


Spring 5-16-2015

The Management and Stewardship of A Cetacean Collection

Rebecca Vele

Seton Hall University, rebeccavele@aol.com

Follow this and additional works at: <https://scholarship.shu.edu/dissertations>

 Part of the [Animal Law Commons](#), [Animal Studies Commons](#), [Legal Ethics and Professional Responsibility Commons](#), [Place and Environment Commons](#), and the [Recreation, Parks and Tourism Administration Commons](#)

Recommended Citation

Vele, Rebecca, "The Management and Stewardship of A Cetacean Collection" (2015). *Seton Hall University Dissertations and Theses (ETDs)*. 2109.

<https://scholarship.shu.edu/dissertations/2109>

**The Management and Stewardship of
A Cetacean Collection**

By

Rebecca A. Vele

**Dr. Martha Easton, Ph.D.
Thesis Advisor**

Submitted in fulfillment of the requirements for the degree of
Master of Arts in Museum Professions
College of Arts and Sciences
Seton Hall University
May 2015

Copyright © 2015 by Rebecca Ann Vele

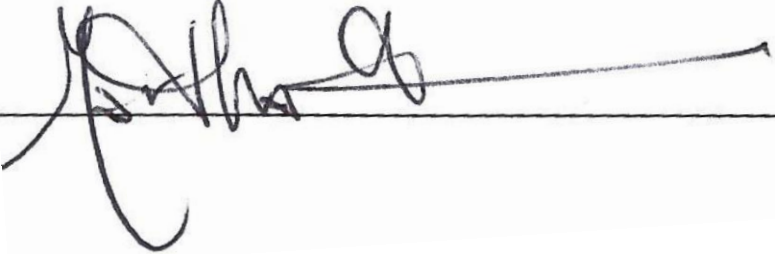
All Rights Reserved

**The Management and Stewardship of
A Cetacean Collection**

By

Rebecca A. Vele

Approved by:

A handwritten signature in black ink, appearing to read 'Martha E. Easton', is written over a horizontal line. The signature is cursive and somewhat stylized.

Martha E. Easton, Ph.D.
Thesis Advisor

Submitted in fulfillment of the requirements for the degree of
Master of Arts in Museum Professions
College of Arts and Sciences
Seton Hall University
May 2015

To My Parents
And
The Cetaceans

"Our knowledge is a little island in a great ocean."

-Isaac Bashevis Singer

Abstract.

Cetacean, by definition, is a marine mammal of the order Cetacea; a whale, dolphin or porpoise. In light of their social intellect and friendly appearance, cetaceans are used in institutions such as zoos and aquariums as a source of education and entertainment for the public. Before the Marine Mammal Protection Act of 1972, cetaceans were captured worldwide including in U.S. waters. In the United States today, there are over 224 zoos and aquariums accredited by the Association of Zoos and Aquariums. Out of those 224, 34 of these institutions display cetaceans.

Even though the Marine Mammal Protection Act *“Prohibits, with certain exceptions, the “taking” of marine mammals in U. S waters and by U. S. citizens on the high seas, and the importation of marine mammals and marine mammal products. (NOAA Fisheries.), U.S.* aquariums and institutions are able to apply for permits that allow the importation of marine mammals.

Due to recent events and the documentary *Blackfish*, for-profit and nonprofit zoos and aquariums are being questioned on the care and display of these particular animals. With newly developed scientific evidence showing the psychological similarities between humans and cetaceans, activists and cetacean scientists believe that cetacean captivity might be drawing to an end. This thesis addresses the management and stewardship of maintaining cetaceans in captivity and the ethical and unethical practices that are found in zoos and aquariums.

This thesis will also discuss the history of cetacean captivity and how throughout the years governmental laws and code of ethics have altered in order for institutions to maintain their collection. Through research, this thesis will allow its readers to decide whether the management of zoos and aquariums use their cetacean collections for the benefit of educating the public on the importance of conserving these animals and their wild populations, or for the benefit of the institutions themselves.

Table of Contents

Introduction.....	Page 5
Chapter 1: Background of Cetacean Captivity.....	Page 7
Chapter 2: Marine Mammal Protection Act.....	Page 14
Chapter 3: Code of Ethics for Zoos and Aquariums.....	Page 24
Chapter 4: Aquariums and their Audience.....	Page 31
Chapter 5: Cetacean Management: Breeding and Conservation.....	Page 40
Chapter 6: Decisions of Management.....	Page 46
Conclusion.....	Page 54
Bibliography.....	Page 58

Introduction.

