9 surveys at that location. Respondents were of the opinion that it has an enormous amount of educational value. However, if visitors were allowed to do more, such as walk out on the catwalk or view the underground labs, it would be even better. Other than that, the responses were positive.

When we looked at all of the respondents for all of the locations together, we could see trouble spots such as bathroom sanitation, facility access, and ticket price. These problems were minor compared to the overall opinion that the tourists were satisfied with the experience they received. These 327 surveys told us that the facility staff are good; over 45 percent of the respondents marked “Strongly Agree” and over 70 percent of the responses were in the positive range. When looking at bar graphs of the responses, we noticed that every question shows the same pattern. It starts off high in the “Strongly Agree” response, even more responses in the “Agree” category, and substantially fewer in the remaining three categories. A typical bar graph is shown below.



From our own observations, we were able to make some more specific recommendations. One problem present at many of the sites we visited was that the informational signs were not available in both English and Spanish. Information should be available in both languages. Another problem was transportation to attractions. Besides the fact that there are far too many toll stops on them, the main routes of Puerto Rico are fine. When tourists enter the winding mountain roads, problems begin. Many route numbers still have not been replaced since the hurricane and others are either not present or cannot be seen due to plant overgrowth.

Overall, signage directing tourists to major attractions is either non-existent or easy to miss because signs are so small. Another problem we encountered was that some tour guides cannot speak English, or if they can, they need improvement. Some attractions are not accurately portrayed by their advertising. Many of the informational brochures present the attractions as being better than they are, while others do not do justice to the quality of the site. We could not visit some locations because repairs from hurricane damage still had not



been made, such as at Gaby's World, or they are closed for renovation, such as at Pablo Casals.

We have concluded from our experiences in Puerto Rico that the number and quality of tourist attractions on the island is much greater than we had expected. While many tourists may look at the destination of Puerto Rico as a collection of nice beaches, we have learned that the people of the island and the facilities located therein contain an enormous amount of history and culture. Each of the locations has its own distinct identity but when visited together, they form a magnificent union representing the entirety of the Puerto Rican culture.

During the two months that we spent visiting the different tourist attractions of the island, we were able to experience driving in Puerto Rico. With one car for every two people on the island and an area of only 35 miles by 100 miles to contain them, the roads of Puerto Rico are overcrowded. We would like share our experiences so that the company will know how tourists view driving in Puerto Rico.

To begin with, from the visitor's viewpoint, traffic laws apparently do not exist in Puerto Rico. Major traffic law violations can be seen at every turn of the wheel. While exploring the island's highways, we noticed that many of the speed limit signs have the number painted over with black paint. Motorists take advantage of this by driving 75 miles per hour, a practice that police tend to ignore. During rush hour traffic jams, tourists will be alarmed when cars use the breakdown lane as an extra travel lane. An additional observation made while driving the highways is the number of missing directional and exit signs. When signs are missing, it is not unusual to find out that the exit just passed was the appropriate one. Despite judicious use of maps, we managed to get lost many times when traveling. Our last



observation about highway travel is that there are tolls every 20 miles or so. The company should encourage rental car companies to inform their customers to take change with them when using the highways.

Should one venture off the highway in the country, the first observation one might make would be the narrow width of mountain roads and the extreme number of hairpin turns and blind corners. When combined with cars driving in the opposite direction, occasionally on the wrong side of the road, these roads can be a harrowing experience.

While in any of the cities, watching for “transito” signs that indicate the direction of traffic is advisable, as most streets are one-way. While these signs look like the “One Way” signs found in the US, they can also indicate two way traffic. If this sign is missing, the direction of traffic can sometimes be determined by checking the direction of the cars parked on the side of the street. We noticed the large numbers of cars with scraped bumper corners. This is due to the narrow nature of the city streets and parking lot spaces. Built hundreds of years ago, these streets were not designed for the number of cars that use them. The last observation about city streets is the almost total lack of stoplights. Despite this lack of lights, traffic flows smoothly, yet a little slower. Tourists should be warned to drive slowly when not on the highway as pedestrians will jaywalk anywhere.

