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Evaluating Visitor Perception of Parque Municipal Summit: An Exercise in Targeted Resource Development and Improving Public Awareness



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Executive Summary

Evaluating Visitor Perception of Parque Municipal Summit: An Exercise in Targeted Resource Development and Improving Public Awareness

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April 30th, 2013

Host: Parque Municipal Summit

Avenida Gaillard,

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Panama is an invaluable country for conservation as it is a biodiversity hotspot and corridor for Mesoamerican exchange. Panamanian law establishes means of protecting its biodiversity rich environment but, unfortunately, many Panamanians do not abide by these laws and they often go unenforced.

Many problems arise from this lack of awareness and enforcement, two main issues of concern being the destruction of habitat and the illegal trafficking of wildlife. One of the main entities in Panama City engaged in dealing with the consequences of these issues is Parque Municipal Summit. This park has an incredibly diverse mission with one of its main activities being its work as a refuge and rehabilitation center for Panamanian wildlife. It also has a long history as a botanical garden and is one of the main recreational centers for both tourists and locals in Panama.

Given all of the work that goes into running Summit, there is little time to ensure that the public is receiving accurate information about the park. Hardly any visitors are aware of the park's history as a botanical garden and most do not recognize that it still is a botanical garden. Furthermore, very few visitors are aware of the park's work as a refuge and rehabilitation centre for wild animals. The issues of miscommunication are also seen in the confusion regarding the park's schedule and pricing, a problem likely due to the presence of contradictory information on the Internet.

This project proposed a means to improve public awareness of the park's work and history. It is a three-step project which first assessed current levels of visitor awareness. Next, improvements were made to information dissemination methods at the park through the creation of a new informative handout and Facebook page. Finally, the effectiveness of the handout and Facebook page at improving visitor awareness of the park's history, mission and work was evaluated.

The first step was conducted by means of surveys. Two different surveys were created, one for visitors entering the park and another for visitors leaving. In both surveys, visitors were asked some general questions that the park administration wanted to know and others that were more in line with the project objectives, such as questions about the park's history and mission. In the survey for visitors leaving the park, additional questions about what visitors thought about the current and proposed methods of information distribution and the park's work were also asked. Questions from both sets of surveys were contrasted to determine what respondents learned during their visit.

These surveys confirmed that very few visitors understood the work being done by the park and the park's history. Very low percentages of visitors recognized that the park was

founded as a botanical garden and very few knew that the animals at Summit were all rescue cases.

Given the information elucidated by the surveys, three main areas where public awareness was lacking were identified: the history of the park as a botanical garden, the overarching mission of the park and the wildlife rescue and rehabilitation aspect of the park. These, therefore, became the three areas that were focused on in the creation of the new handout, along with a new map of the park. The handout's design was a collaborative effort between the authors, the park director and a graphic designer who volunteered to help with this project.

The Facebook page's main purpose was to eliminate confusion about general park information such as pricing, schedules and location, and act as a convenient way to update the public on Summit's activities. The Facebook page also addressed the park's mission and includes some information about the park's work and history.

Once the handout and Facebook page were complete, surveys were once again conducted. The new handout was given to visitors upon their entry and the same visitors were surveyed on their way out. They were asked questions regarding their experience with the new handout. Also, in order to test whether visitors were learning from the handout, the new survey asked the same questions about the park's history, mission and work as the previous surveys.

When comparing the data from the new round of surveys to the old, improvements to visitor awareness were observed; significantly more visitors were aware of the park's history as a botanical garden and more people recognized that the animals at the park were all rescues. However, given the small sample size that was surveyed in this last round of surveys it was difficult to make explicit conclusions.

From the feedback received from the visitor surveys and park staff it is clear that the handout will be of great use to the park, especially in light of upcoming renovations, and it is hoped that with time, public awareness about the park's work and history will continue to improve.

Resumen Ejecutivo

Evaluación de la Percepción de los visitantes del Parque Municipal Summit: un ejercicio para mejorar la conciencia pública

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Panamá es un país muy importante por razones conservacionistas tanto como un punto caliente de biodiversidad y por su papel como el corredor para el intercambio de vida silvestre entre el norte y sur de las Américas. La ley panameña establece medios para proteger su entorno de biodiversidad muy rica, pero desafortunadamente la mayoría de los panameños no son conscientes de las leyes y la autoridad ambiental no las aplique.

Muchos problemas surgen de esta falta de conciencia y de aplicación, dos principales preocupaciones son la destrucción del hábitat y el tráfico ilegal de vida silvestre. Una de las principales entidades de la ciudad de Panamá que participa en la lucha contra esos problemas es Parque Municipal Summit. Este parque tiene una misión muy diversa, una de sus principales actividades es su trabajo como un refugio y centro de rehabilitación para la fauna panameña. Parque Summit tiene una larga historia como un jardín botánico y es también uno de los principales centros recreativas en Panamá para panameños y turistas también.

Con todo el tiempo que está dedicado al bien funcionamiento del parque hay muy poco tiempo para la difusión de la información al público. Casi ningún de los visitantes son conscientes de la historia del parque que empezó como un jardín botánico, y tampoco reconocen que Summit es todavía un jardín botánico en la actualidad. Por otra parte, son muy pocos los visitantes que conozcan la obra del parque como refugio y centro de rehabilitación para la vida silvestre. Este problema de difusión de la información es más profundo, en el que hay mucha confusión sobre el horario del parque y los precios. Eso problema en gran parte se debe a la existencia de mucha información contradictoria disponible en la Internet.

Este proyecto propone un medio para mejorar la conciencia pública de la obra del parque y de su historia. Se trata de un proyecto de tres etapas que probó primero los actuales niveles de la conciencia de visitantes en el Parque Summit. A continuación, se realizó mejoras a los métodos de difusión de información en el parque a través de la creación de un nuevo folleto informativo y de una página de facebook por el parque. Por último, se puso a probar la eficacia del folleto y de la página facebook a mejorar el conocimiento de los visitantes de la misión y la obra del parque.

La primera etapa se llevó a cabo por medio de encuestas. Dos encuestas diferentes fueron creados, uno para los visitantes que entran al parque y una otra para los visitantes que salen. En los dos estudios, los visitantes se hicieron algunas preguntas generales que la administración del parque quería saber y también preguntas más vinculadas a los objetivos del proyecto acerca de la historia y la misión del parque. En la encuesta a los visitantes que salen del parque, más preguntas se pidieron acerca de lo que pensaban los visitantes acerca de las medios de difusión de información actuales y propósitos. Las respuestas de los dos encuestas fueron contrastadas para determinar lo que los visitantes aprendieron de su visita.

Estas encuestas confirmaron que muy pocos visitantes entienden la historia del parque y el trabajo realizado por el parque. Muy bajas proporciones de los visitantes reconocieron que el parque fue fundado como un jardín botánico y muy pocos sabían que los animales en Summit fueron todos rescatados.

Teniendo en cuenta la información obtenida en estas encuestas, tres áreas principales se determinaron en que la conciencia pública faltaba: la historia del parque, la misión del parque como un jardín botánico y el aspecto del parque como refugio y centro de rehabilitación para animales rescatados. Estos, por lo tanto, se convirtieron en las tres áreas abordadas en la creación del nuevo folleto informativo y de la mapa incluso a dentro. El diseño del folleto fue un esfuerzo de colaboración entre los autores, el director del parque y un diseñador gráfico que se había ofrecido como voluntario para ayudar con este proyecto.

El propósito principal de la página de facebook era de eliminar algo de la confusión acerca de la información general del parque, como los precios, los horarios y la ubicación y de ser un manera conveniente para dar actualizaciones sobre lo que pasa en el parque. La página de Facebook también se trata de aclarar la misión multifacética del parque y dar un poco de información sobre la historia del parque.

Cuando se han hecho el folleto y la página facebook del parque,unas encuestas se llevaron a cabo una vez más con los visitantes al parque Summit. El nuevo folleto informativo se da a los visitantes cuando entren en el parque, y ellos fueron encuestados en su salida. Los visitantes fueron preguntados acerca de su experiencia con el nuevo folleto. Además, con el fin de probar si los visitantes aprendieron algo del folleto, la nueva encuesta preguntó las mismas preguntas sobre la historia del parque, su misión y su trabajo como un refugio que fueron incluidos en las encuestas anteriores.

Al comparar los datos de la nueva ronda de encuestas a los viejos, ligeras mejoras a la conciencia visitante se pudieron observar. Más visitantes reconocieron la historia del parque como un jardín botánico y más gente reconocieron que los animales en el parque fueron rescatados. Pero, dado el pequeño tamaño de la muestra que se encuestó en esta última ronda de encuestas es difícil llegar a conclusiones definitivas.

Independientemente de esto, de lo que recibimos como comentarios de los visitantes encuestados y del personal del parque es evidente que el material sería sin duda de gran utilidad para el parque, especialmente con las grandes renovaciones que serán efectuadas en el parque. Se espera que con más tiempo, las mejoras más claras en la conciencia pública acerca de la obra del parque y de su historia serán observables.

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McGill Code of Ethics

A portion of this project's results relied on information gathered through written surveys from visitors of Parque Municipal Summit. Examples of the surveys are provided in the Appendix. All surveys were performed with free prior informed consent, and were conducted according to the McGill Code of Ethics.

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Host institution

This project was conducted in conjunction with Parque Municipal Summit, named so because it is located at the highest point along the continental divide in Panama (Correa 2010). Parque Municipal Summit is a botanical garden and wildlife rescue and rehabilitation center located on the outskirts of Panama City and the second most visited place in Panama following the Miraflores Locks. As a natural space within the city, Summit acts to maintain a crucial balance between the natural and urban environment, facilitating important environmental education and scientific research (Correa 2013A).

Formerly Summit Garden, the park was founded in 1923 by the famous American botanist David Fairchild with the goal of introducing foreign tropical plants to the Canal Zone; it was only in 1958 that Summit began accepting rescued wildlife. Summit was originally under the administration of the United States government and, consequently, in 1942 was used as grounds to train American World War II soldiers in jungle survival techniques. Summit only became accessible to the public in 1957, when it was officially converted into a park. The park remained under U.S. administration until the 1970's, at which point it was handed to the Panamanian government. Finally, in 1985 it was passed to the Municipality of Panama as Parque Municipal Summit (Correa 2010).

Summit counts a total of 43 employees whose positions are distributed among the following sectors: management, nursery and gardens, maintenance, environmental education and a zoological side, which includes the units of veterinary medicine, animal nutrition and rescue and rehabilitation of wildlife. Additionally, through a recent municipal agreement, the park has the support and equal contribution of a Patronato- a non-governmental, non-profit organization whose main mission is to preserve and protect Panama's cultural and biological diversity at

Summit. Members of the Patronato are actively involved in the care and maintenance of the park's flora and fauna (Correa 2013A).

As both a botanical garden and wildlife rescue and rehabilitation center, Summit is home to thousands of different trees and plants as well as hundreds of wild animals. The park receives many more animals each year, the majority of which have been orphaned or confiscated by the Autoridad Nacional del Ambiente (ANAM). Summit also participates in the amphibian rescue and conservation program run by the Smithsonian Tropical Research Institute (STRI).

Cannonball trees, royal palms, mangotine trees, bamboos, jaguars, tapirs, pumas and macaws make up but a small fraction of the diversity readily observable throughout the park (Correa 2013B).

Finally, Parque Municipal Summit is in a crucial time of change as they follow through with extensive changes in administration and infrastructure. The goal for the future is to renovate the park such that areas dedicated to the rehabilitation of wildlife are kept separate and apart from the areas accessible to visitors, where animals that cannot be rehabilitated and released back to the wild will be kept to live out their lives. During this time the enclosures, signage, private buildings and public facilities will all be revamped and a veterinary clinic is set to be built on the premises.

Introduction

Wildlife problems in Panama

Panama's environment is home to some of the greatest biodiversity in the world, counting over 10 thousand different species of flora and fauna (APPC). Accordingly, Panamanian law establishes rules for the protection, conservation, management and restoration of this

environment, promoting sustainable use of natural resources. In addition, it orders the integration of environmental management to social and economic objectives with the goal of achieving sustainable human development in the country (ANAM); however, many of these laws remain ignored by the public and unenforced by the authority.

Despite the efforts of ANAM and conservation NGOs, the destruction of natural ecosystems and the traffic of wildlife species are continually increasing. Every year, the black species market generates millions of dollars; thousands of wild animals become the victims of trafficking or poaching and more and more species face endangerment and extinction. The Scarlet Macaw is one of the most attractive birds on the black market and, in consequence, its population has now been reduced to only a few hundred individuals with the species now on the verge of extinction (APPC). According to the IUCN, over 389 species found in Panama are currently endangered, of which approximately 202 are plants.

Every year a large number of animals are confiscated or rescued by authorities like ANAM however, in many cases, the damage done is longlasting as many of them have been kept in captivity for entertainment purposes or as pets. Consequently, returning these animals to their natural habitat is often, at the least, a complicated undertaking, and trained professionals as well as special treatment plans are compulsory, among other things, for successful rehabilitation (APPC).

