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**A WHALE OF A GOOD TIME: WHALE WATCHES
SPREADING CONSERVATION THROUGH EDUCATION**

Honors Thesis

**Presented in Partial Fulfillment of the Requirements
For the Degree of Bachelor of Science in Geography**

In the School of Arts and Sciences
at Salem State University

By

Shannon Cooney

Dr. Keith Ratner
Faculty Advisor
Department of Geography

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Abstract

Ecotourists are more concerned with their impact on the environment compared to mainstream tourists. They have a strong commitment to preserving nature and look for educational experiences. These values and motives translate into the activities ecotourists choose to participate in while vacationing. Understanding ecotourist behavior is important, so that destination managers can better market their sites or activity. For example, whale watching is increasing in popularity. Whale watches are a good way to incorporate ecotourist values and help further the conservation of whales. Studies have shown whale watches have an educational component that satisfies visitor expectations. If people are satisfied with the experience, they are more likely to pass on the conservation related information they learned and get their peers to undergo a similar trip.

This research project is a literature review of the history of whale watching, motivations of ecotourists, and case studies of whale watches in different areas. In addition to the literature review, I went on a whale watch tour in Cape Ann, Gloucester to see how tours on the North Shore of Boston compare to the case studies. The conclusions in this research project are important as they can be applied to any whale watch to improve visitor satisfaction and better incorporate ecotourist values.

Table of Contents

Abstract.....	i
Tables and Figures.....	iii
Introduction.....	1
History of Commercial Whale Watching.....	2
International Whaling Commission.....	3
Whale Watching Around the World.....	4
Education on Whale Watches.....	5
My Experience on Stellwagen Bank.....	8
Discussion on Personal Tour.....	9
Study Conclusions.....	11
References.....	13

Tables and Figures

Table 1: 2008 Global Whale Watchers	5
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Introduction

Ecotourists are more concerned about their impact on the environment than mainstream or non-ecotourists. Additionally, they are looking for an educational experience in addition to the tourist experience. By contrast, a mainstream tourist is less likely to be concerned with their impact on the environment (Perkins & Brown, 2012). Is it possible to make a non-ecotourist more eco-conscious? A study by Orams (1997) found that education during wildlife encounters can change tourists' behavior and make them more eco-friendly. A whale watch is a tremendous opportunity to incorporate the findings of this study.

Commercial whale watching has come a long way since Chuck Chamberlain offered trips to tourists for one dollar in the 1950s (Hoyt, 2009). Whale watching has since grown in popularity with thirteen million people participating worldwide (O'Connor et al., 2008). Education was not incorporated into whale watches until the 1970s when New England based whale watch companies started using naturalists on their boats to educate passengers about whales. This method proved to be a successful partnership between whale watch companies and naturalists. Later, it was adopted by other whale watch companies (Hoyt, 1995, as cited in Hoyt & Parsons, 2014).

Studies have found the following about education and tourism.

- When tourists go on a whale watch, they want to be educated about whales and expect the whale watch to have an educational component (Andersen & Miller, 2006).
- The whale watch crew is how most tourists gained new knowledge of whales (Lopez & Pearson, 2017).

- Additionally, people who had been on whale watches before had more knowledge of whales than those who had never been on a whale watch (Gleason & Parsons, 2018).
- Furthermore, people are likely to pass on the information they learned to friends and family (Lopez & Pearson, 2017).

In other words, whale watches play an important role when it comes to educating the public about whales.

The following paper is a review of the literature on the motivations of ecotourists, the history of commercial whale watching, the International Whaling Commission, an overview of whale watching globally, and several case studies that evaluated the educational content of whale watches. I also went on a whale watch out of Cape Ann in Gloucester, Massachusetts to conduct my own case study. My goal for this thesis project is to demonstrate that educational whale watches can promote whale conservation and be made more marketable to ecotourists.