When people first hear the word “museum”, many automatically think of The Metropolitan Museum of Art or the Museum of Natural History. These are institutions that collect objects relating to history, art, and science, which are placed on display for the public’s education. A zoo’s purpose is similar to that of a museum, but instead it cares for living collections and is there to educate, enlighten, and in some cases house animals that may face extinction in the wild. An aquarium is a type of zoo that contains and exhibits aquatic animals for the purpose of study and conservation.

Ancient civilizations created zoos in order to collect exotic animals for the curiosity of their royals. The Greeks established zoos in order to study animal behavior, and in the eighteenth century, zoos were created throughout Europe in order to amuse visitors.¹ Today, zoos are found throughout the world and contain a variety of animals in order to educate the public and conserve the populations of animals that are threatened in the wild.

Presently in the United States, the Association of Zoos and Aquariums accredit over 224 zoos and aquariums. Of those 224, 34 of these institutions display cetaceans. Cetaceans by definition are marine mammals of the order Cetacea; whales, dolphins or porpoises. Because of their social structure, intellect, and friendly appearance, cetaceans are used in aquariums to educate and entertain the public. Due to recent events and the documentary *Blackfish*, for-profit and nonprofit zoos and aquariums are being questioned on the care and display of these particular animals. With newly developed scientific evidence showing the psychological similarities between humans and cetaceans, activists and cetacean scientists believe that cetacean captivity might be drawing to an end. In this thesis, I will

¹ “What is a “Zoo” and what is an “Aquarium,” <http://www.americanzoos.info/What.html>. (May 4, 2015)

discuss the management and stewardship of maintaining cetaceans in captivity and the ethical and unethical practices that are found in zoos and aquariums.

Furthermore, this thesis is presented with the understanding of both the ethical and unethical sides of keeping cetaceans in captivity. At the end of this thesis, with knowledge of both the pros and cons of institutions obtaining a living collection, I will express my opinion on whether the management of zoos and aquariums use their cetacean collections for the benefit of educating the public on the importance of conserving these animals and their wild populations, or for the benefit of the institutions themselves.

Chapter 1: Background of Cetacean Captivity.

Before we can discuss the practices of the management of a cetacean collection, it is useful to review the history of how these animals were obtained and what makes them featured attractions of a marine park or aquarium. Cetaceans have always been key stars in certain aquarium collections. The demand for cetaceans goes back to the mid-nineteenth century. The first cetaceans put on display for the public were two beluga whales, which were exhibited in the United States by businessman P.T. Barnum. He hired a crew to capture the two cetaceans, and placed them in the Barnum's American Museum located in New York. Thousands of visitors came to see the cetaceans, but unfortunately both died after two days of being on exhibition since they were placed in fresh water. There was such a high public demand for the belugas, Barnum went on to obtain two more beluga whales that died before even reaching their final destination at the museum. A fifth whale was brought in, but unfortunately died within a few hours of being placed on exhibition. From 1861 to 1868, Barnum attained eleven beluga whales for his collection. The enormous popularity of the Barnum Museum encouraged other institutions to seek and capture cetaceans for their own collections. In 1908, the New York Aquarium hired fisherman to capture two bottlenose dolphins off of the coast of North Carolina. Unfortunately, once they were obtained, they only survived for a month. Then again in 1913, the New York Aquarium acquired ten more bottlenose dolphins from the wild. The longest-lived died after only twenty-one months in captivity.²

After the New York Aquarium's numerous attempts to exhibit bottlenose dolphins, there were no further captures of cetaceans from the wild until 1938. In 1938, the first ever

² "Cetaceans in captivity: 1861-1915," The Cetacean Project, May 20, 2012, Blog.
<<http://www.cetaceanproject.com/2012/05/cetaceans-in-captivity-1861-1915.html>>