How Summit's work helps

Parque Municipal Summit's mission and vision is that of a center for conservation, research, education and recreation that reflects the cultural and biological diversity of Panama while simultaneously encouraging respect for nature. Summit plays a crucial role in the

conservation of Panama's wildlife through their collaboration with a number of other wildlife monitoring, conservation and rescue projects and through the rescue and rehabilitation work they do themselves. The park works directly in conjunction with ANAM, la Asociación Panamericana para la Conservación (APPC) and STRI, all organizations whose ultimate purpose is to promote conservation, research and education with respect to Panamanian wildlife (Correa 2013B).

Each year, Summit receives hundreds of wild animals, many of which are endangered species, in need of rescue and rehabilitation. As mentioned previously, many resources are required in order for rescue and rehabilitation of wildlife to be successful; individuals that are dedicated to the animals and experienced in handling and caring for wildlife are undeniably a key part of the process. Summit possesses a Patronato, which consists of such qualified individuals, and boasts the necessary infrastructure to support such an operation. As a result, the park has been successful in rehabilitating, and subsequently reintroducing, many animals back to the wild.

All of the animals that arrive at Summit are native to Panama, therefore presenting the park with a unique opportunity to educate the public on Panamanian wildlife and the threats they face. Due to the large amount of visitors received, and the stories behind the animals that are there, Summit is in the perfect position to raise the public's awareness about these issues. The park receives visits by schools of all levels, participates in educational events and offers the opportunity to interact with knowledgeable employees that are extremely passionate about sharing their knowledge with others. Studies done by Curti and Valdez (2009) in fact show that conservation efforts are often much more effective when they incorporate strong community education programs. It is therefore clear that Summit has the power to further contribute to the conservation of Panama's biodiversity as an educational institution by increasing public

knowledge of conservational issues.

Where this project comes in

Unfortunately, most of Summit's work, and contributions to the field of conservation, remain widely overlooked by the visitors of the park. According to Summit's staff, most visitors are under the impression that the park is a zoo and that the animals are collected from the wild and imported from all over the world. As such, the park is slowly working on improving the visibility of their mission and rehabilitation efforts, but these projects often take the back burner to all of the quotidian work that must go into maintaining a wildlife refuge. In fact, it isn't only the park's mission that goes unnoticed to visitors but also more basic aspects of the park, like the history of the park and its role as a botanical garden; even easily communicable information, such as pricing and opening hours, is often misunderstood by visitors.

In light of the huge constraints on the park's public communication efforts, it was decided that the best way to contribute to the park was by improving the visibility of the park's mission, history and work. As such, the following research question was devised: "How can information dissemination methods in the park be updated to improve the public's understanding of its mission, history and work?". This question was undertaken by improving the park's methods of information dissemination, namely an informative handout and Facebook page, and their effectiveness tested through the administration of visitor surveys.

The objectives

The main objective of this research project is to improve the visibility of the park's mission, history and work. More specifically, this project aims to improve visitor knowledge of

the park's history and continued work as a botanical garden, as well as its very important role in conservation as both a refuge and rehabilitation center for Panamanian wildlife. It is also hoped that general information about the park, such as its layout, opening hours, admission costs, etc. can simultaneously be better communicated to the public.

It shall be determined how visitors respond to the current methods of information dissemination at the Summit and how these methods could be changed in order to improve people's understanding of the park. Visitors' understanding of basic aspects of the park will be determined through the use of surveys. Visitor appreciation of the current signage and informative handout, as well as visitors' openness to the idea of a Facebook page, will also be evaluated by means of surveys. This information will be used to make improvements to the informative handout and to create a useful and official Facebook page.

The concrete contributions to the park (the handout and the Facebook page) will be evaluated in terms of their effectiveness at improving visitor knowledge about the park's history and work, once again by means of surveying visitors.

It is hoped that through the targeted changes made to the information dissemination methods of Parque Municipal Summit, public awareness of the park's mission, history and work will be improved.

Methods

This research project was divided into three parts. In the first part, surveys were conducted to determine the current level of knowledge visitors had about the park, its history and its work. In the next part a new map-handout for the park and an official Facebook page for the park were designed based on the feedback received from the surveys. Finally, another round of

surveys was conducted to pilot the newly designed handout and to test whether it would improve the educational experience of visitors at the park.

Study Area

All data was collected at Parque Municipal Summit. This park is located just outside of Panama City on the highway towards Gamboa, known as Avenida Gaillard. The entrance is not far past the administrative buildings for Parque National Soberania. The park covers an area of approximately 50 hectares, of which half is represented by fragments of secondary forest, parks and open spaces. It is almost entirely accessible by asphalt roads, has more than 30 animal enclosures, administrative offices, an animal nutrition center, a dining room, bathrooms and showers for employees, a workshop area, a botanical center, a nursery, an animal quarantine area, a warehousing and storage. Surveys were conducted at the park by intercepting visitors at the main gates that serve as the entrance and departure area.

Part 1: General Knowledge Surveys

As previously stated, this section of the research project was focused on probing visitor's current understanding of the park, its history and its work. This information was collected through two different surveys, both of which can be found in Appendix A. These surveys were designed in close collaboration with Néstor Correa and Rafael Gómez and were devised to gather general information for the park's direction as well as information relevant to this research project. Both surveys' questions were multiple choice, yes or no, and short answer based. Surveys were available in both English and Spanish in order to reach both locals and tourists.

The first survey was targeted towards visitors entering the park and evaluated visitor knowledge of Summit prior to their visit. Visitors were asked basic questions like if it was their first time visiting, for what purpose they were visiting, how they heard about the park and

whether or not they were residents of Panama City. They were also asked what they believed to be the park's primary mission and for what purpose they believed it was founded. During analysis, the responses were cross-referenced with one another. The question about having visited Summit before was cross-referenced with the questions about Summit's principal mission and Summit's history in order to determine if past visitors had a better grasp on this information than did new visitors. Another cross-reference that was conducted was between the question asking how visitors had heard about Summit and whether or not visitors were residents of Panama City.

The second survey was targeted towards visitors leaving the park and attempted to determine what visitors had learned during their visit. The second survey asked some of the same questions about the park's history and mission as the first survey, but also asked additional questions regarding the methods of information dissemination being utilized by the park. Visitors were first asked if they noticed the signs on the plants or the animal enclosures, what caught their attention, if they found them useful and how they could be improved. They were also asked similar questions about the handout, as well as if they knew how the animals arrived to the park and if they spoke to any personnel while visiting. They were also asked if they had read the new handout, availed themselves of it and the included map and, if so, what they thought of it. Finally, they were asked what they enjoyed most about the park, what could be done to improve their visit and if they would follow Summit on Facebook. Cross-references were not conducted on the data from the second survey; however, the responses to the questions about the park's mission and history were compared to the responses from the first survey. Analyses were conducted to determine if there were significant differences between the responses of the groups sampled before and those sampled after visiting the park. Significance

was tested with a two-tailed t-test for samples with unequal variances, at 95% confidence intervals, on Microsoft Excel 2011. This same statistical analysis was conducted on the responses to the mission and history question that compared first time visitors to returning visitors. This statistical analysis was also conducted on the responses to the park's mission and history question that compared first time visitors to returning visitors.

Surveys were conducted at the entrance (and exit) of Parque Municipal Summit on three separate days: Friday February 1st from 11 am to 3pm, Sunday February 3rd from 12pm to 4pm, and Saturday February 23rd from 2pm to 4pm. Weekend days were favored since they are generally the busiest and the times frames were selected on the basis of equalizing the number of entrance and exit interviews. A total of 115 surveys were collected from visitors entering the park and 133 surveys from visitors leaving the park.

Part 2: Improvements to Information

Based on the information gained through the survey process, as well as the resources available at the park, it was decided that the simplest ways to improve information dissemination during the time allotted would be through the creation of a new map handout to replace the original handout, both of which are available in Appendix B, and an official Facebook page. Given that the park is expected to undergo many changes and extensive renovations in the upcoming years, creating a new signage plan was deemed futile; however the feedback obtained by the surveys in regards to the signage can be used to inform the process of renovating signage in the future.

The information to be included in the handout was decided upon based on where information was found to be lacking following the analysis of the surveys. Sections about the history of the park, the role of the park as an animal refuge and how visitors can help were

therefore included in the handout along with the more general information like operating hours, contact information and what there is to do. It was also determined that handouts would be created in Spanish, English and French due to the high volume of French tourists that were also found to visit Summit.

The other big section of the handout was the map of the park, which was also modified to make it more visually appealing, user-friendly and accurate. Information about animal locations was generalized, as to avoid confusion when animals' enclosures are changed or closed for renovations. The location of several key plants was also included in order to emphasize the park's role as a botanical garden. Furthermore, many pathways were removed from the existing map to eliminate confusion and discourage visitors from wandering in restricted zones of the park. All of the information was encoded by pictograms in the map and subsequently elucidated in a legend.

The contents of the handout, as well as the general layout, were collectively decided upon with the help of Nestor Correa. The esthetic design of the handout was produced in direct collaboration with Francisco Cedeño, the chief graphic designer and director of Sarigua Design Studio, and Javier Bermudez, his assistant, using Adobe Illustrator cs5. The layout of the handout was across a 9 by 16 inch double-sided sheet, folded into 4 sections.

The official Facebook page was created to address the issues of conflicting operating hours, as well as pricing and location information, on the Internet. As there were several Facebook pages for Summit already in existence without an administrator, Facebook was contacted and proof was provided in order to have the old pages deleted and consolidated into one single page. Facebook timeline presented a convenient opportunity to describe important historical events and allowed the page to be linked to Summit's Twitter account such that any

time an update is made on Twitter, it is automatically made on Facebook as well. Most importantly, Yiscel Yanguéz accepted to be an administrator and keep the page up to date.

Part 3: Piloting the handout

This section was focused on determining whether the new handout helped to improve visitor's understanding of the park, its history and its work. Copies of the new handout were printed in Spanish to be given to visitors upon entry to the park, as the English and French handouts were not completed in time and, for this reason, only Spanish surveys were created. Furthermore, this round of surveys was targeted solely towards visitors leaving the park. This survey, which can also be found in Appendix A, asked some of the same questions about the park's history and mission as the first two surveys, however the answer format was changed such that all questions were yes or no and none were short answer; it became clear after conducting the first round of surveys that short answer questions discouraged individuals from answering. Visitors were asked if it was their first time visiting, if they knew about the park's mission and history and about how the animals arrived to the park. They were also asked if they received the new handout, availed themselves of it and, if so, what they thought of it. Finally, they were asked if they were aware of Summit's Facebook page and, if so, if they were following it. Responses were again cross-referenced with one another when possible. As with the first survey, the question about the history was cross-referenced, this time with the first set of 'after' surveys, and two-tailed t-test for samples with unequal variances were performed to determine if there was a significant difference between the responses. The answers to circumstances surrounding the arrival of the animals question was also compared to the responses of the visitors leaving the park from the first round of surveys and tested for significant difference in the same way.

New handouts were distributed to visitors and surveys were conducted at the entrance (and exit) of Parque Municipal Summit on a slow Tuesday, April 23, from 11am to 4pm due to time constraints. A total of 25 surveys were collected from visitors, who had received the new handout upon their entrance, leaving the park.

Results

All the Figures alluded to in this section can be found in Appendix C.

General knowledge surveys

The first round of surveys generated answers from 116 individuals before visiting the park and 133 individuals after visiting the park, producing an interesting assortment of data. In terms of the surveys for visitors entering the park, 64.3% were returning visitors and 35.6% were visiting for the first time. The ratio of Panama City residents to visitors from outside of the city was quite similar at 70% to 30%, which suggested that a large proportion of Panama City residents that visited have been to the park before.

In terms of the reasons visitors had for visiting Summit, the results are summarized in Figure 1. As shown, recreation was the primary reason visitors gave for their visit, with 62% of visitors marking it as the motive behind their trip to the park. Tourism and seeing animals in their cages were the next most common reason, with 23.3% of visitors indicating them as their main motive. Observing animals in nature was indicated as the main motive by 16.4% of visitors. It can therefore be deduced that nearly 40% of visitors come to the park in order to enjoy the fauna; however, recreation remains the dominant reason for visiting the park. Finally, 14.6% of visitors claimed to come for educational purposes, 0.9% for a special event and 4.3% for a reason other than those listed, namely for picnics.

In terms of how visitors had heard of Summit, the results from this question presented a clear division between Panama City residents and visitors to the city, as shown in Figure 2. In both cases, word of mouth from friends was the most commonly chosen answer, with 38% of Panama City residents and 54% of visitors to the city answering that they had learned about the park in this manner. However, school was also a common way Panama City residents learned about the park, with 33% of residents selecting this option as the way in which they heard about the park and only 5.7% of non-residents. Unsurprisingly, tour guides were a common source of information about the park amongst city visitors only, with 31.4% of tourists versus 4.9% of Panama City residents having come to Summit after learning about it from a tour guide. The media and the Internet were not very commonly selected by either demographic; only 7.4% and 2.5% of residents and 2.9% and 0% of non-residents chose this option, respectively. 17.3% of visitors from the city and 5.7% of visitors from outside the city had heard about the park in a way other than those listed, namely family.