History of Commercial Whale Watching

Whale watching began on the United States' west coast. In the late 1940s, students would conduct whale counts on land for the University of California's research and government monitoring project. In 1950, the Cabrillo National Monument was converted into a public whale watch lookout from a former US Army gun station. These land based whale watches inspired a local fisherman to offer his own (Hoyt, 2001). Chuck Chamberlain, from San Diego, California, began offering boat trips in 1955 to see gray whales for one dollar in the first commercial whale watch (Hoyt, 2009). Land-based whale watching was the most common way to view whales up until the late 1970s. Lookout spots were located along the coasts of California, Oregon, and Washington. In the late 1970s, Commercial whale watching was still in its infancy, but spread to

lagoons in Mexico and continued to grow along the Californian coast. A Hawaiian whale club, known as the Wailupe Whale Watchers, offered trips to see humpback whales. Moreover, the Montreal Zoological Society began having whale watching trips along the St. Lawrence River in 1973 (Hoyt, 2009). However, commercial whale watching did not become majorly successful until the whale watching craze came to New England.

Provincetown, Massachusetts began offering commercial whale watch tours lead by a naturalist. In 1975, Al Avellar, a fisherman, and Charles ‘Stormy’ Mayo, a naturalist, saw the potential to combine commercial whale watching with science and education. Mayo created the Center for Coastal Studies as a research institution. The Center would provide naturalists to teach passengers of the Dolphin Fleet, operated by Al Avellar, about whales (Hoyt, 1995, as cited in Hoyt & Parsons, 2014). Center researchers were also able to collect photo IDs and other data on the whales. This method of incorporating education and research with commercial whale watching became popular with other whale tour operators (Hoyt, 1995, as cited in Hoyt & Parsons, 2014).

International Whaling Commission

Commercial whaling caused a decline in large whale populations. The International Whaling Commission or IWC was created in 1946 to prevent further whale population decline. The IWC enacted whaling bans for several endangered whale populations before establishing a ban on commercial whaling across all species in 1982. In 1993, the IWC recognized whale watching as a sustainable way to use whales as an economic resource. The next year the IWC scientific committee was tasked to give scientific based advice on whale watching and create guidelines (Hoyt & Parsons, 2014). Currently the IWC cooperates with scientists, governments, NGOs, and the whale watching industry to further sustainable whale watching. The IWC

scientific committee studies the impacts of continual whale watching on whales and their populations as well as their habitats. This research has contributed to the formation of guidelines for more sustainable whale watching. These regulations include limiting boats and their speeds around whales. Moreover, the IWC is in the process of developing a web-based interactive handbook for whale watching. The aim of the handbook is to assist whale tour operators and managers in adhering to sustainable whale watching guidelines. Additionally, the handbook is an educational tool for people planning a whale watch trip (International Whaling Commission, n.d.). The IWC is committed to protecting whales and ensuring whale watching remains a sustainable activity.

Whale Watching Around the World

By the 1980s, the whale watching phenomenon spread to other areas of the world including Argentina, the Canary Islands, New Zealand, the United Kingdom and Ireland (Hoyt, 1995, 2001, as cited Hoyt & Parsons, 2014). In 1991, thirty-one countries participated in whale watching and that expanded to eighty-seven countries by 1998 (Hoyt, 2001). Commercial whale watching has since spread to 119 countries. In 2008, thirteen million people participated in whale watches and brought in \$870 million in ticket sales globally. North America is home to the largest whale watching industry with sixty-two million whale watchers in 2008 making up close to 50% of the world's whale watchers. The second most popular whale watch destination is Oceania, the Pacific Islands, and Antarctica. In 2008, they received two and a half million whale watchers or 20% of global total whale watchers (O'Connor et al., 2009). Table 1 shows the number of whale watchers in other regions and their percentage globally. In the early 2000s, whale watch growth decreased due to slowing global tourism from the 9/11 terrorists attacks and SARs (severe acute respiratory syndrome). However, whale watching numbers have since

increased. In 2008, thirteen million people went on whale tours and spent \$2.1 million (O'Connor et al., 2009).