Although some Puerto Rican drivers have the stereotype of being bad drivers, observation brings us to the conclusion that they are very courteous and amazingly talented, bringing their cars within inches of other cars without hitting them. We were concerned to see cars on the highway traveling at speeds over 100 miles per hour weaving in and out of tight traffic. Perhaps, the best advice that we can suggest to the company is to tell tourists to forget their own driving rules and imitate the locals! But above all, we suggest that the Company





encourage tourists to rent a car and visit other parts of the island, as the knowledge and culture they will absorb outweigh the hassles of driving.

We suggest that a better toll system could be adopted. A system such as those in use on the Garden State Parkway in Pennsylvania or the Massachusetts Turnpike would work just as well in Puerto Rico. These systems involve the use of a ticket when getting on the highway, and an increasing toll according to how far you drive to be paid at the exit. This will allow for a more continuous flow of traffic across the island. We also suggest that the Company encourage the replacement of the missing directional signs all across the island.



## 7.0 Appendices



## **7.1 Appendix A - Company Information**



### **7.1.1 Introduction**

In 1993, the Government of Puerto Rico made a firm commitment, through an aggressive economic development program, to double tourism's contribution to the Gross Domestic Product from six to twelve percent within ten years. As the organization responsible for stimulating, promoting and regulating the tourism industry, the Puerto Rico Tourism Company accepted the challenge, formulating a comprehensive tourism development policy. The company is both fiscally and operationally autonomous and works in coordination with the Department of Economic Development and Commerce. In addition to formulating public policy specifically designed to stimulate the development of the tourism industry, the Puerto Rico Tourism Company is responsible for:

- *Marketing Puerto Rico as a tourism destination through advertising, public relations and promotional activities.*
- *Promoting tourism across the Island among local residents.*
- *Providing visitor orientation.*
- *Providing technical assistance to investors.*
- *Evaluating tourism facilities endorsed by the PRTC and establishing standards of quality.*
- *Regulating and overseeing gaming operations on the Island.*

The Puerto Rico Tourism Company has offices and representatives in the United States mainland, Canada, Europe and Latin America. These representatives and their places in the organization are found in Section 4.1.5.

### **7.1.2 Mission Statement**

The Puerto Rico Tourism Company's mission is to formulate and facilitate the implementation of public policy that will make Puerto Rico a world-class tourism destination and maximize the tourism sector's contribution to Puerto Rico's economy. This mission is to



be fulfilled by working with the best human resources within an environment conducive to individual and professional growth, thus contributing to the company's associates growth while pursuing the common goal of creating jobs and obtaining the maximum benefit for Puerto Rico.

### **7.1.3 Who They Serve**

The Puerto Rico Tourism Company serves local and outside tourism, travel agents, wholesalers, and other government agencies.

### **7.1.4 Budget**

The most up to date budget information obtainable was for the 1995-1996 fiscal year and can be found in Appendix F.