Visitors leaving the park were also asked questions about their general experience, such as whether they had spoken to any employees, what they had enjoyed most about the park and what they thought could be done to improve their experience. Of the visitors surveyed, only 30% had spoken with an employee during their time at Summit. 32.5% of visitors had asked the employee about the harpy eagle, and when it would arrive at the park. Though a few visitors spoke to members of the Patronato regarding the rescue and rehabilitation of the animals, the absence of the harpy eagle was the only topic that came up a significant number of times.

As shown in Figure 3, the aspect of the park that visitors most enjoyed was the animals; this was the favorite part for 45% of the respondents. The ambiance and environment of the park, particularly the park's cleanliness, were also appreciated by respondents; 27.5% of visitors

commented on this aspect of their visit. 10.8% preferred the plants and trees, while 15.8% claimed to have enjoyed everything and 8.3% claimed to have enjoyed something other than the aspects mentioned above, like the Harpy Eagle Museum and quality of care given to the animals.

In terms of improvements that could be made to the park, there was a wide range of recommendations all of which are shown in Figure 4. The three most popular suggestions were to acquire more animals, provide tours and more information, the first two of which were indicated by 20.56% of visitors and the third by 18.6% of visitors.

While all of this information will prove to be useful for the direction of the park, what was more important from this first survey for the sake of this project were the questions testing visitors' knowledge of the park's mission, work and history. This information was analyzed in two ways; in the first, answers are compared between first time visitors and returning visitors. These results can be seen in Figures 5 and 6.

As demonstrated in Figure 5, very few visitors know about the history of the park. No first time visitors knew why the park was originally founded and only 6.75% of returning visitors seemed to have some kind of grasp on the reason for the park's founding, indicating that it was a botanical garden, or was previously managed by the U.S. government. Answers about the founding of the park were quite varied without any one answer really standing out. More returning visitors believed the park was founded as a botanical garden, as a zoo, for conservation or preservation, as an animal refuge and rehabilitation center and for recreational purposes (6.8%, 2.7%, 24.3%, 17.6% and 9.5% respectively) than did first time visitors (0%, 0%, 14.6%, 9.8% and 0% respectively). A few first time visitors (2.4%) and returning visitors (2.7%) believed the park was founded for a reason other than those listed, namely for scientific purposes. The majority of visitors in fact indicated that they did not know why Summit was founded, or just did

not answer the question outright, though a higher percentage of first time visitors (63.4%) indicated that they did not know the history or gave no response than did returning visitors (29.7%).

Using a two-tailed t-test with differing variances for percentages, it was determined that significantly higher percentages of returning visitors indicated the park was founded for recreational reasons or as a botanical garden at a 95% confidence level (p-values of 0.00727 and 0.024311 respectively). However, in both cases, the only reason for the significance was that no first time visitors had indicated them as the reasons for the foundation of the park. The small number of votes that recreation and botanical garden received from returning visitors was therefore calculated to be significantly higher despite neither being a commonly selected category. The differences between the percentages for the rest of the options were not significant. In the same way, it was determined that significantly more first time visitors indicated they did not know why the park was founded, or left the question blank, than returning visitors. A p-value of 0.00052 was obtained indicating a significant difference between the percentages at a 95% confidence level.

Figure 6 demonstrates visitors' understanding regarding the mission of the park. Recreation was indicated as a primary mission by 21.6% of returning visitors, but by very few first time visitors. Education was fairly commonly selected; approximately 20% of both first time and returning visitors identified it as the primary mission of the park. In both cases, a majority of respondents correctly indicated that the park was a refuge and rehabilitation center for wildlife: 46% of first-time visitors and 72% of returning visitors indicated that this was the primary mission of the park. There was a considerable percentage of first time visitors that thought the park was a zoo (29.2%), however fewer returning visitors (17.6%). Overall, the park's botanical

garden aspect was the least recognized by visitors; only 12.2% of first time visitors and 13.5% of returning visitors selected it as the park's primary mission. The other botanical side of the park that includes plant production and sales was not included in the figure since no visitors chose it as the park's primary mission.

There were a significantly higher percentage of returning visitors who indicated that the primary mission of the park was as a refuge and rehabilitation center for wildlife. Conducting a two-tailed t-test for samples with differing variances yielded a p-value of 0.006147. A significantly higher percentage of returning visitors also indicated that recreation was the main mission. A p-value of 0.000578 was obtained for the comparison of the percentage of first time visitors and returning visitors who indicated recreation. While a lower percentage of returning visitors indicated that the park's main mission was as a zoo, the difference in percentages was not significant; no other percentages were deemed to be significantly different.

The answers to the questions about the park's history and mission were also compared between the respondents doing the survey upon entering and the respondents doing the survey upon leaving the park to see if visitor's gained a better understanding of these aspects during their visit. The results of these comparisons can be seen in Figures 5 and 6.

Figure 7 demonstrates similar patterns to Figure 5. A greater percentage of visitors did not know why the park was founded (or provided no answer) before visiting the park (42.2%) than after visiting (18%). Again, very few visitors actually knew the real reason behind the foundation of the park, with only 4.3% of visitors entering the park and 5.3% of visitors exiting the park having answered correctly. 14.7% of visitors believed that the park was founded as an animal refuge and rehabilitation center before having visited, while 25.6% of visitors still believed that after visiting. 20.7% of visitors entering the park versus 16.5% of visitor leaving the park

thought that the park was founded for conservation or preservation purposes. Fewer visitors believed the park was founded as a botanical garden, as a zoo, for educational purposes and forrecreational purposes before having visited the park (4.3%, 1.7%, 7.8% and 6.0% respectively) than did visitors after leaving the park (5.3%, 3.0%, 24.8% and 6.8% respectively).A few visitors (2.6%) believed the park was founded for a reason other than those listed before entering the park; however, no one believed that was the case after their visit.

There was a significantly lower percentage of visitors who indicated they did not know why the park was founded after visiting the park. A p-value of 3.185E-5 was obtained. There was also a significantly higher percentage of visitors who indicated the park was founded for educational purposes or as an animal refuge and rehabilitation center after visiting the park. P-values of 0.000201 and 0.031032 were obtained respectively. There was not a significant difference between the percentages of visitors who chose any other reasons for the park's founding.

Figure 8 yielded interesting results in that not much changed, in terms of visitors' perception of the park's mission, once individuals had visited the park. As shown, almost all of the options in terms of mission were chosen by approximately the same percentage of visitors from the 'before visit' sample and the 'after visit' sample. The majority of visitors believed that the park's primary mission was as a refuge and rehabilitation center for wildlife: 63.8% of visitors entering the park and 66.9% of visitors departing selected this as the park's main mission. As was the case for the comparison of responses regarding the park's mission between first time visitors and returning visitors, very few visitors recognize the park's mission as a botanical garden immediately after their visit. 12.9% of visitors recognized this before their visit and 13.5% of visitors after their visit. 14.7% believed the mission of the park before their visit was

recreation, 21.6% believed it was zoological, 63.8% believed it was refuge and rehabilitation, 0% believed it was plant production and 18.1% believed it was education versus 22.6%, 19.5%, 2.3%, and 23.3% of visitor after their visit, respectively. There were no significant differences in visitors' perception of the park's mission before and after having visited.

Visitor perception of the signage and the handout was also examined from the survey administered to visitors leaving the park. 90% of visitors saw the animal signs, whereas only 74.4% saw the signage on the plants. In terms of comments that were received about the plant and animal signage, 17% commented that they enjoyed the information provided about the animal species and 13% commented the same about the plant signs. Several (11%) also commented on the signage outlining the rules on the animal cages, which apparently were among the signs that most stood out. In terms of the usefulness of the signage, 81.2% of respondents stated that they found the signage useful. There were, however, a number of recommendations on how the signage could be improved; mainly by increasing their number and visibility (in terms of quality and location) and making sure all the signs are Spanish/English bilingual. The results of the handout questions revealed that the main problem is that the handout is not being distributed: 66.9% of respondents did not receive the handout. Overall, comments about the handout were too vague to be considered relevant.

Another question analyzed from the surveys administered to visitors leaving the park was if they knew how the animals in the park had arrived to Summit. While nearly 40% of visitors attested to knowing the answer, only 57.7% of them correctly stated that the animals were rescues of some sort or another, while 8.3% stated they knew how the animals arrived but did not specify an answer. This corresponds to a mere 22.5% of visitors knowing that the animals were rescues. Quite a few visitors stated they did not know or were misinformed and seemed to think

that the animals were raised in captivity or captured in the wild to be put on display in the park (68.4%). 0.8% did not give any response to this question.

The final question of the survey given to visitors leaving the park was about the potential for a Facebook page. Respondents were asked if they would visit a Facebook page for the park. The responses were overwhelmingly positive with 74.4% of visitors indicating that they would follow Summit on Facebook.

Piloting the handout

This second round of surveying was slightly less informative, given the small sample size obtained (25 individuals). Out of the respondents surveyed, 36% were visiting for their first time, and the remaining 64% were returning visitors, nearly identical to the demographic surveyed in the first set of surveys and allowing for several of the following analyses.

While a high percentage of respondents attested to reading the handout (84%), the most useful aspect definitely seemed to be the map, with 92% of respondents supposedly using it to navigate themselves around the park. The same proportion of respondents also found it to be clear. The only complaints received were that the colour-coding scheme for the map was slightly difficult and that an item from the park, the train, was not included in it, both quite minor and only reported by one individual each.

Other complaints about the map could be found in the question about whether anything was missing from the map. Three people mentioned that they felt animal enclosures were missing and another three mentioned that many trees or plants were missing. In general, most people were satisfied with the map and its contents with 64% of respondents thinking it was complete and 84% thinking no changes to the handout were necessary. Most respondents

appreciated the information within the handout, with 88% attesting to having learned something from its contents.

The areas that respondents claimed to have learned about from the handout are shown in Figure 9. The highest proportion of respondents (35.3%) claimed that they learned about the animals in the park. 29.4% commented that they learned how to better orient themselves in the park. Another 29.4% were quite vague in their responses stating only that the handout provided them with previously unknown information. A few respondents expressed that they learned more about the park rules and the history of the park (11.8% in both cases).

The questions about the park's founding, the park's mission and how the animals arrived at the park were asked again in this survey, albeit in a slightly different format from the previous surveys. In terms of the question about why the park was founded, 36% of respondents still did not know why the park was founded while 16% said it was founded for conservational purposes and 12% said it was founded as a wildlife refuge and rehabilitation center. Overall, 64% of respondents thought they knew why it was founded but only 24% of respondents accurately responded that the park was founded as an experimental botanical garden. None of the answers for specific founding reasons were significantly different within themselves, however, the proportion of respondents who correctly identified Summit as having been founded as a botanical garden is significantly higher than the proportion of respondents who correctly identified the reason for the founding of the park in the previous round of surveys.

Comparisons between the results of both sets of 'after' surveys are shown in Figure 10. A p-value of 0.04563 was yielded from a two-tailed t-test indicating that significantly more respondents leaving the park correctly identified the reason Summit was founded after having

received the new handout upon their entry and, correspondingly, significantly fewer respondents incorrectly identified the reason the park was founded (p-value of 2.397E-5).

In terms of the question about the mission, given the change in format of the question from multiple choice to yes or no (which included a specification) fewer people indicated that they understood the mission of the park. Only 52% of respondents stated they knew the mission of the park. Amongst visitors' ideas of the park's mission were conservation (69.2%), botanical garden (15.4%) and wildlife refuge and rehabilitation (30.8%).

The question about where the animals came from was identical to the one used in the previous surveys and thus the results from both were easily compared in Figure 11. In this round of surveys, 48% of respondents reported to know where the animals come from and 75% of these respondents correctly stated that the animals were rescues; that is, 40% of the total number of respondents knew where the animals came from while 56% did not know. While this may seem higher than the previous surveys, it was not deemed significantly higher by a two-tailed t-test for samples with unequal variance.

The final question of this survey asked about the Facebook page. Unfortunately very few people knew the park had a Facebook page, only 24% indicated they knew of its existence. Out of this 24%, only 1 respondent indicated that they actually followed the page.

Discussion

Limitations

There were several limitations to this research project. In terms of the first section of the project, that of the general knowledge surveys, the main problem was with respondents not taking the surveys seriously especially when faced with short answer questions, respondents had a tendency to be very vague and some wrote outright nonsense. The short answer questions were

also quite difficult to categorize when it came time for analysis, given the variety of answers. For this reason, in the last round of surveys, all questions were changed to yes or no, with the option of making specifications.