underwater movie studio, Marine Studios, which would later be renamed Marineland, opened, introducing to the public the first dolphin show. Not only was Marine Studios the first oceanarium to conduct a show, which featured dolphins and trainers interacting, but it would also be the first venue to have a bottlenose dolphin born in captivity. Unfortunately the calf was stillborn. Due to the success of Marine Studios, more marine mammal parks and industries were established throughout the country. Between 1954 and 1961, Los Angeles, Miami, Florida and Chicago opened their own oceanariums. Before 1961, U.S. oceanariums would collect mainly bottlenose dolphins, beluga whales and a small population of short finned pilot whales. The first orca whale ever captured was in California by Marineland. The animal only survived for two days in captivity. Since orcas are known to be aggressive when they hunt, in the eyes of the public they were thought to be dangerous. Oceanariums did not attempt to capture any more orca whales until 1964 when the Vancouver Aquarium accidentally captured a male orca whale. Originally the Vancouver Aquarium commissioned a sculptor to kill an orca whale and have its model displayed in its facility, but instead the whale survived the attack and was taken to Burrard Drydock in North Vancouver. Thousands of visitors who traveled to view the whale realized that these types of cetaceans that were thought to be destructive were actually gentle. This knowledge of orca whales would lead to the growth of killer whale collections throughout the country.³

Before the implementation of the U.S. Marine Mammal Protection Act (MMPA) in 1972, which we will discuss further in Chapter 3, cetaceans were captured in U.S waters.

³ "Changing Perspectives: The First Orca in Captivity," The Cetacean Project, Friday, May 25, 2012, Blog. <http://www.cetaceanproject.com/2012_05_01_archive.html>

Moby Doll's capture was significant for many reasons. Like the dolphins captured for Marine Studios, the bull orca set a new precedent for keeping killer whales in captivity. Although Moby Doll only lived for 87 days before succumbing to a skin disease, the orca's surprisingly gentle nature resonated with the captive industry.

On the NOAA Fisheries website, it states, “The MMPA prohibits, with certain exceptions, the “take” of marine mammals in U.S waters and by U.S citizens on the high seas, and the importation of marine mammals and marine mammal products into the U.S.” (NOAA Fisheries)⁴ Even though the MMPA is in effect for the U.S. there are many countries that continue the practice of capturing wild cetaceans. Obtaining a collection of cetaceans involves an inhumane and destructive procedure. The common practice used in capturing wild cetaceans usually involves boats, nets and explosives. These procedures were used in the U.S before the ban in 1972, but are still continued throughout the world in areas such as Asia, South America and Russia. The most typical group of small cetaceans captured from the wild is bottlenose dolphins and beluga whales, while the largest cetacean species are orca whales. Dolphins usually travel in groups called pods, which mainly consist of females and calves. When pods are located, whether by boat or plane, boats are then directed to herd the pod into shallow waters, where they are rounded into a tight circle and then netted off. These nets usually float on the surface, but extend to the bottom, making it impossible for the pod to escape. Once the pod is secured in the net, trained veterinarians, who are used to monitor the health of their captives, and trainers wade into the waters and physically handle the dolphins. “It’s a very violent procedure to capture a dolphins,” states Richard O’Barry who was known for capturing and training bottlenose dolphins for the TV series *Flipper*.⁵ After O’Barry’s experience with the captive dolphins, he turned his attention to educating the public about captivity and its effects on cetaceans. The dolphins that are chosen are hoisted onto the working boats and then are transported to a holding tank, or

⁴ “Marine Mammal Protection Act (MMPA),” NOAA Fisheries, < <http://www.nmfs.noaa.gov/pr/laws/mmpa/>> (October 8, 2014).

⁵ Footage of orca and dolphin being caught from the wild,” < Youtube.com. > February 11, 2011, This video is a non-profit and educational and thus tips the balance in favor of fair use. This video shows well-known dolphin captor Jaw Sweeney and team.

are sent immediately to their final destinations either by truck or air. Animals that are not chosen are released from the nets, but are not evaluated for any signs of distress they might have sustained during the capture.

The process of capturing killer whale pods is different because of their large and powerful sizes. Boats and floating stations are positioned near the selected pod. Since all cetaceans navigate through sonar, explosive devices or loud noises are used to scare and confuse the pod and drive them closer to the boats. Once the whales form a tight circle, boats on both sides of the pod drop the same types of nets that are used for dolphin captures. Usually mothers are separated from the calves and juveniles in order to rope and haul the young onto the floating stations for transportation. Since an adult killer whale can grow to be twenty-three feet long and weighs seven to ten tons, younger whales are preferred for capture. Once the selection is completed, the remaining whales in the pod are released.