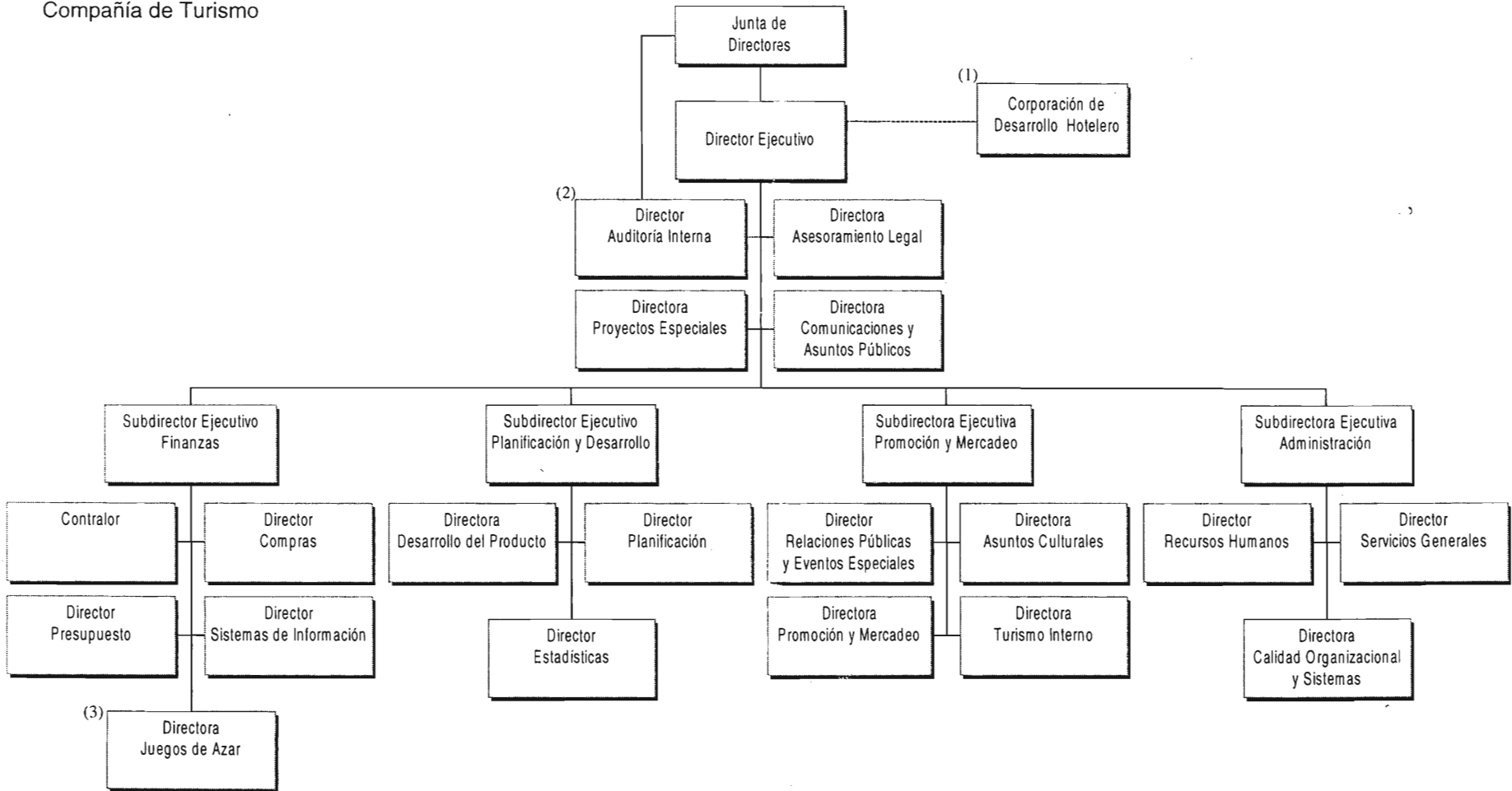
### **7.1.5 Organizational Charts**

The Puerto Rico Tourism Company employs a large number of people. The basic divisions of the company are provided on the following page.



Compañía de Turismo

# Compañía de Turismo Organigrama General



(1) Subsidiaria de la Compañía de Turismo. El Director Ejecutivo de la Compañía funge como presidente de este organismo. La Junta de Directores de la Compañía autoriza la supervisión de esta unidad al Subdirector Ejecutivo de Planificación y Desarrollo.

(2) La Junta de Directores nombra al Director de esta unidad. Esta oficina se reporta administrativamente al Director Ejecutivo y operativamente a la Junta de Directores.

(3) La Junta de Directores nombra al Director de esta unidad, pero delega la supervisión al Subdirector Ejecutivo de Finanzas.



## **7.2 Appendix B - Sample Surveys**



### 7.2.1 Tourism Research Survey

The tourism research team from Worcester Polytechnic Institute, with the sponsorship of the Puerto Rican Tourism Company, is conducting a survey to assess the attitudes and opinions of tourists regarding the quality of their visit to this facility.

The Puerto Rico Tourism Company is a government-funded organization that endorses several tourist attractions throughout Puerto Rico. It is within their interests to be assured that the facilities they sponsor maintain a high level of quality.

The attached survey questionnaire is a part of a larger project designed to assess the attitudes and opinions of tourists toward the quality of tourist attractions in Puerto Rico. The results will be used to help the participating companies develop strategies to improve the quality of their tourist facility in order to provide a better experience for you, the tourist.

We would greatly appreciate if you would take a few minutes to complete the following questionnaire. Your opinions will be important input to our study. Be assured that your responses will remain entirely confidential. Thank you for your help.