Another issue with this part of our project was in the way the surveys were administered. It was originally hoped that the same visitors could be surveyed on their way in and out of the park to serve as a better control. It became obvious quite quickly, however, that this was not an efficient way to conduct the surveys as the number of people who could be surveyed in this manner would be quite limited, given the long amounts of time people spend in the park and their lack of willingness to participate twice. As a result, the two sets of surveys were not paired, but completely independent.

In relation to specific questions asked in the survey, during the analysis period it became clear that many could have been more detailed in order to obtain more useful information both for the sake of the project and for the park. For instance, visitors were asked how they had heard of the park but some of the options were vague, such as Internet and media. Knowing what form of media or what Internet site had provided information about the park could have proven to be useful to the park.

The main limitation that stood out for the other sections of this project was that of time. Working with the graphic designer to produce the handout proved to be a long process, as did working with the park's director, due to the fact they are both very busy men with other priorities to address. As a result, the first version of the handout was only available for distribution very late in the process of this project and only the Spanish version was ready in time to conduct the second set of interviews. Unfortunately, this greatly limited the number of people, and the demographic, that could be reached in the last round of surveys. Furthermore, surveys for

piloting the handout had to take place on a Tuesday, one of the slower days in the park, as opposed to the busier weekend days.

Part 1: General knowledge surveys

The results outlined in Figures 1 and 3 will prove to be interesting and useful for the park's administration, however were not essential for the scope of this project and thus will not be discussed further.

From the results of the remaining questions, it became clear that public awareness was lacking in three main areas: the park's history, the park's multi-faceted mission and the circumstances under which animals arrive at Summit. While it was also clear that some kind of learning process was taking place in the park, though visitors were not always learning accurate information. For instance, with regards to the question about the park's history there was a statistically significant difference between the amounts of respondents who did not respond to the question about the park's founding or did not know the answer before and after visiting the park, shown in Figure 7. That is more visitors would give an answer to the question about the founding of the park, after visiting than before visiting. As shown in Figure 5, the same pattern was visible between respondents who were visiting for the first time and returning visitors. This shows that after a visit to the park, respondents think they have a better understanding of why the park was founded; however, as the results reveal, this is not necessarily the case. After visiting the park, a significantly higher proportion of respondents falsely believed that the park was founded as a wildlife refuge, or for educational purposes. Overall, very few visitors knew anything about why Summit was founded suggesting that both the park's history and sustained role as a botanical garden are aspects that need to be better explained to the public.

This same pattern of learning was also observable in the comparison of returning to first time visitors with regards to the park's mission. A significantly higher proportion of returning visitors recognized the park's missions as a refuge and rehabilitation center for wildlife and as a center for recreation, shown in Figure 6. However, when comparing the responses of the visitors surveyed before entering the park to those surveyed after their visit in Figure 8, no learning was apparent. There was no significant difference between the proportions of visitors who indicated each option as a principal mission. No changes in perception about the park's mission were observable between people who had completed their visit to the park and those who had not yet entered. There was, on the other hand, a large proportion of respondents who recognized that one of the park's main purposes was the rescue and rehabilitation of wildlife. What was troubling about the responses to the mission question was how few visitors recognized the botanical garden sector of Summit as one of the park's main features. In fact, a lower proportion of visitors recognized Summit as a botanical garden than erroneously recognized the park as a zoo. Once again, it was clear that the methods responsible for transmitting information about the botanical side of the park were lacking and/or inefficient.

Another discovery that was visitors did not understand how the animals arrived to the park. While, a large proportion of visitors were aware that the park was a refuge and rehabilitation center, very few visitors could explicitly identify how the animals arrived at the park, or where they came from. Clearly a lack of awareness remains with regards to the zoological side of the park, even if many visitors accurately realize that the park is not a zoo.

While there were many areas in which visitor awareness was lacking, it was also clear that visitors would be receptive to new information if it were presented to them. When asked about the signage, for both the animals and the plants, one of the aspects that was most

appreciated by the visitors was the information provided on the signs. Furthermore, when asked about whether the signage was useful, a number of visitors thought that more bilingual signs in more visible places would be ideal. Evidently, most visitors were interested in learning more about the park's animals and plants.

It was more difficult to assess what people thought about the handout, given that such a high proportion of visitors did not receive it. Of the useful criticisms received, many related to improving and adding to the information available in the handout or making the information more widely accessible by providing an English translation.

When asked about how their experience at the park could be improved, two of the most common things mentioned were to present the option of guided tours and, generally, to have more information available in the park, shown in Figure 4. Both of these ideas once again attest to the fact that visitors want to know more and become more aware of what is taking place in the park. This would seem to suggest that any improvements made to the information dissemination methods in the park would be very well received by the majority of visitors.

Part 2: Improvements to information

From the feedback received by staff and visitors alike, it was decided that changes would be made to the information dissemination methods in the park through the creation of a new informative handout, including a newly designed, more use-friendly map, and the creation of an official Facebook page. Given the three areas in which public awareness was lacking, these same three areas were addressed in the handout. It was decided that a question answer format for the handout would be most effective and easier to read than giant blocks of text. The questions in the handout answered were: “Why was Summit Founded?” “What is there to do at Summit?” “What

is there to see at Summit?”“Why are animals brought to Summit?” and “What can you do to help the animals?”.

Though no respondents commented on the map portion of the handout, it was clear to everyone that it was an aspect that needed to be addressed. The park director, Nestor Correa, wanted to the new version of the map to be simple, clean and user-friendly. Also, given the renovation plans for the park, the map could only include the enclosures of the animals that were permanent residents and that would not be relocated during the overhaul. As a result, only the six following animals were included on the map: the macaws, the jaguars, the crocodile, the tapir, the harpy eagle and the spider monkeys. The other enclosures that will remain in the same location house a variety of wild animals, many of which are continuously changing. For this reason, these animals were simply acknowledged on the map by an area labeled "Other Wildlife".

In order to emphasize the botanical side of the park, a number of interesting trees and gardens were included on the map as well. Specifically, 8 areas of particular interest were chosen by the main botanical staff member to be included: the prehistoric garden (which was renamed from “Jurassic garden” because, according to staff, visitors believed it related to dinosaurs), the Panama tree, the Cinnamon trees, the Cannon ball trees, the Monkey Pot tree, the Garcinias, the Rubber trees and the Timber trees of Panama.

A Facebook page was decided upon given the current state of information available online with regards to Summit. In the absence of a complete web page, Facebook will act as an efficient means to reach a new demographic, while simultaneously complementing Summit’s pre-existing Twitter page. It also offered a convenient way to invite a targeted audience to special events and easily keep them up to date on the park’s activities, such as animal arrivals and rehabilitations, and park renovations. It also seemed like a logical area to address since the

results in Figure 2 showed that very few visitors were directed to Summit from the Internet, suggesting that this area has not been effectively exploited by the park, as a means of advertisement and information dissemination. Furthermore, the results supported the idea since the vast majority of visitors claimed they would be interested in following a Facebook page for Summit.

With regards to the Facebook page, information about the park's history, the park's multifaceted mission and the circumstances under which animals arrive at Summit were also included. The history of the park was touched upon by means of milestone dates that show up on Facebook timeline. The multifaceted mission of the park, and the circumstances under which animals arrive, were acknowledged in the 'About' section of the page and are further addressed through some of the pictures posted on the page.

As is also the case with the handout, all the general information about the park (location, opening hours and admission prices) was included on the Facebook page. Since the Facebook page was passed along to Yiscel Yanguéz to administrate, the reach of the page has increased significantly. It presently has 119 likes and some of the photos posted have reached over 400 people.

Part 3: Piloting the handout

Given the small sample size that was surveyed, this round of surveys was much more useful for receiving feedback about the handout than for comparing the knowledge bases of the visitors, though a few encouraging comparisons could be made. For one, as shown in Figure 10, a significant increase in the amount of people who correctly identified the reason for the park's founding was obtained in this round of surveys in comparison to the previous surveys of visitors

leaving the park. Furthermore, as shown in Figure 11, a higher proportion (though not significantly higher) of respondents correctly identified that the animals from the park were rescued or confiscated in this round of surveys. Clearly, as suggested by Figure 9, having a more visually appealing source of information outlining Summit's history, mission and work acted to encourage visitors to read the handout and learn more about the park.

In terms of people's response to the handout, overall it was overwhelmingly positive. Very few respondents thought the handout required changes or that there were any aspects of the map that were missing or unclear. The part of the handout that seemed to be the most useful to the respondents was the map; almost all the visitors reported to have used the map to navigate themselves around the park. While a large proportion of visitors also reported to having read the handout, it was suggested from their responses to the knowledge questions that they had not read it thoroughly.

While it is difficult to tell conclusively how many people were reading the handout and learning from it, almost all visitors showed much more interest in the new handout than the old one. Upon receiving the new handout of the park, visitors would immediately leaf through it and appeared to read small excerpts. This behavior was never observed when the old handout was distributed to visitors; they would just take it and walk off without ever glancing at it. Even if the handout is not being read entirely, at least it is being paid more attention than it was in the past. Hopefully, with time, as the handout is distributed to more and more visitors and is seen by the same visitors over and over public awareness about the park's history, mission and work with wildlife will increase.

In terms of the Facebook page, very few of the surveyed visitors knew about the park's Facebook page, and it is very likely that those that did had only heard about it through the

handout. Only one person reported to be following the Facebook page; however, given the very small sample size surveyed and how new the Facebook page is, these results were to be expected.

Concluding remarks

This project, while inconclusive with regards to the ability of the improvements made to increase public awareness about Parque Municipal Summit, has provided a very important first step towards accomplishing this task. After one day piloting the handout, changes in public perception of the park were already visible, particularly with regards to the park's history and the circumstances under which the animals arrive at the park.

The handout was very well received by the park's administration, the Patronato and the municipality alike. It will shortly be printed in all Spanish, English and French versions in bulk quantities by the park to be distributed to the visitors. From the results, it was discovered that the previous map handout was rarely being given to visitors; in order to avoid the same problem with the new handout, the park administration has promised to either require that the ticket sellers give out the handout (instead of leaving this job to the front security) or set up a shelving unit at the park's entrance, from which visitors can help themselves to a handout. It is hoped, that with the increased distribution of the new informative map handout, visitor awareness of the history, mission and work of the park will continue to grow.

Furthermore, the informative handout is essential in that it will be the base for all of the improvements to signage, set to take place in the park as it undergoes renovations. The graphic designer who assisted in the design of the handout will also be providing the park's new signage design. This design will be following the same format that was established in the handout, and

will also be drawing on the information this project obtained with regards to current visitor perceptions.

With regards to the Facebook page, each day it receives more “likes” and with more time the reach of the Facebook page will undoubtedly increase. Given that it now has a permanent administrator who works closely with the park, it should continue forward in the same direction. It is also hoped that, as with the handout, the information on the Facebook page will become more widely distributed and understood.

In conclusion, this project undertook significant improvements to the information dissemination methods in the park and should greatly contribute to increasing public awareness of Summit Municipal Park’s history, mission and truly invaluable work.

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Appendix A - Surveys

‘Before’ survey: English version

OPINION SURVEY
PARQUE MUNICIPAL SUMMIT AND MCGILL
FEBRUARY 2013

(Note: to be answered before visiting the park)

1. Is this your first time visiting Summit Park?
 - Yes
 - No

2. Why are you visiting Summit?
 - Recreation
 - Tourism
 - Education
 - Special event
 - To see the animals in their cages
 - To observe animals and birds in their natural habitat
 - Other _____

3. How did you hear about Summit?
 - Internet
 - Friends
 - Tour book
 - School
 - Radio, TV or media
 - Other _____

4. In your opinion for what purpose was Summit founded?

5. In your opinion what is Summit’s primary mission?
 - Recreation
 - Zoo
 - Botanical garden
 - Refuge and rehabilitation of wild animals
 - Center for education
 - Plant production and sale

6. Do you reside in Panama City or its surrounding areas?
 - Yes
 - No _____

‘Before’ survey: Spanish version

ENCUESTA DE OPINIÓN
PARQUE MUNICIPAL SUMMIT Y MCGILL
FEBRERO 2013

(Nota: Para responder antes de visitar el parque)

1. ¿Es la primera vez que visita Parque Municipal Summit?
 Sí
 No

 2. ¿Por qué visita Summit?
 Recreación
 Turismo
 Educación
 Evento especial
 Ver a los animales en sus recintos
 Observar aves y animales silvestres en su hábitat natural
 Otro _____

 3. ¿Cómo se enteró de Summit?
 Internet
 Amigos
 Guía turística
 Escuela o universidad
 Radio, TV o prensa
 Otro _____

 4. ¿Sabe porque y para que fue creado el Parque Summit?
-
5. ¿Según su opinión, Cual cree usted es la principal misión del Parque?
 Recreación al aire libre
 Zoológico
 Jardín Botánico
 Refugio y centro de rehabilitación de animales silvestres
 Centro de educación
 Producción y venta de plantas

 6. ¿Reside usted en la Ciudad de Panamá o sus alrededores?
 Sí
 No _____

First 'after' survey: English version

OPINION SURVEY PARQUE MUNICIPAL SUMMIT AND MCGILL (FEBRUARY 2013)

(Note: to be answered after visiting the park)

1. After visiting the park, why would you say Summit was founded?

2. In your opinion what is Summit's primary mission?

- Recreation
- Zoo
- Botanical garden
- Refuge and rehabilitation of wild animals
- Center for education
- Plant production and sale

3. Did you see the signs on the animal cages? (If your answer is yes, what caught your attention?)

- No
- Yes _____

4. Did you see the signs on the trees and plants? (If your answer is yes, what caught your attention?)

- No
- Yes _____

5. Did you find the signage useful for your visit? (If the answer is no, how could it be improved?)

- Yes
- No _____

6. Did you receive the informative map upon entering the park? (If the answer is yes, what did you think of it?)

- No
- Yes _____

7. Do you know how the animals arrive at Summit? (If the answer is yes, explain)

- No
- Yes _____

8. What did you enjoy the most about the park?

9. Did you speak with any park personnel? If the answer is yes, what kind of information did you receive?)

- No
- Yes _____

10. What do you think could be done to improve your experience at Summit?

11. Would you follow Summit on Facebook?

- No
- Yes _____

First 'after' survey: Spanish version

ENCUESTA DE OPINIÓN
PARQUE MUNICIPAL SUMMIT Y MCGILL (FEBRERO 2013)

(Nota: Para responder después de visitar el parque)

2. ¿Luego de recorrer el parque, porqué y para que cree usted que fue creado?