Many times the animals that are released from the capture still face problems. The stress from the hunt is known to kill individuals and at times affect the pod years after.⁶ Barbara E. Curry, who is part of the National Oceanic and Atmospheric Administration, participated in a study called "Stress in Mammals." The study showed the types of effects that occur in individual cetaceans that are part of a capture procedure. Many of these effects are caused by the chase, handling, and social separation, especially in mother-calf relationships. According to Curry, "Chronic stress or repeated acute stress can have

⁶ "Capture of Marine Life," Animal Welfare Institute, <https://awionline.org/content/capture-marine-life>.

maladaptive effects on immune responses, reproductive function and growth among others.”⁷

An example of the effects of these captures can be seen in the case of the endangered population of killer whales that live in the Puget Sound, Washington. The Puget Sound, before the Marine Mammal Protection Act of 1971, was one of the popular areas to capture killer whales in the U.S. Between the sixties and early seventies. The number of killer whales in the Puget Sound was reduced to 70 from a high number of 140, due to the capture of the young for aquariums and marine parks throughout the country. Despite the end of the captures, this endangered population has had trouble regaining their numbers because of the stress of these captures, compounded with other factors such as the mortality rates of young (there is a 70% chance of newborns surviving their first year) and the decline in their food supply caused by pollution. Luckily, a new calf was born in early September, the first birth since 2012, raising hopes that these populations of cetaceans can slowly, but surely regain their numbers.⁸

These social species are used in aquariums for a variety of reasons. Education and conservation are usually highlighted in an aquarium’s mission statement, but it is not the education that keeps these aquariums thriving; rather, it is the use of these animals as a source of entertainment. Cetaceans, such as the bottlenose dolphin and the orca whale, are known to perform tricks with positive reinforcement. Aquariums have taken advantage of this practice as a way to bring in more of an audience, whether it is through shows or personal interaction with these animals. Jiang Yixing states that “for tourists who are

⁷ Barbara Curry, “Stress in Mammals: The Potential Influence of Fishery-Induced Stress on Dolphins in the Eastern Tropical Pacific Ocean,” NOAA Technical Memorandum NMFS, April 1999, Part III, Section A, 58.

⁸ Victoria Cavaliere, “Newborn Killer Whale Presumed Dead,” Yahoo News, October 2014, Unfortunately, the newborn calf that was mentioned above is now presumed dead since scientists have not seen the calf since mid October. Calves usually stay with their mothers for two years.

unable to visit the animal in its natural habitat, there is only one solution: the animal must come to the tourist. In order to satisfy this demand, many destinations have developed a series of visitor attractions based around animals kept in some kind of captivity—for example, marine parks.”⁹ It is important to keep in mind that the missions of aquariums vary from one institution to the other, but they all serve the public through either education or entertainment. Though aquariums are institutions that help educate the public about our oceans and the animals that inhabit them, the display of cetaceans is meant to be an entertaining experience for visitors.

In order to maintain this collection, aquariums and marine parks turn to their breeding programs, such as advanced reproductive technologies (ART), as the key practice for stewardship. It is rather difficult for these animals to breed on their own due to their stress from captivity. According to Jerye Mooney, “Captivity defies, depresses, and denies the instincts which define each animal.”¹⁰ Managers and directors of cetacean collections have turned to ART to keep collections thriving through the induction of ovulation and artificial insemination using frozen semen. These tactics can be used in order to manage endangered species and to enable the gene flow of animals in captivity. If these practices were managed correctly, the success of artificial insemination would be beneficial to the conservation of these animals. Some marine institutions are under scrutiny by marine biologists and activists since they impregnate their cetaceans at a much younger age than they would reproduce in the wild, or inject them with the semen of their own offspring, hence increasing the risk of the calf not surviving. Dr. Naomi Rose, a senior scientist at Humane Society International who has studied wild cetaceans, educated thousands on the

⁹ Jiang Yixing, Michael Luck, E.C.M. Parsons, “Public Awareness, Education and Marine Mammals in Captivity,” *Tourism Review International*, Volume 11:237-49, 2007, Pg. 239.

¹⁰ Jerye Mooney, “Captive Cetaceans: A Handbook for Campaigners,” *A Whale and Dolphin Conservation Society*, March 1998, Section 3, Pg. 16.

unethical stewardship of captive cetaceans. She explains that the reason the mortality rate of captive newborns is so high is because first-time mothers have had no opportunity to learn from their social group in the wild. When first-time mothers in captivity are giving birth, they are usually isolated from the rest of the group and are observed by their human caretakers who do not assist with the procedure due to safety regulations. “It’s the blind leading the blind,” says Dr. Rose.¹¹ It is impossible to replicate a process of nature that has evolved over thousands of years.