Sincerely,

Kristin Carreau

Corry Johnson

Jessica Horan





We would appreciate it if you could take just a few minutes to fill out this survey. We will be using the information collected to help the facility operators improve their facility. For questions 1-6, SA means Strongly Agree, A means Agree, N means Neutral, D means Disagree, SD means Strongly Disagree, and NA means Not Applicable.

	SA	A	N	D	SD	
1 The facility met my expectations:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2 The following areas were clean:	NA	SA	A	N	D	SD
Bathroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Food area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other areas of the facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 The facility staff was:	SA	A	N	D	SD	
Knowledgeable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Friendly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Helpful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Bilingual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4 Access to the facility was easy:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5 The value for the ticket price was satisfactory:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6 I will recommend this facility to a friend: <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7 What is the purpose of your visit:	<input type="checkbox"/> Family Vacation <input type="checkbox"/> Business <input type="checkbox"/> Cruise <input type="checkbox"/> Honeymoon <input type="checkbox"/> Spring Break <input type="checkbox"/> Other _____					
8 Gender:	<input type="checkbox"/> Male <input type="checkbox"/> Female					
9 Age:	<input type="checkbox"/> under 21 <input type="checkbox"/> 21-30 <input type="checkbox"/> 31-40 <input type="checkbox"/> 41-50 <input type="checkbox"/> 51-60 <input type="checkbox"/> 61-70 <input type="checkbox"/> 71-80 <input type="checkbox"/> 81-up					
10 Salary (US\$): (thousands)	<input type="checkbox"/> 0-10 <input type="checkbox"/> 10-20 <input type="checkbox"/> 20-30 <input type="checkbox"/> 30-40 <input type="checkbox"/> 40-50 <input type="checkbox"/> 50-60 <input type="checkbox"/> 60-70 <input type="checkbox"/> 70-80 <input type="checkbox"/> 80-90 <input type="checkbox"/> 90-up					
11 Home State or Country:	_____					

More On Other Side



12 What did you like best about your visit to this attraction: \_\_\_\_\_

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13 What did you like least about your visit to this attraction: \_\_\_\_\_

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14 Describe your overall feelings concerning your visit to this attraction: \_\_\_\_\_

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15 What did you learn about Puerto Rico from this experience: \_\_\_\_\_

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16 How would you describe your experience to a friend: \_\_\_\_\_

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17 Other Comments: \_\_\_\_\_

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### 7.2.2 Observational Survey - Staff

Survey Administrator:
Date:
Time:
Location:
Weather:
Temperature:

Staff Member Under Observation:
Male/Female (M or F):
Age (circle one): 10-15    15-20    20-25    25-30    30-40    40-50    50 and over
Tasks:

Rate the staff member according to the following scale:

	Excellent	Very Good	Good	Acceptable	Poor	Very Poor	N/A
1. Performance of job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Quality of service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Presentation of attraction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Orientation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Knowledge of facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Cleanliness of appearance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Enthusiasm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Voice projection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Alertness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Attitude	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Comfort level when asking questions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Ability to give directions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- |   |                          |                          |                          |                          |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 13. Ability to tend to special needs    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Explanation of health/safety issues | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Navigational skill                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. Table service                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. Cafeteria service                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Comments: \_\_\_\_\_

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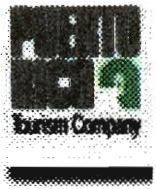
### 7.2.3 Observational Survey - Facility

Survey Administrator:
Location:
Date:
Time:
Weather:
Temperature:

Brief Description:

Rate the facility according to the following scale:

	Excellent	Very Good	Good	Acceptable	Poor	Very Poor	N/A
1. Overall cleanliness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Directions for getting around facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Informational signs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Quality of visitor center	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Facility set up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Bathroom sanitation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Transportation around facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Tour	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Educational quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Interest factor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



- |                              |                          |                          |                          |                          |                          |                          |                          |
|------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 11. First aid access         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Access to telephones     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Parking availability     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Availability of staff    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Cleanliness of cafeteria | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. Quality of food          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Time spent waiting in lines (circle one):

- 0-5min   5-10min   10-15min   15-20min   20-30min   30 and longer

Time spent waiting for service/attendance (circle one):

- 0-5min   5-10min   10-15min   15-20min   20-30min   30 and longer

Comments: \_\_\_\_\_

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### 7.2.4 Telephone Survey

Caller
Attraction
Date
Time
Length of call

#### Questions

1. What are your hours?
2. Are there tour guides available?
3. Are you open on weekends and holidays?
4. What is the admission price?
5. What is the proper attire required for this attraction?
6. How do I get to your facility from the San Juan Mariot Hotel?
  