Table 1		
2008 Global Whale Watchers		
Region	Number of Whale Watchers	Percent Globally
North America	62 million	50%
Oceania, Pacific Islands, Antarctica	2.5 million	20%
Africa and Middle East	1.3 million	10%
Asia	1 million	8%
Europe	-	6%
South America	-	5%
Central America and Caribbean	-	2%

Note: Adapted from “Whale Watching Worldwide”, by O'Connor et. al., 2009, Report from the International Fund for Animal Welfare.

Education on Whale Watches

The literature shows that whale watches that are educational will appeal more to ecotourists. A study conducted on the Gold Coast of Australia surveyed tourists at a mainstream attraction, Seaworld, and an ecotourist destination, O'Reilly's Rainforest Retreat which is an accredited ecotourism site. The tourists who visited the ecotourist destination were more interested in ecotourism activities and were more likely to consider their personal impacts on the environment while travelling. Additionally, according to the study, ecotourists were looking to learn about other cultures and historical sites. On the other hand, non-ecotourists or mainstream tourists were not as likely to be concerned with their personal impacts on the environment (Perkins & Brown, 2012). Considering this study, it seems probable that whale watch tours could appeal more to ecotourists by marketing their educational experience.

According to Andersen and Miller (2006), overall tourists want to be educated and education is an expectation of the whale watch. The aim of a case study in Sri Lanka was to determine visitor satisfaction. Tourists were surveyed after completing a whale watch. The most popular suggested improvement was that the tour include more educational information about whales (Buultjens, Ratnayake, Gnanapala, & Nedelea, 2018). This is significant because a study done in Samaná Bay, Dominican Republic had similar results. Tourists indicated that public education of whale conservation was important to them. However according to the study, education on whale watches in the area is lacking.

Along with the ecology and biology of whales, conservation issues surrounding whales should also be addressed. Noise pollution is a major concern because Samaná Bay is small and receives large amounts of boat traffic. However, respondents do not associate noise pollution as a threat to whales (Gleason & Parsons, 2018). A study conducted by Andersen and Miller (2006) found education on whale tours must include conservation issues as well as biological information on whales. Education on whale tours is important because it is the primary place tourists receive information about whales. A study in Juneau, Alaska found the whale watch and the tour operators were where tourists gained the most knowledge about whales. Furthermore, whale watchers are likely to pass on the information they learned to friends and family (Lopez & Pearson, 2017). Additionally, people who have been on whale watches previously were more educated about whales than those who had never been on one (Gleason & Parsons, 2018). This study is valuable because it shows whale watches play a vital role in educating the public about whales.

The most enjoyable aspect of the whale watch for tourists is getting close to whales and observing their behavior (Andersen & Miller, 2006; Buultjens, Ratnayake, Gnanapala, &

Nedelea, 2018; Lopez & Pearson, 2017). However, keeping a safe distance is necessary. In the Sri Lanka study, 8% of respondents indicated they want to see other boats to adhere to the proper guidelines (Buultjens, Ratnayake, Gnanapala, & Nedelea, 2018). Likewise, in Juneau, Alaska almost half of survey respondents were aware of NOAA's whale watching guidelines, but only 14% were able to correctly identify all the regulations. Additionally, one third of tourists indicated that being respectful of whales plays a significant role enjoying the whale watch experience (Lopez & Pearson, 2017). These studies show obeying whale watching regulations will not impede the quality of whale encounters for tourists. Moreover, tour operators should educate passengers on guidelines to manage their expectations. This was especially illustrated by a study conducted on the San Juan Islands in Washington. Here, tourists were not dissatisfied with the distance kept from the whales because the guide explained the distance is needed for conservation (Andersen & Miller, 2006). Furthermore, adhering to guidelines might even attract more ecotourists because of their concern with their personal impacts on the environment (Perkins & Brown, 2012). These studies reveal that tourists want to be respectful of whales, even if it means keeping a further distance away.