3. ¿Según su opinión, Cual cree usted es la principal misión del Parque?

- Recreación al aire libre
- Zoológico
- Jardín Botánico
- Refugio y centro de rehabilitación de animales silvestres
- Centro de educación
- Producción y venta de plantas

4. ¿Vio usted los letreros informativos en los recintos de los animales? (Si la respuesta es Sí, que fue lo que más le llamó la atención)

- No
- Sí _____

5. ¿Vio usted los letreros informativos en los árboles y plantas? (Si la respuesta es Sí, que fue lo que más le llamó la atención)

- No
- Sí _____

6. ¿Encontró los letreros útiles para ilustrar su visita? (Si la respuesta es No, que cree hace falta)

- Sí
- No _____

7. ¿Recibió la guía informativa del Parque? (Si la respuesta es Sí, que le pareció)

- No
- Sí _____

8. ¿Sabe usted como llegan los animales que están en los recintos al Parque? (Si la respuesta es Sí, explique)

- No
- Sí _____

9. ¿Qué fue lo que más le gustó del Parque?

10. ¿Conversó con alguien del personal del Parque? Si la respuestas es Sí, que tipo de información recibió)

- No
- Sí _____

11. ¿Qué cree usted que deberíamos hacer para mejorar su experiencia en Summit?

12. ¿Estaría interesado en visitar una página Facebook sobre el Parque Summit?

- No
- Sí _____

Second 'after' survey: Spanish

ENCUESTA DE OPINIÓN
PARQUE MUNICIPAL SUMMIT Y MCGILL (ABRIL 2013)

7. ¿Es la primera vez que visita Parque Municipal Summit?
 Sí
 No
8. ¿Leyó la guía informativa? (Si la respuesta es Sí, que le pareció?)
 No
 Sí _____
9. ¿Utilizó la mapa para orientarse en el parque?
 No
 Sí
10. ¿Hubo algún aspecto de la mapa que no fue comprensible? (Si la respuesta es Sí, explique)
 No
 Sí _____
11. ¿Siente que hay algo que falta en la mapa? (Si la respuesta es Sí, explique)
 No
 Sí _____
12. ¿Siente que ha aprendido algo de la guía informativa?(Si la respuesta es Sí, explique)
 No
 Sí _____
13. ¿Cambiaría algo de la guía informativa? (Si la respuesta es Sí, qué?)
 No
 Sí _____
14. ¿Sabe porque y para que fue creado el Parque Summit? (Si la respuesta es Sí, explique)
 No
 Sí _____
15. ¿Sabe cuál es la misión del Parque? (Si la respuesta es Sí, explique)
 No
 Sí _____
16. ¿Sabe como llegan los animales que están en los recintos al Parque? (Si la respuesta es Sí, explique)
 No
 Sí _____
17. ¿Sabe que Summit tiene una página Facebook oficial? (Si la respuesta es Sí, la sigue?)
 No
 Sí Sí No

English handout: Side 1

Why was Summit founded?

Summit was founded in 1923 as an experimental botanical garden by the US government. It was used for many years by David Fairchild, a famous botanist and explorer, to test whether tropical plants from Asia and around the world could be grown in the canal zone. Summit's legacy as a botanical garden persists and is attested to by the amazing diversity of trees and plants in Summit's gardens.

What is there to do at Summit?

- Outdoor recreation
- Family picnics
- Trail walking
- Celebrate events and birthdays
- Nature photography
- Volunteer work
- ...and much more

Why are animals brought to Summit?

Every year Summit receives a great number of rescued, confiscated or orphaned wild animals, many of which were being kept as pets illegally. Some are rehabilitated and reintroduced into the wild, while others remain at the park temporarily or permanently depending on their circumstances. The first animals arrived in 1958 and, since then, Summit has been converted into an important refuge for Panamanian wildlife.

What can I do to help wild animals?

- Do not buy them as pets
- Reduce, reuse and recycle, the 3Rs
- Inform yourself about wildlife laws and regulations
- Report animals in danger
- Don't hurt them, protect them
- Become a volunteer and support us

Follow us on Facebook and Twitter to learn more about how you can help!

Park Schedule

Monday to Sunday
9:00 a.m. to 4:00 p.m.
(Ticket box closes at 3:00 p.m.)

Harpy Eagle Museum

Monday to Sunday
9:00 a.m. to 3:00 p.m.

Admission

Children under 5 years old FREE
Seniors \$1.00
Students with card or uniform \$1.00
Panamanian citizens and residents \$2.00
Non-residents \$5.00

Location

Ave. Gaillard towards Gamboa, Municipality of Ancon, entrance following the administrative buildings of Parque Nacional Soberania

E-mail: parquesummit@gmail.com
 Telephone: (507)232-4850
 (507)232-4854
www.parquesummit.org

Parque Municipal Summit
 @ParqueSummit

Photo credit: Ron Magill

PARQUE MUNICIPAL SUMMIT

Summit, more than a botanical garden... a refuge for wildlife. For more than 90 years, an excellent area for natural recreation in Panama.

Trabajando para ti, Alcaldía de Panamá

English handout: Side 2

What is there to see at Summit?

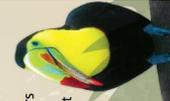
Summit's main attraction is the direct contact it offers with nature. You can enjoy the musicality of tropical bird calls and the majesty of Panama's native fauna. Learn about the jaguar, the largest feline in the Americas, or about Panama's national bird in the Harpy Eagle Museum.

Summit is also a botanical garden, offering contact with a variety of tropical trees and plants from around the world. A garden of prehistoric plants near the park's entrance signals the pathway up to the nursery where ornamental plants are sold.

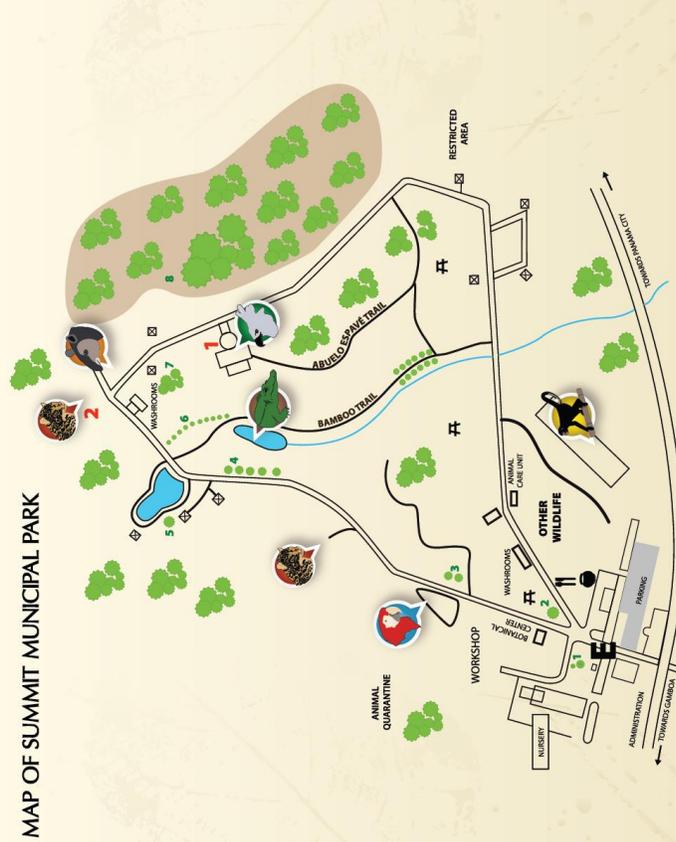


During your visit to Summit, don't forget to respect the park rules!

- Do not feed the animals
- Do not put hands or fingers in the enclosures
- Do not throw things at the animals
- Do not yell at, or harass the animals
- Put garbage in the appropriate containers
- Pets are prohibited in the park
- Do not destroy any plants, or pick their fruit
- Smoking and alcohol is prohibited
- Keep children supervised at all times



MAP OF SUMMIT MUNICIPAL PARK



PLANTS

1. Prehistoric garden
2. Panama tree
3. Cinnamon trees
4. Cannonball trees
5. Monkey Pot tree
6. Garcinias
7. Rubber trees
8. Timber trees of Panama

ANIMALS

- Macaws
- Jaguar
- Crocodile
- Tapir
- Harpy Eagle
- Primates

INFRASTRUCTURE

- ⊞ Recreational areas
- ⊞ Rentable ranchos
- ⊞ Food stands
- ⊞ Sale of artisanal goods
- ⊞ Harpy Eagle museum
- ⊞ Mundo Jaguar



Spanish handout: Side 1

¿Por qué fue creado Summit?

Fundado en 1923 como jardín experimental por el gobierno de los Estados Unidos, fue por muchos años utilizado por el famoso explorador David Fairchild para probar la resistencia de plantas tropicales de Asia y otras partes del mundo en la zona del Canal. Su legado aún se puede ver en la gran diversidad de árboles y plantas existentes en los jardines de Summit.



¿Qué hacer en Summit?

- Recreación al aire libre
- Pícnic familiares
- Senderismo o caminatas
- Celebrar eventos y cumpleaños
- Fotografar la naturaleza
- Hacer voluntariado
- ...y mucho más!

¿Cómo llegan los animales a Summit?

Todos los años Summit recibe un gran número de animales silvestres rescatados, confiscados, huérfanos o que han sido mantenidos como mascotas ilegales. Algunos son reintegrados a su medio natural y otros permanecen en el parque de forma temporal o permanente por su condición especial. Los primeros animales llegan en 1958, por tal razón Summit se ha convertido en uno de los principales refugios de fauna silvestre panameña.



¿Qué puedo hacer para ayudar a los animales silvestres?

- No comprarlos como mascotas
- Recicla, reduce y reutiliza las 3R
- Aprende sobre las leyes de vida silvestre
- Reporta animales en peligro
- No les hagas daño, protégelos!
- Conviértete en Voluntario y apóyanos!

¡Síguenos en Facebook y Twitter y aprende más sobre cómo ayudarnos!



Horario del Parque

Lunes a Domingos
9:00 a.m. a 4:00 p.m.
(Venta de boletos hasta las 3:00 p.m.)

Museo del Águila Harpía

Lunes a Domingos
9:00 a.m. a 3:00 p.m.

Entrada General

Niños menores de 5 años GRATIS
Jubilados B/.1.00
Estudiantes con carnet o uniforme: B/.1.00
Nacionales y residentes: B/.2.00
Extranjeros: B/.5.00

Ubicación

Ave. Gaillard, dirección Gamboa, Corregimiento de Ancón, entrando por la sede administrativa del Parque Nacional Soberanía.



Fotografía: Ron Magill

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www.parquesummit.org

Facebook: Parque Municipal Summit
Twitter: @ParqueSummit

PARQUE MUNICIPAL



SUMMIT

Summit, más que un Jardín Botánico...un refugio para la vida silvestre. Por más de 90 años, el área recreativa natural por excelencia de Panamá!



Trabajando para tí,
Alcaldía de Panamá

Spanish handout: Side 2

¿Qué se puede ver en el Parque?

El principal atractivo de Summit es entrar en contacto directo con la naturaleza. Puedes disfrutar del canto de las aves tropicales, de una muestra representativa de fauna silvestre panameña, aprender sobre el jaguar, felino más grande de América o sobre nuestra ave nacional, en el Museo del Águila Harpía.