7. Are there any health risks involved in this activity?
8. Is this activity appropriate for all ages?
9. Is there a place there where we can get meals or should we pack food?
10. Are there any rules or regulations we should know about?
11. Do I need a reservation prior to my arrival?
12. Is experience required for this activity?



1. Did you speak with someone or did you use an automated menu?
2. If you used an automated menu, were all our questions answered?
3. How difficult was it to reach an operator?
4. Could the person who answered the phone answer all your questions?
5. Were you transferred?
6. How many people did you speak with?
7. Were you put on hold?

If yes, how long was the wait?

The following questions are to be answered if you spoke to a live person

Rate the following concerning your phone experience on a scale of 1-5, 1 being the worst and 5 the best

1. Knowledge of facility	1	2	3	4	5	N/A
2. Bilingual ability	1	2	3	4	5	N/A
3. Enthusiasm	1	2	3	4	5	N/A
4. Voice projection	1	2	3	4	5	N/A
5. Attitude	1	2	3	4	5	N/A
6. Comfort level when asking questions	1	2	3	4	5	N/A
7. Alertness	1	2	3	4	5	N/A
8. Ability to give directions	1	2	3	4	5	N/A
9. Explanation of health and safety issues	1	2	3	4	5	N/A
10. Ability to answer questions	1	2	3	4	5	N/A

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_





### **7.3 Appendix C – Tourism Statistics**



### 7.3.1 Puerto Rico Tourism Statistics (1992-1996)

Fiscal Years	1992	1993	1994	1995	1996(P)	Annual Change
<b>Total Visitors</b> (thousands)	3,730.0	3,869.0	4,022.6	4,085.8	4,071.4	2.2%
Stay-over Visitors	2,656.6	2,854.5	3,042.4	3,130.7	3,044.1	3.5%
Cruise Passengers	1,073.4	1,014.5	980.2	955.1	1,027.3	-1.1%
<b>Visitor Expenditures</b> (millions)	1,519.6	1,628.1	1,728.3	1,826.0	1,883.0	5.5%
Stay-over Visitors	1,452.7	1,563.0	1,661.6	1,760.5	1,808.9	5.6%
Cruise Passengers	66.9	65.1	66.7	65.5	74.1	2.6%
<b>Hotel Registrations</b> (thousands)	8,415	8,581	9,519	10,251	10,299	5.2%
Non-Residents	712.6	760.1	779.4	851.4	893.2	5.8%
US Mainland	519.5	550.8	570.4	661.1	703.4	7.9%
Other	193.1	209.3	209.0	190.3	189.8	-0.4%
PR Residents	288.7	327.8	398.2	451.0	507.6	15.2%
<b>Hotel Rooms (1)</b>	8,415	8,581	9,519	10,251	10,299	5.2%
Metro Area	4,865	4,697	4,680	5,205	5,152	1.4%
Island Wide	1,840	2,033	2,941	3,139	3,263	15.4%
Other	1,710	1,851	1,898	1,907	1,884	2.5%
<b>Hotel Occupancy Rate</b> (percent)	66.3	68.5	68.7	68.0	69.0	
Metro Hotels	68.9	72.6	74.0	72.8	74.9	
Island Hotels	62.5	62.8	63.1	64.2	63.0	
<b>Tourism Budget</b> (thousands)	44,164	53,154	72,045	91,584	76,050	
Advertising/Promotion	20,956	24,754	38,126	48,648	37,668	
Administrative	16,368	19,143	23,675	27,258	26,628	
Other	6,840	9,257	10,244	15,678	11,753	

Source: Puerto Rico Tourism Company.

Fiscal 1996 data is preliminary and subject to revision.

Hotel Rooms Endorsed by the Puerto Rico Tourism Company.