As previously mentioned, non- ecotourists are less concerned with their personal impacts on the environment compared to ecotourists (Perkins & Brown, 2012). However, an interesting study by Orams (1997) concluded that education during wildlife encounters can make all tourists more eco-conscious and consequently change their behavior. In the experiment, one tour group had an educational component along with their dolphin encounter and another did not receive any education. The first group became more environmentally aware than the second group. Likewise, the first group was more likely to pick up litter and donate to an environmental organization. This study shows the value of education when tourists and ecotourists see wildlife.

Tourists who received education were more likely to change their behavior to be more environmentally friendly.

My Experience on Stellwagen Bank

In October 2019, I went on a whale watch out of Gloucester, Massachusetts on Cape Ann to evaluate the education provided to passengers verbally and through written material. The whale watch took place in the Stellwagen Bank Marine Sanctuary. The sanctuary is located in the Massachusetts Bay between Cape Ann and Cape Cod in the southwest of the Gulf of Maine. The main feature is a sandy plateau named Stellwagen Bank (NOAA, n.d.-b). Stellwagen Bank was designated a sanctuary in 1992 (NOAA, n.d.-a). The area is the most popular whale watching destination in New England and accounts for 80% of whale watching in the region. Whale watch operators visit from Provincetown, Gloucester, and Boston all to conduct their tours here (O'Connor et al., 2009).

The first written material I encountered was a giant poster by the dock while they waited to board the boat. It depicted the whales we may come across as well as facts about them. More posters were located inside the vessel and hung up along the top of the cabin. They had information about whale behavior, species of whales, and other marine life we may encounter on our voyage. Additionally, each table in the cabin had a small information book about humpback whales, including information about their biology, ecology, and some conservation issues. Overall, from my perspective, written material provided sufficient information on the biology and ecology of whales along with other marine animals.

As we left the harbor, the guide highlighted the importance of being respectful of local wildlife. She instructed passengers to throw away trash in the appropriate bins to prevent polluting the ocean and emphasized that we were heading into whales' territory. Therefore, we

needed to respect them and their environment. Moreover, the guide made it a point to mention that the company does not bait whales with food or song. Then, we made our way out of Gloucester Harbor and headed to Stellwagen Bank.

An hour into our journey we had our first humpback whale sighting. I was out on the deck and could see the back of the whale emerge from the water in the distance. The captain slowed down and moved the boat closer. When the whale resurfaced, our guide announced the location of the whale over the loudspeaker and tourists crowded on one side to get the best view. When the flukes of the whale disappeared into the depths of the ocean, the guide came back onto the loudspeaker. She spoke about the anatomy of humpback whales until it surfaced again. I noticed that throughout the trip the guide would remain quiet while the whales surfaced and only spoke while the whales dove. This allowed the tourists to have their full attention on the whales and focus on listening to the guide when there was only open ocean. During these moments, the guide explained how whales can be identified by the unique markings on their flukes and that is how they are named. Furthermore, the guide instructed us on how whales use bubbles to help them feed. Additionally, when the sightseeing was over and as we were heading back to Gloucester, the guide walked around and made herself available to passengers so they could ask her questions.

Discussion on Personal Tour

Overall, in my opinion, the whale watch did an adequate job of educating passengers about humpback whales. The guide was well-informed and she made herself available to respond to questions on our way back to the harbor. Furthermore, I liked that the guide would speak while the whales dove, so tourists could listen to her without distractions. Likewise, supplemental written material in the form of posters and the booklet reiterated what she was

saying while also providing extra information. Therefore by the end of the whale watch tourists had received a significant amount of education on humpback whale biology and ecology.