Summit es además un jardín botánico, el cual ofrece al visitante la oportunidad de disfrutar de una gran variedad de árboles y plantas tropicales de todo el mundo. Un jardín de plantas prehistóricas en la entrada del parque señala el camino hacia el vivero donde se vende plantas ornamentales.

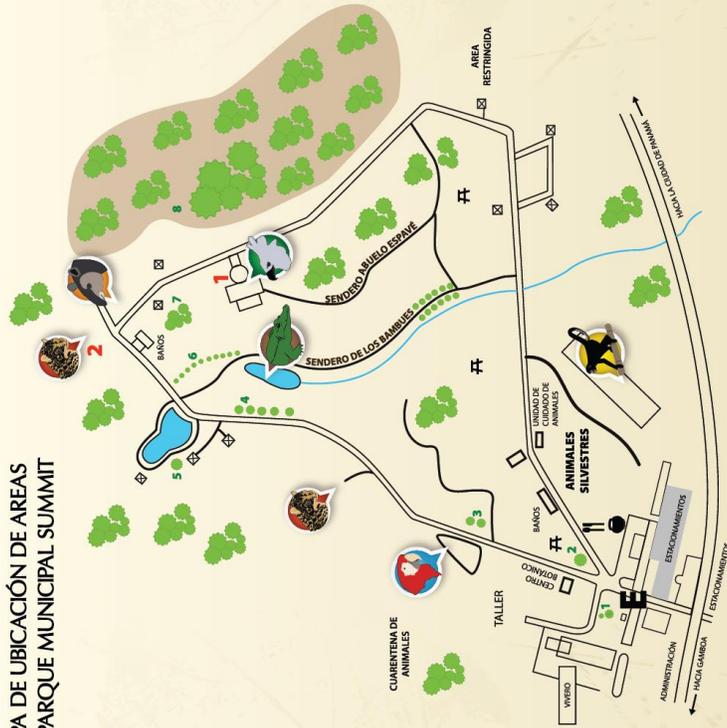


Durante su visita a Summit, no olvide respetar las normas de seguridad!

- No alimente a los animales
- No meta manos o dedos en los recintos
- No arroje objetos a los animales
- No grite o moleste a los animales
- Coloque la basura en los contenedores
- Prohibido ingresar con mascotas
- No arranque las plantas o sus frutos
- No se permite fumar o ingresar alcohol
- No deje a los niños solos



MAPA DE UBICACIÓN DE AREAS DEL PARQUE MUNICIPAL SUMMIT



PLANTAS

1. Jardín Prehistórico
2. Árbol Panamá
3. Árboles de Canela
4. Árboles Bala de Cañon
5. Árbol Olla de Mono
6. Las Garcinias
7. Árboles de Caucho
8. Árboles Maderables de Panamá

ANIMALES

- Guacamayas
- Jaguar
- Cocodrilo
- Tapir
- Águila Harpía
- Primates

INFRAESTRUCTURAS

- ⚡ Areas Recreativas
- ⚡ Ranchos de Alquiler
- ⚡ Venta de Comida
- ⚡ Museo Águila Harpía
- ⚡ Mundo Jaguar



French handout: Side 1

Pour quelle raison a Summit été créé?

Summit a été fondé en 1923 comme un jardin botanique expérimental par le gouvernement américain. Le parc a été utilisé pendant de nombreuses années par David Fairchild, un célèbre botaniste et explorateur, pour examiner si les plantes tropicales de l'Asie et d'autres parties du monde pouvaient être cultivées dans la zone du canal. L'héritage du parc comme jardin botanique persiste et est attesté par la grande diversité d'arbres et de plantes dans les jardins de Summit.



Pourquoi les animaux sont-ils apportés à Summit?

Chaque année, Summit reçoit un grand nombre d'animaux sauvages sauvés, confisqués ou orphelins, duquel beaucoup ont été maintenu comme animaux de compagnie illégalement. Quelques animaux sont réhabilités, d'autres sont gardés au parc de façon temporaire ou permanente dépendant des circonstances de l'animal. Les premiers animaux ont été sauvés en 1958, et depuis ce temps Summit est devenu un des plus importants refuges pour la faune panaméenne.



Que puis-je faire pour aider les animaux sauvages?

- N'achetez les pas comme animaux de compagnie
- Réduisez, réutilisez et recyclez, les 3R
- Renseignez-vous sur les lois de la vie sauvage
- Avisez les autorités si vous trouvez un animal en danger
- Faites aucun mal aux animaux, protégez les
- Devenez un Bénévoles et appuyez le travail à Summit

Suivez nous sur Facebook et Twitter pour apprendre plus sur comment vous pouvez nous aider!

Qu'est-ce qu'il y a faire à Summit?

- Récréation en plein air
- Pique-niques familiales
- Marcher sur les sentiers
- Célébrer événements spéciaux et anniversaires
- Photographier la nature
- Bénévoles
- ...et beaucoup plus!



Horaires du Parc
Lundi à Dimanche
9h00-16h00
(La billetterie ferme à 15h00)

Musée de la Harpie féroce
Lundi à Dimanche
9h00-15h00

Admission
Enfants moins de 5 ans GRATUIT
Âge d'or 1.00\$
Étudiants avec carte d'identité ou uniforme 1.00\$
Citoyens et résidents du Panama 2.00\$
Non-résidents 5.00\$

Localisation
Avenue Gaillard, en direction de Gamboa, Municipalité de Ancon, entrée après les édifices d'administration du Parque Nacional Soberania.



Photo: Ron Magill

Courriel: parquesummit@gmail.com
Téléphone: (507)232-4850
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f Parque Municipal Summit
t @ParqueSummit



Summit, plus qu'un jardin botanique...un refuge faunique. Depuis plus de 90 ans, un excellent espace de récréation en nature au Panamá!



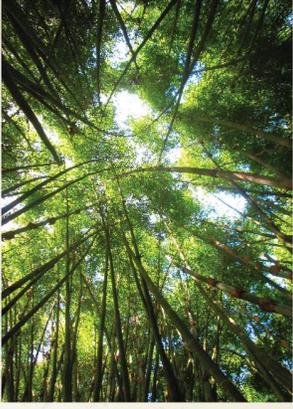
Trabajando para tí, Alcaldía de Panamá

French handout: Side 2

Qu'est-ce qu'il y a à voir à Summit?

L'attraction principale de Summit est le contact offert avec la nature. Vous pouvez écouter des chants d'oiseaux tropicaux ou explorer le magnifique échantillon de faune indigène du Panama. Renseignez-vous sur les jaguars, le plus grand félin des Amériques, ou sur l'oiseau national du Panama, au Musée de la Harpie féroce.

Summit est également un jardin botanique où l'on peut observer une grande variété de plantes tropicales. De plus un jardin de plantes préhistoriques près de l'entrée souligne le chemin à la pépinière, où des plantes ornementales sont vendues.

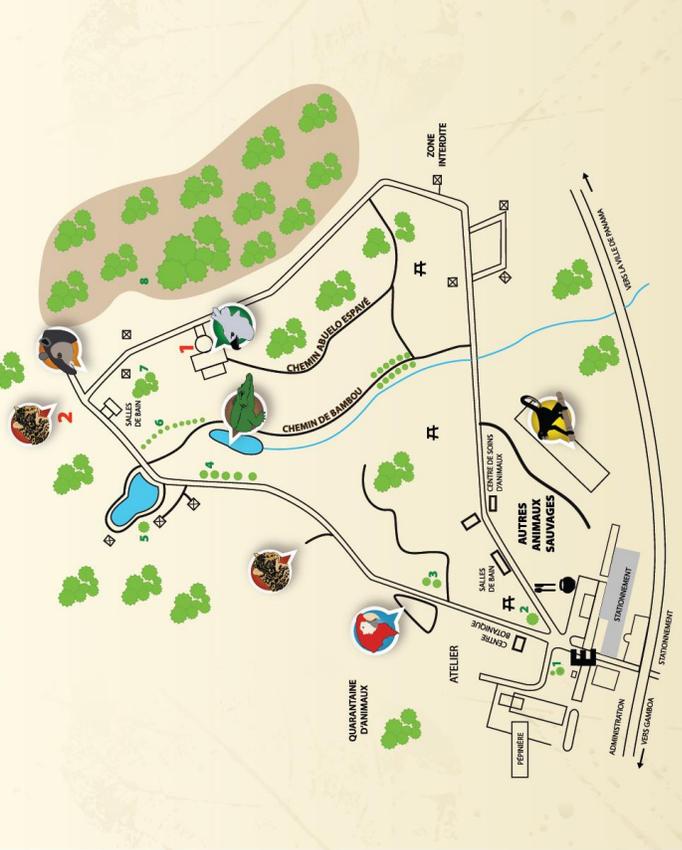


Au cours de votre visite, n'oubliez pas de respecter les règles du parc!

- Ne pas nourrir les animaux
- Ne pas jeter des objets pour les animaux
- Ne pas jeter des déchets dans les récipients
- Interdit d'entrer avec des animaux de compagnie
- Ne pas détruire les plantes ou ramasser leurs fruits
- Interdit de fumer ou de boire de l'alcool
- Ne laissez pas les enfants sans surveillance



PLAN DU PARC MUNICIPAL SUMMIT



- INFRASTRUCTURE**
- ⌘ Aire de pique-nique
 - ⌘ Ranchos à louer
 - ⌘ Vente d'aliments
 - ⌘ Musée de la Harpie féroce
 - 1 2

- ANIMAUX**
- Perroquets Aras
 - Jaguar
 - Crocodile
 - Tapir
 - Harpie féroce
 - Primates

- PLANTES**
1. Jardin préhistorique
 2. Arbre de Panama
 3. Arbres à cannelle
 4. Arbres aux boulets de canon

5. Arbre pot de singe
6. Garcinias
7. Arbres à caoutchouc
8. Arbres à bois de Panama



Appendix C - Figures

Visitors' motivation behind visiting Summit

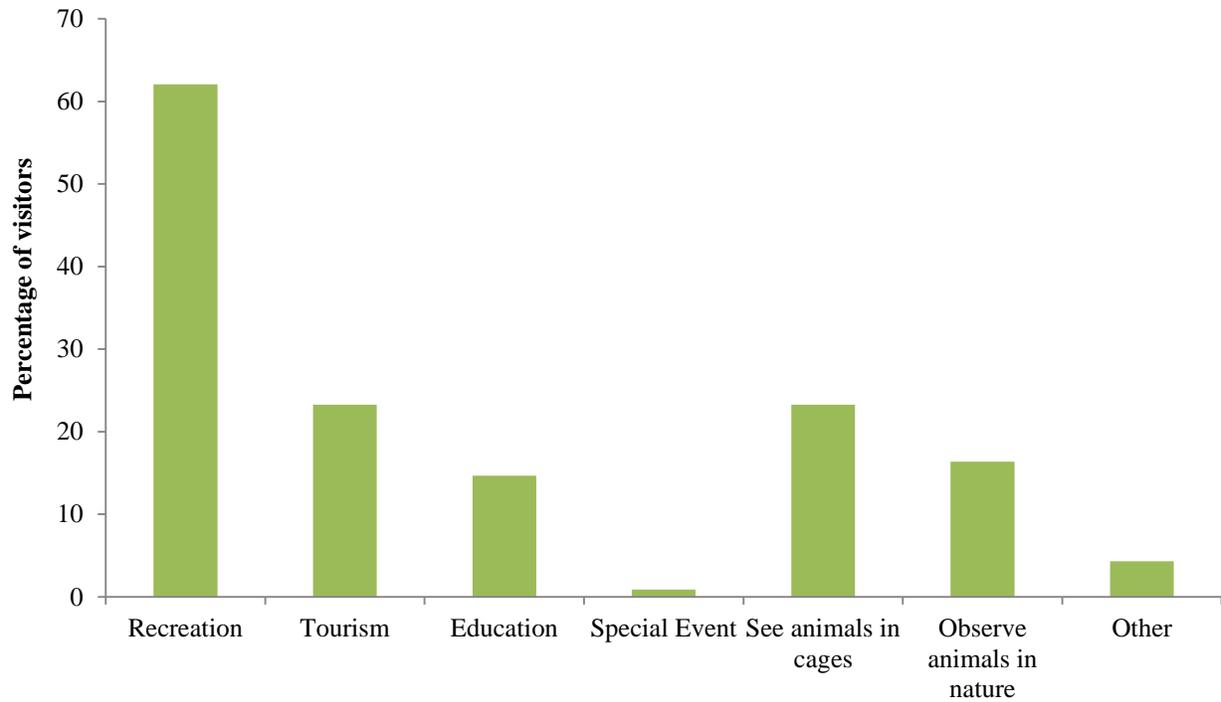


Figure 1: Results from the 'before' surveys revealing the reasons why visitors claim to visit Summit.