### 7.3.2 Allocation of Revenue Generated by Slot Machine Operations

(Millions of Dollars by Fiscal Year)						
	1991	1992	1993	1994	1995	1996
University of Puerto Rico	9.6	10.8	13.0	15.2	18.2	21.2
Educational Fund	9.6	10.8	13.0	15.2	18.2	21.2
Tourism Company	8.2	9.2	11.0	12.9	15.5	18.0
TID Fund	4.3	4.9	5.8	6.8	8.2	9.5
<b>Total</b>	<b>31.7</b>	<b>35.6</b>	<b>42.8</b>	<b>50.0</b>	<b>60.1</b>	<b>69.8</b>

### 7.3.3 Other Government Related Revenue Related to Tourism Activity

(thousands)		
<u>Revenue From</u>	<u>Total During 1990-1996</u>	<u>Annual Average</u>
Hotel Rooms	129,338.00	18,476.86
Aviation Gasoline	43,077.00	6,153.86
Aviation Fuel	25,800.00	3,685.71
<u>Income Tax</u>	<u>795,200.00</u>	<u>113,600.00</u>
<b>Total Revenue</b>	<b>973,415.00</b>	<b>141,913.43</b>



## **7.4 Appendix D – Background Interviews**

#### 7.4.1 OSV Interview Summary

On Saturday, February 13, 1999, project group member, Kristin Carreau, met with Valerie McAllister, manager of visitor services, at Old Sturbridge Village (OSV) in Sturbridge, MA. Old Sturbridge Village is a representation of a nineteenth century New England village. At OSV visitors can tour the homes, shops, farms, schools, and the town hall of the village to learn about life in New England during the 1830s. Topics discussed were the techniques OSV uses to administer the surveys they use for obtaining tourist information concerning the overall quality and satisfaction OSV has to offer. The surveys OSV has administered are the “Old Sturbridge Village Visitor Survey,” “Village at Twilight Survey,” “Old Sturbridge Village Visitor Questionnaire,” and the “Old Sturbridge Village Quinebaug River Ride Survey.”

Specifically, the “Old Sturbridge Village 1998 Visitor Survey” was discussed. Mrs. McAllister conducted this exit survey with a team of survey administrators that included herself and eleven other OSV employees. Mrs. McAllister said that the minimum sample size for this particular survey was 300 participants. For the month of October, OSV collected 575 surveys.

Some advice Mrs. McAllister gives concerning how to approach the tourist is to be up front, explain what the survey is about, its purpose, how the information will be used, and approximately how much time it will take to complete the survey. In order to keep track of the people surveyed, Mrs. McAllister suggested a “Survey Report Form”. This form helps survey administrators keep track of who they have interviewed and also provides valuable statistical information to be used in analysis.

Mrs. McAllister noted that the open-ended questions on the survey provided the most valuable information. These questions allowed visitors to explain and expand on the questions they were asked in the survey. Analyzing these comments, according to Mrs. McAllister, is very laborious. First, each of the comments needs to be read, and general categories need to be devised in order that each comment can be placed in one of these categories. Mrs. McAllister remembers that formulating these categories was the most difficult part. Once the categories are made, a count is done of how many comments fall into each category. With this done, statistical analysis can be performed using the computer program SPSS.

For this survey, no specific age group, sex, or nationality was targeted. However, the manner in which they choose those whom they would survey was done systematically. Mrs. McAllister explained that they chose to survey one out of every ten persons that exited the facility. She explained that this was called a “systematic sample.” In order to count the number of tourists that exited the facility, an employee stood by the exit location and kept track using a counter.

Also discussed was the manner in which OSV administers its “Village at Twilight Survey.” Village at Twilight is a new program at OSV. This survey was designed to determine how OSV visitors perceived the existing quality of the new program and to obtain comments or suggestions on how to improve the program. For the month of October, OSV collected 150 completed surveys.

For more qualitative commentary, OSV also has an oral survey they administer about once a month. For this survey, the administrators approach tourists upon exit of the facility and ask if they can record their responses to a few questions concerning their



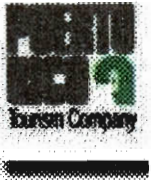
opinions about their visit at OSV. This information is used as a basis for making improvements only; no statistical analysis is done to this data.