My main critique of the tour is that the conservation of whales should have been made a greater portion of the experience. A study by Andersen and Miller (2006) concluded that whale watches must include conservation issues along with providing education in whale ecology and biology. The whale watch excelled in educating tourists in biology and ecology, but lacked when it came to conservation issues. For example, the only information on conservation could be found at the bottom of a single page in the information booklet left on the table. Threats to humpback whales, such as entanglements in fishing gear, ship strikes, noise pollution, and habitat damage were mentioned. However, no detail was given as to how these threats impact humpback whales and how to mitigate them.

Stellwagen Bank is a hotspot for commercial fishing and has a high rate of whale entanglements (“Why do we need a national ocean policy?,” 2009). Because of potential conflicts in this area, shipping lanes were altered in 2007 and have successfully reduced vessel collisions with whales by 81% (“Ocean management in action,” 2011). My personal experience of a whale watch lacking education on conservation issues in the area is similar to a study in the Dominican Republic by Gleason and Parsons (2018) which found noise pollution is a massive concern for humpback whales in the area, but whale watch operators failed to educate tourists on this matter. As previously stated, both from the literature and my experience, tourists gain the most knowledge about whales from staff (Lopez & Pearson, 2017). Therefore, educating tourists about conservation issues in the area should be made a more significant aspect of the tour.

In addition to conservation issues, the whale watch operator should state the guidelines they follow. As found by Andersen and Miller (2006), tourists understood why guidelines were

needed once the guide explained their importance. Moreover, tourists in Alaska were aware of NOAA's guidelines, but only a small amount could correctly identify all the guidelines. (Lopez & Pearson, 2017). For these reasons, the tour operator should have the viewing guidelines posted or have them verbally stated by the guide, so tourists know them.

The trip concluded with a survey on customer satisfaction that was part of the boarding ticket. In addition, the survey asked tourists if they were now inspired to make any changes in their life to help the whales and the ocean environment. This question is important because a study by Orams (1997) found tourists who receive education during wildlife encounters become more environmentally aware and were more likely to modify their behavior to be more eco-friendly. This question could support that. The survey further encouraged tourists to consider ways they may help humpback whales in their daily lives after spending an hour with them out on the open ocean.

Study Conclusions

This paper has shown that whale watches with an educational component will appeal more to ecotourists and help further whale conservation. As stated previously, ecotourists are interested in educational experiences and are more concerned with their impact on the environment, unlike non-ecotourists. Additionally, wildlife encounters with education have been shown to alter tourist behavior and make them more eco-conscious. This is important because it shows how valuable education is when it comes to wildlife encounters, such as whale watches. Whale watches are a popular activity that take place in 119 countries and in 2008 thirteen million people went on one (O'Connor et al., 2009). Therefore, whale watches are a massive opportunity to educate tourists about whales in order to promote their conservation.

Moreover, tourists and ecotourists are looking for an educational experience and expect the whale watch to provide it. Tourists gain the most information about whales from the whale watch and the crew. People who had been on a whale watch were found to be more educated about whales than people who had never been on one. Additionally, tourists are likely to pass on the information they learned to friends and family. This demonstrates the power of education on whale watches.

Even though what is above occurs, it is also found that some tours lack information on the biology and ecology of whales along with conservation issues. Likewise, tour operators should state the whale watching guidelines they follow. This will help mitigate any disappointment passengers may feel if they are not close enough to whales. In addition, being open about following guidelines may attract more ecotourists. All in all, education should be made a greater portion of commercial whale watching trips.

In conclusion, when whale watch operators provide a naturalist on their tours to educate tourists on the biology, ecology, and conservation issues surrounding whales, this can improve visitor satisfaction and also attract ecotourists. Furthermore, an educational whale watch may inspire tourists to be more eco-friendly overall and possibly make changes to their behavior. Finally, I encourage whale watch operators and tourists considering participating in a whale watch to be made aware of the International Whaling Commission's virtual handbook. The handbook offers information on how to prepare for a trip as well as resources for whale watch operators. A whale watch is a fun experience that can be made more enjoyable and help support overall conservation efforts with the focus of education.

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