How visitors heard about Summit

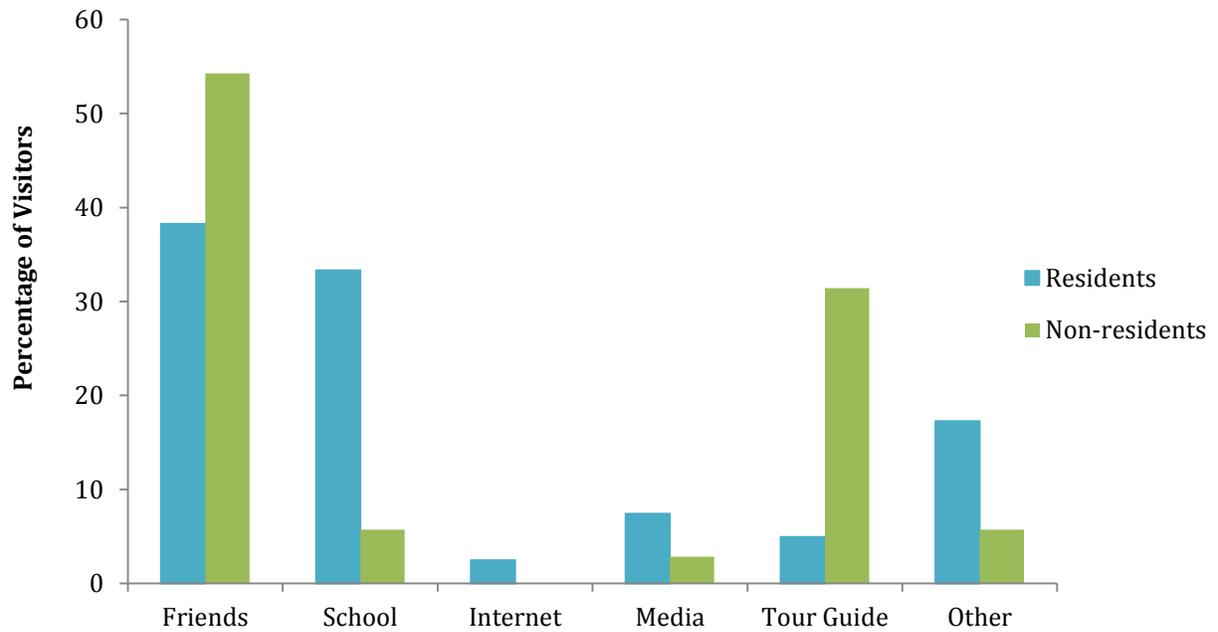


Figure 2: Results from the ‘before’ surveys revealing the ways in which Panama City residents heard about Summit versus the ways in which non-residents heard about Summit.

Aspects visitors enjoyed most about Summit



Figure 3: Results from the first set of ‘after’ surveys revealing the aspects of the park visitors most enjoyed.

Things visitors suggested could improve their experience at Summit

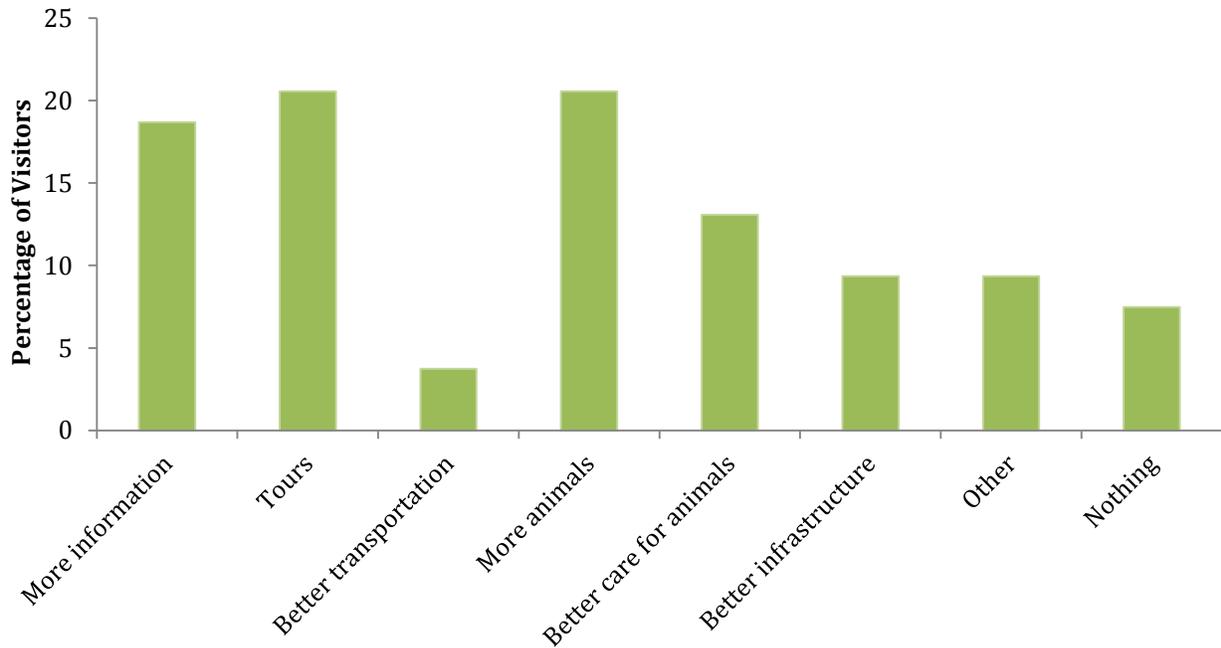


Figure 4: Results from the first set of ‘after’ surveys revealing the areas of the park visitors believed could be improved.

Reasons for which visitors believed Summit was founded

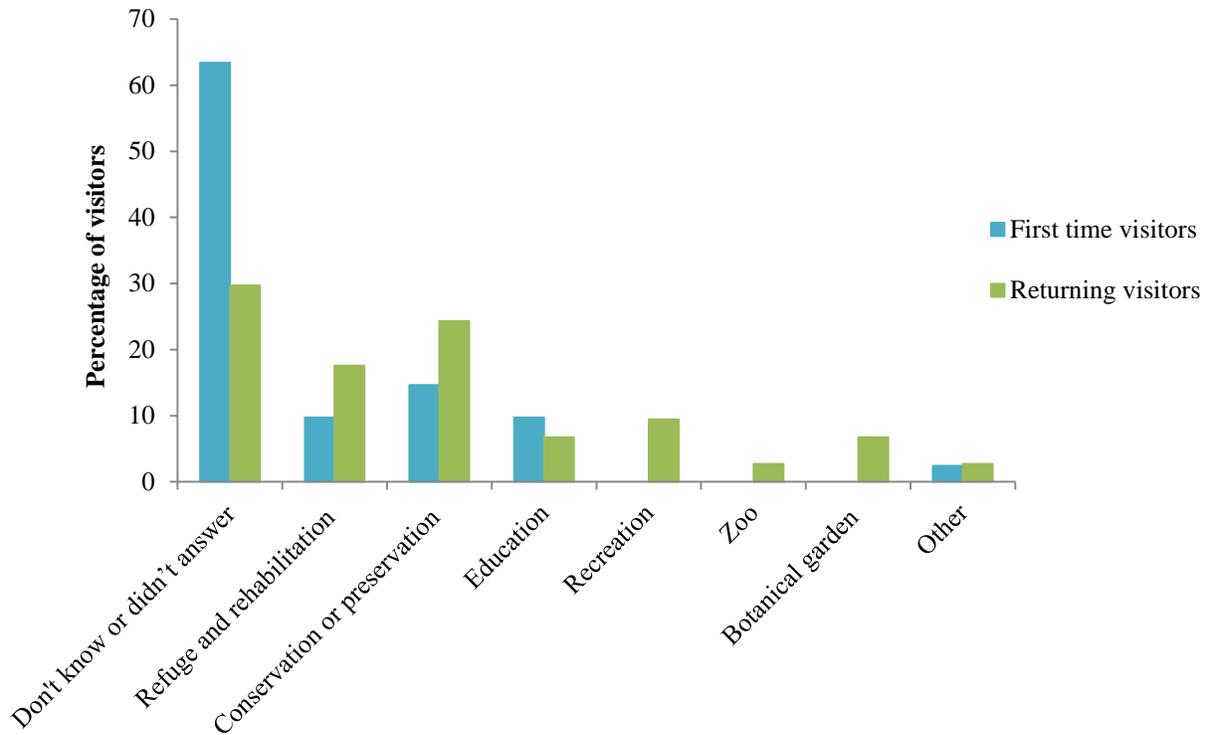


Figure 5: Results from the ‘before’ surveys revealing the reasons for which first time visitors believed Summit was founded versus the reasons for which returning visitors believed Summit was founded.

Summit's mission, according to visitors

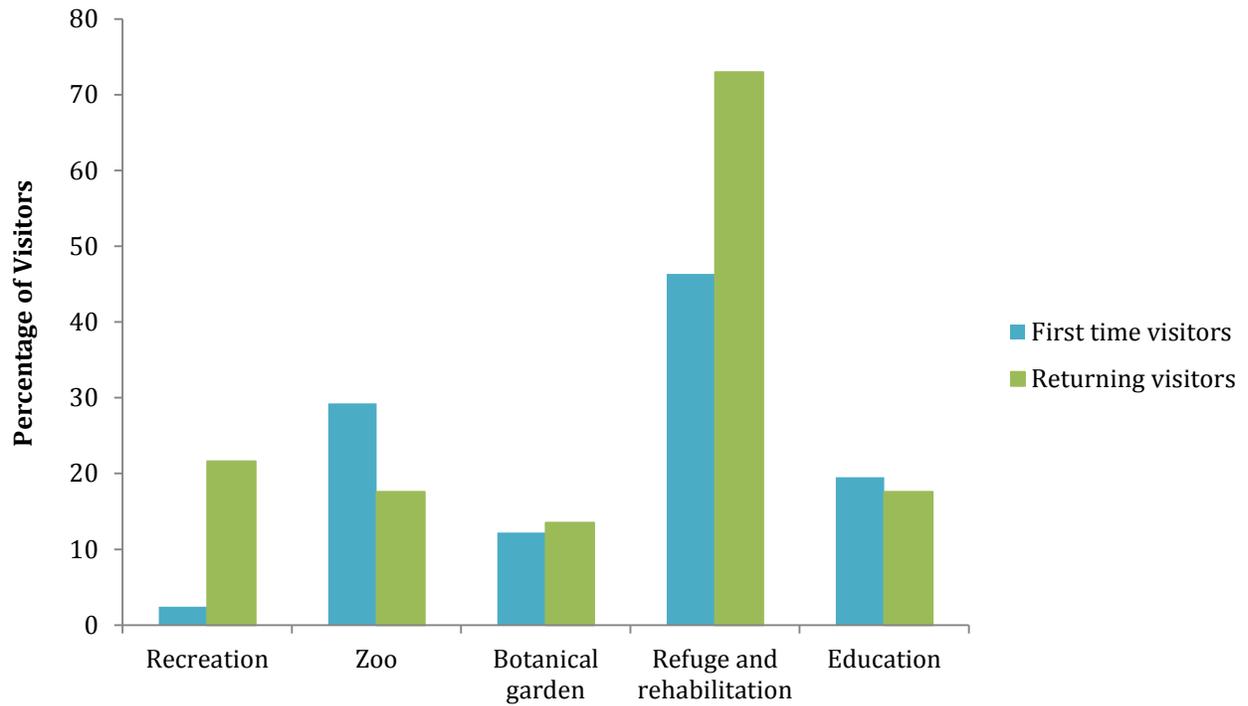


Figure 6: Results from the 'before' surveys revealing Summit's main mission according to first time visitors and returning visitors.

Reasons for which visitors believed Summit was founded

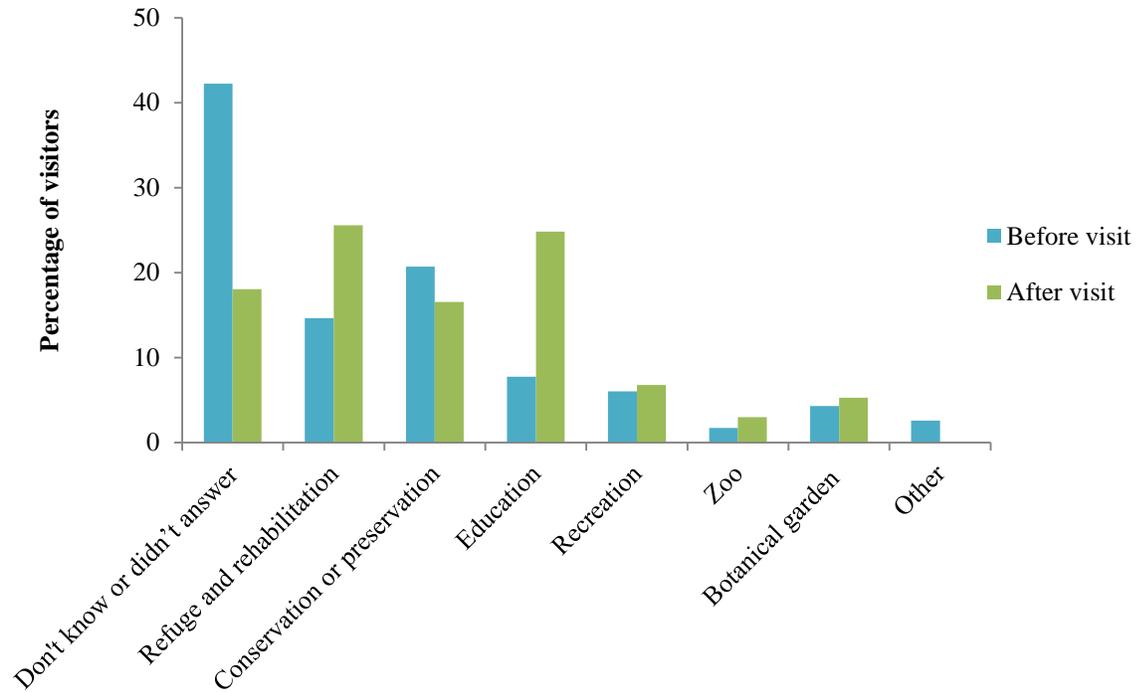


Figure 7: Results contrasting answers from the 'before' surveys with the first round of 'after' surveys. The graph shows the reasons for which respondents believed Summit was founded, before and after having visited the park.