When asked about the use of incentives in order to “lure” more tourists to take the survey, Mrs. McAllister said that incentives were a good tool, but if the value of the incentive is too big, the survey could be “swayed”. People may just fill the survey out in order to get the incentive without any real thought toward accuracy. A common incentive OSV uses is cookies.

We next asked Mrs. McAllister what types of computer software OSV uses for its survey process. OSV uses a program called Teleform to create their surveys and they use SPSS to perform statistical analysis of their data. Most OSV surveys are scanned into a computer. This reduces the labors of inputting the survey data. Mrs. McAllister said that it is initially difficult to set up the computer program that will scan this information. For smaller scale surveys like “The Village of Twilight” it is easier to input the data by hand.

We also asked Mrs. McAllister about the uses of the information OSV obtains from its surveys. She noted that once the results of the surveys have been analyzed, the information “filters down through administrators.” Any suggestions or advice for improvement is given to the proper employee. Mrs. McAllister remarked that OSV has greatly improved their service quality in this manner. OSV also uses much of the information obtained from these surveys to help make decisions on strategies for improving marketing techniques.

Mrs. McAllister provided some sample surveys and some articles she uses to help her form the OSV surveys. She also suggested some books for research. Before leaving OSV, Kristin toured the facility and completed a survey. Her impressions helped to give



the project group a better understanding of the types of questions that will be asked on the survey to be used for research in Puerto Rico.

#### **7.4.2 WAM Interview Summary**

On Friday, February 12, 1999, Jessica Horan met with Tammi Flynn, and Corry Johnson met with Sue Ryall for interviewing at the Worcester Art Museum (WAM) in Worcester, MA. Both Mrs. Flynn and Mrs. Ryall are project coordinators in The Art of Discovery Department. We discussed the techniques WAM uses to administer surveys for obtaining tourist information concerning the overall quality and satisfaction the museum has to offer its visitors. The surveys WAM has administered are the “Worcester Art Museum Visitor Survey” and the “More Than a Smile Survey.”

Mrs. Flynn first discussed their “Worcester Art Museum Visitor Survey.” WAM is required to administer this survey by the people who provide a grant to the museum. This grant is provided by the Lila Wallace - Reader’s Digest Fund. WAM must collect 832 surveys yearly, that is 208 quarterly. Because the museum does not have a team to administer these surveys, Mrs. Ryall explained that collecting even 52 surveys quarterly is a difficult task.

The cashiers located at the entrance of the museum administer the survey. The survey sample is collected on the basis of zip code. Upon entrance to the museum, visitors are required to sign in. The cashier asks them for their zip code. If their zip code coincides with that of the Auburn area, the cashier asks if they would like to fill out the survey. This method has proven to be problematic because when large groups come in, it is very difficult for the cashier to charge everyone, check them in, and administer





surveys. The museum is required to administer their survey every half-hour, but Mrs. Ryall remarked that this was a “ridiculous request.” It would be impossible for the cashiers to administer the survey and work at the same time. Mrs. Flynn felt that if the Lila Wallace - Reader’s Digest Fund provided money for a team of survey administrators, the survey results would be much more reliable.

Mrs. Flynn is also in charge of a survey she developed called the “More Than a Smile Survey.” This survey asks museum visitors about the quality of their visit. Questions are concerned with the cleanliness of the building and quality of the service at the museum. This survey is self-administered. It is left in a box at each exit of the museum and visitors are free to fill it out if they wish. The response to this survey has been low and therefore, Mrs. Flynn says that they try to have the cashier administer the survey to increase the response rate. Another idea Mrs. Flynn had for her survey was to count each survey as a raffle ticket to be drawn at the end of the month. The prize, a WAM poster, was the incentive to fill out the survey.

WAM also does an observational survey. About once a month they have experts come in to observe the visitors and take notes. Mrs. Ryall said that this survey helps them learn about how visitors interact with the museum and the staff.

When asked about other incentives WAM has offered, Mrs. Flynn remarked that they have tried three in the past: a WAM postcard, a WAM gift bag, and an entry into a drawing for a WAM framed picture. Mrs. Flynn remarked that the visitors really appreciated the incentives and when other visitors saw them receiving them, they filled out a survey as well.

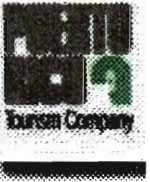


One problem WAM has encountered with their survey is that the same type of people always fill out the surveys. This skews the sample because it does not give a clear representation of the entire tourist population. Mrs. Flynn said that their surveys are filled out mostly by people who come in only to eat at the café and by retired people.

Mrs. Ryall and Mrs. Flynn's suggestions and remarks on survey administering were very helpful. However, they could not supply any advice on analyzing the data because they do not do the statistical analysis themselves. The surveys are sent to people at the Lila Wallace - Reader's Digest Fund. After they do the analysis, the results are returned to the museum. The results are used to improve the quality of the facility and its staff. The results also provide useful information for marketing strategies.



## **7.5 Appendix E - Glossary**



**Aggregating:** Sums groups of responses.

**Behavioral mapping:** An observational method which uses a drawn-to-scale map to record sequences of behaviors that occur in each area of a facility.

**Construct validity:** Questions if the measurements are really measuring the concepts the researcher intends.

**Content validity:** The sample of visitor behavior is representative of the population of behaviors the researchers wish to test.

**Data cleaning:** Checking the information that has been inputted into a database.

**Demographics:** The factual characteristics of the audience being studied (e.g., gender, age, and residence).

**Formative evaluation:** Evaluation whose major purpose is to improve the functioning of the exhibit.

**Merging:** Combines information from various sources.

**Numeric coding:** A number that translates to a response on a survey questionnaire.

**Predictive validity:** Usage of a sample of behavior to predict a visitor's behavior toward an exhibit.

**Rating scale:** Survey device in which respondents are asked to judge some object, program, or other type of experience along some dimension (e.g., Excellent, Good, Neutral, Fair, Poor).

**Recording:** Collapses or combines responses into categories for analysis.

**Recording validity:** Deals with the accuracy of the measurement system and questions whether the system distorts the results.

**Reliability:** Consistency or stability of behavioral measurements.

**Serial identifier:** Used in a database to recognize topic categories.

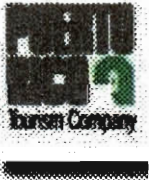
**Splitting:** Separates data into groups for analysis.

**Subsetting:** Restricts analysis to a specific group based on criteria specified.

**Survey:** Self-report method that includes questionnaires, interviews, and rating scales.



**Validity:** Term which refers to the accuracy of the conclusions about measurements and results. For example, does the measurement system really measure what is intended?



## **7.6 Appendix F - PRTC Budget**

# Budget of the PRTC

Fiscal Years

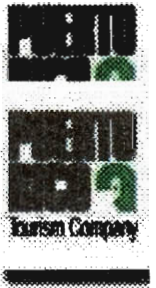
Table 15

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95 a/	1995-96 b/
TOTAL BUDGET	42,594,094	\$42,657,572	\$44,164,264	\$53,154,230	\$72,045,021	\$91,583,651	\$76,049,900
Personal Services c/	6,787,461	7,412,612	8,284,284	8,968,028	10,185,857	13,035,411	16,886,450
Rent & Utilities d/	687,268	679,424	659,117	799,944	865,861	835,175	1,476,565
Other Administrative Costs	12,973,770	5,372,178	7,424,750	9,375,158	12,623,491	13,386,905	8,266,172
Media Advertising	11,050,000	10,545,000	11,185,000	13,763,773	17,165,927	24,968,788	19,600,000
Promotion	3,968,172	5,943,308	7,739,138	8,912,004	17,913,167	17,593,424	11,927,052
Press and Public Relations	1,378,347	1,787,725	1,733,700	1,956,192	2,982,094	5,906,449	5,770,000
Welcome Center Operations	49,261	282,865	298,518	121,713	64,644	179,300	370,579
Capital Improvements	1,505,050	4,734,682	1,305,025	2,519,219	2,000,723	5,376,098	1,938,724
Slot Machines Operations	4,194,765	5,899,778	5,534,732	6,738,199	8,243,257	10,302,101	9,814,358

a/ Revised Figures

b/ Preliminary Figures

Source: P.R. Tourism Company, Budget Division



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