Summit's mission, according to visitors

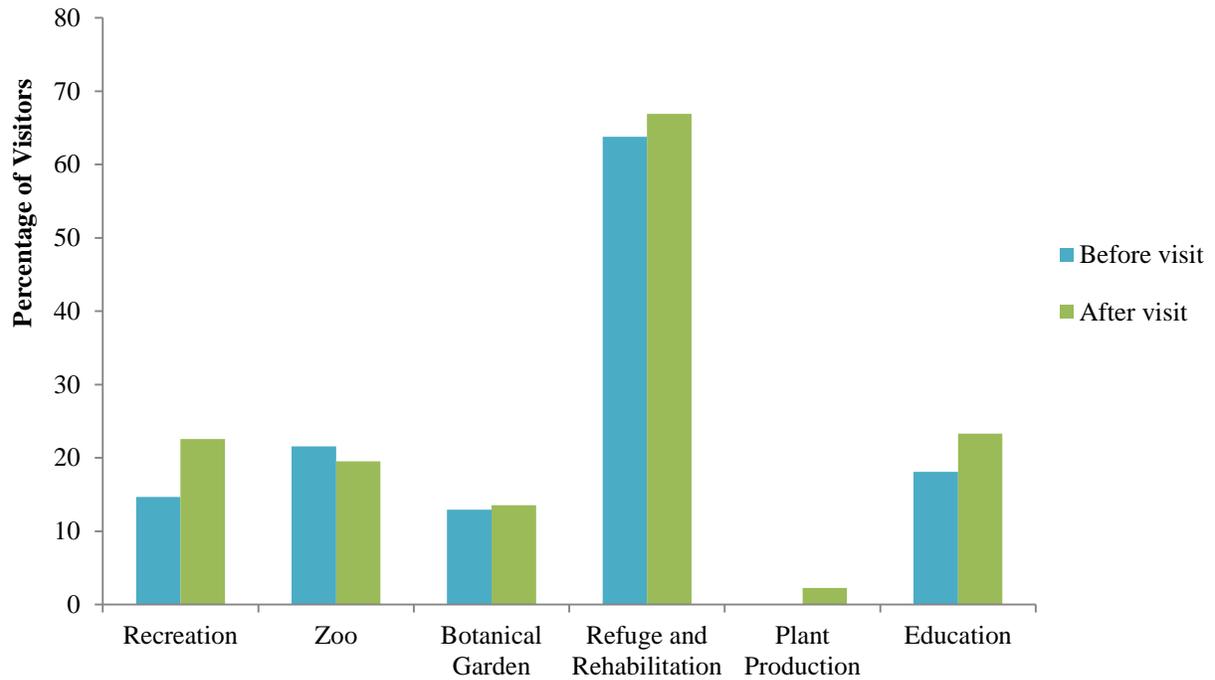


Figure 8: Results contrasting answers from the 'before' surveys with the first round of 'after' surveys. The graph shows Summit's main mission according to respondents, before and after having visited the park.

Things visitors claimed to have learned from the handout

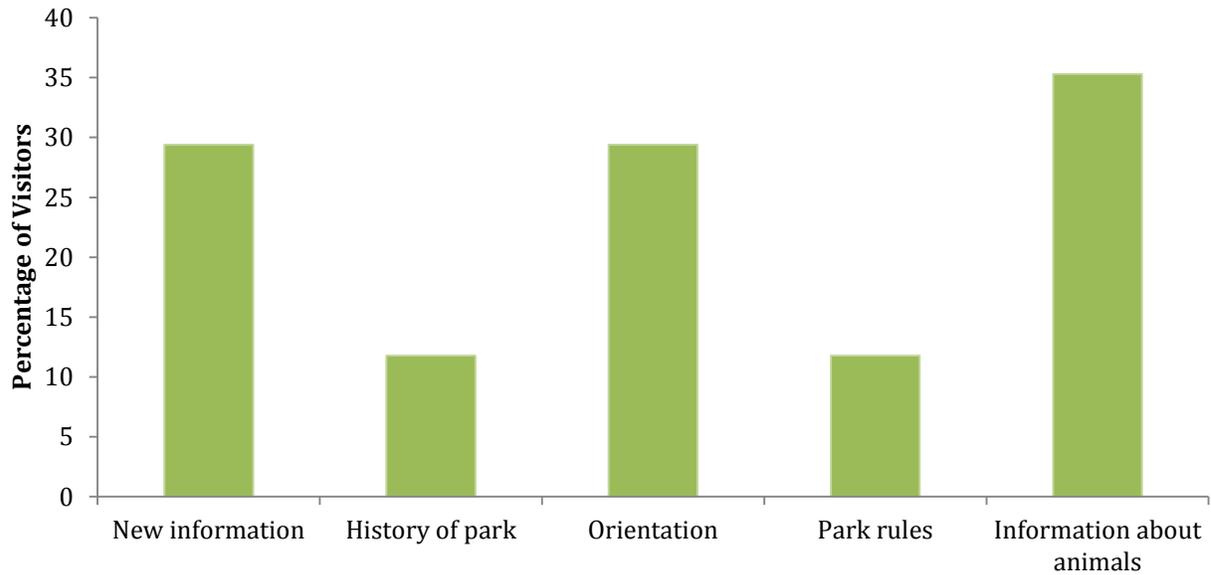


Figure9:Results from the second set of ‘after’ surveys revealing the things visitors claimed they learned from reading the handout.

Visitors' knowledge of the reason for Summit's foundation

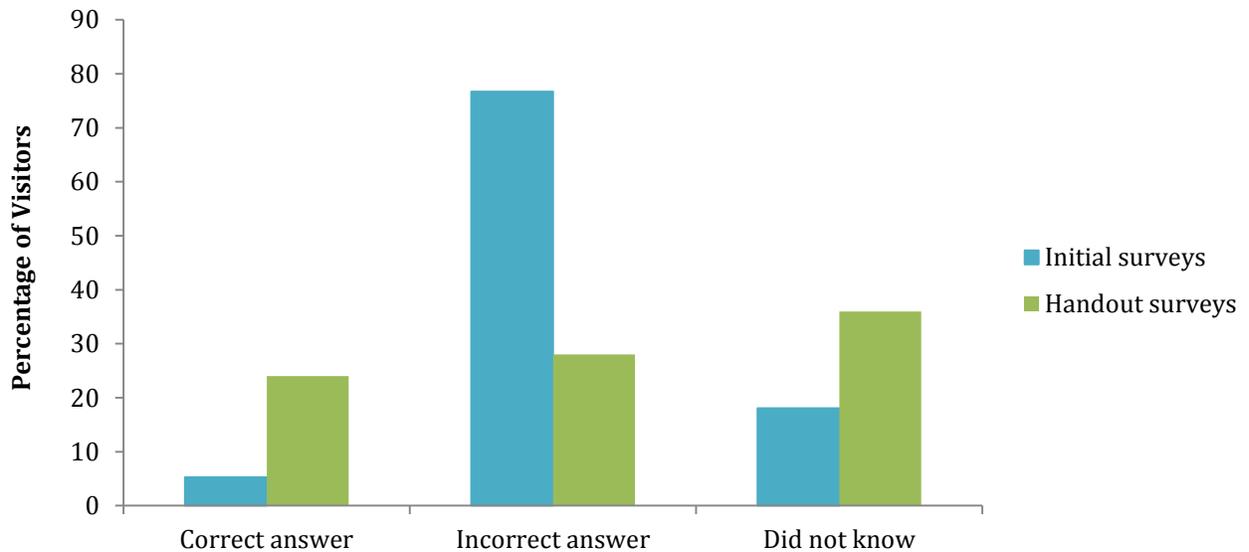


Figure 10: Results contrasting answers from the first round of ‘after’ surveys with the second round of ‘after’ surveys. The graph shows the percentage of visitors who were aware that the park was founded as a botanical garden after visiting the park with the old handout versus the percentage of visitors who were aware that the park was founded as a botanical garden after visiting the park with the new handout.

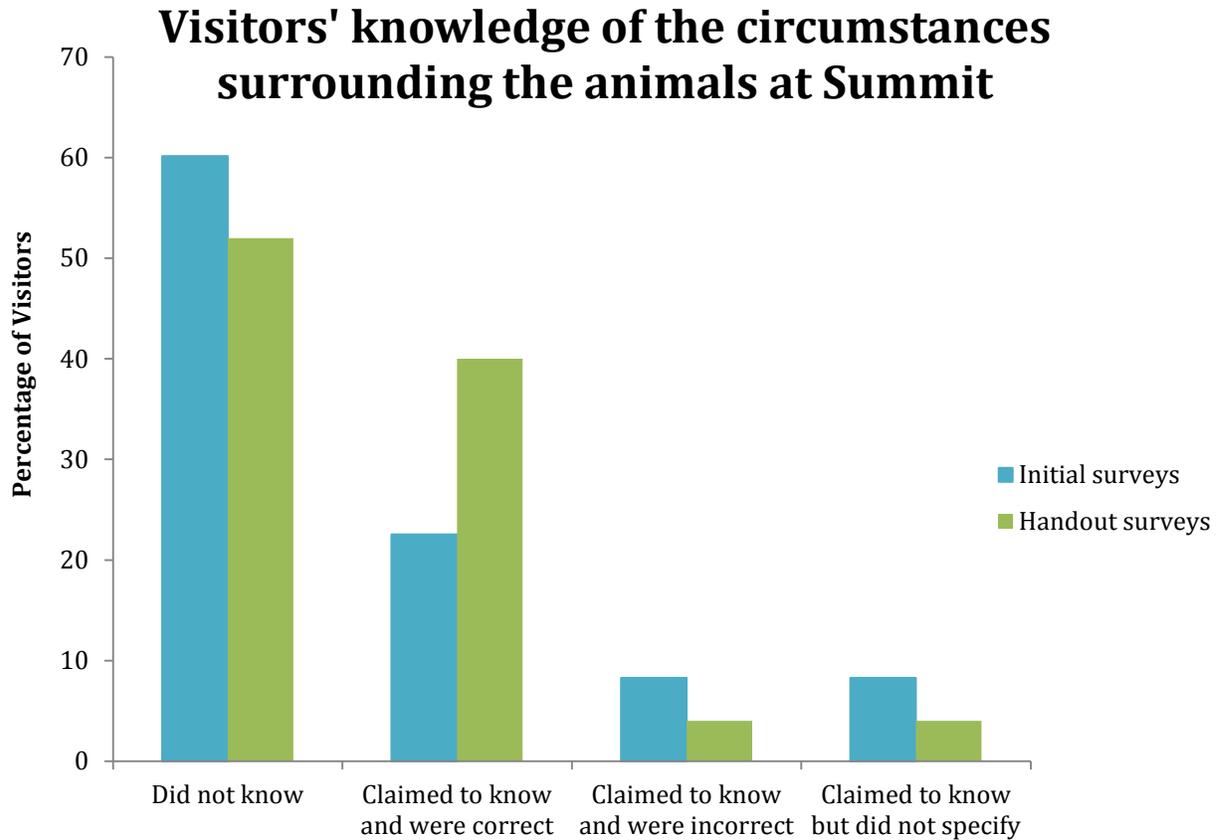


Figure 11: Results contrasting answers from the first round of ‘after’ surveys with the second round of ‘after’ surveys. The percentage of visitors who were aware that the animals were rescues after visiting the park with the old handout versus the percentage of visitors who were aware that the animals were rescues after visiting the park with the new handout.

Appendix D - Days Spent on Project, Budget

Days spent on the project: 30

Days spent in the field: 6

Budget:

Printing: \$45.00

Transportation: \$80.00

Total: \$125.00