Another way that some institutions find a solution for their breeding program is to look for situations that would allow the institution to receive a fresh, wild caught cetacean. For example, unlike orca whales and bottlenose dolphins that are able to conceive young through the husbandry of ART, beluga whales are not able to maintain their young in captivity, for unknown reasons. The Georgia Aquarium, which holds a collection of beluga whales, recently lost a baby beluga, thus reducing the number of beluga whales in captivity in the U.S. The Georgia Aquarium, along with four other U.S marine institutions, initiated the capture of 18 wild beluga whales from Russia in order to refresh the breeding program of this particular species. This case will be further discussed in the following chapter about the MMPA.

Because keeping cetaceans in captivity is increasingly viewed as unethical, there is now a public debate about whether aquariums and marine parks are caring for their collections correctly. These concerns and certain cases, that now involve the Supreme Court, have caused many to think that the MMPA should be updated in order to protect cetacean collections.

¹¹“ Beluga Whale Died at Aquarium,” *Earth in Transition*, May 24, 2014, <<http://www.earthintransition.org/2012/05/newborn-beluga-whale-dies-at-aquarium/>>

Chapter 2: Marine Mammal Protection Act.

Prior to the creation of the Marine Mammal Protection Act, environmental issues caused a movement throughout the country capturing the United States attention. Before the 1960's, large amounts of pesticides and toxins were used in most households and food products. Many citizens were not aware of this effect until 1962, when a book called *Silent Spring*, by Rachel Carson, was published in the U.S. The book discussed the dangers of a pesticide called DDT, an organic compound used as an insecticide. The book also discussed how DDT had potential environmental and health hazards on both the earth and citizens. The knowledge of this chemical spread throughout the country, awakening people to its hazards. At that moment, the birth of environmental awareness began. Between 1962 and the early 1970's, the environmental movement grew throughout the United States, creating a rise in campaigns and protests that supported the creation of environmental protection bills. As the campaigns and awareness spread, environmental organizations such as Sierra Club and Greenpeace began to lead the way, and their messages began to be heard in courtrooms, where bills and laws could be passed. Many environmental bills such as the National Environmental Policy Act (1969) and the Pesticide Control Act (1972) were passed through the government. Not only was the movement focused on the use of pesticides, but it also focused on the wellbeing of animals that were affected by human activity.

Before the MMPA was passed in the United States, the country was responsible for the capture of over 1,133 dolphins and 134 orca whales.¹² As the high demand for cetaceans grew, marine parks and institutions continued the practice of capturing

¹²"Orcas and Dolphins in Captivity," World Animal Foundation, PDF, www.worldanimalfoundation.net/f/OrcasandDolphinsinCaptivity.pdf

cetaceans from areas such as the Puget Sound in Oregon, Mississippi, Florida and occasionally the northern east coast. Along with the high demand for cetaceans as public attractions, human activities such as commercial fishing played into the decrease of the species. Dolphins prey upon yellow fin tuna, which is hunted by commercial fishermen. Large numbers of dolphins were commonly caught in the large fishing nets along with the tuna, only to eventually weaken and drown. From 1959 to 1972, it was recorded that a total of 4.8 million dolphins were killed as a result of commercial fishing practices.¹³ With the rise of environmental awareness, the public targeted commercial fishing companies, demanding that they reevaluate their techniques in order to prevent the trapping of dolphins in their nets. However, "Despite efforts by fishermen to develop new techniques, such as 'backing down' where the net was quite literally pulled out from under the dolphins, and new equipment, such as smaller mesh netting known as the Medina Panel, the rate of dolphin mortality remained high."¹⁴

Because of the rapid growth in the number of cetaceans captured for display, and the high percentage of dolphin deaths due to fishing, there was growing concern from scientists and activists. This caused Congress to create an ecosystem approach to natural resource management and the conservation of marine mammals. In 1972, the Marine Mammal Protection Act was created. Based on events such as the overfishing of dolphins in tuna nets and the high number of cetaceans in public display, the MMPA passed this law to prevent the depletion in numbers of wild marine mammals.

¹³ "The Tuna/ Dolphin Controversy," Forsea Institute Of Marine Science, HTML, <http://www.forsea.org/TUNALESSON.html>

¹⁴ Mark Schoell, "The Marine Mammal Protection Act and its Role in the Decline in the San Diego's Tuna Fishing Industry," The Journal of San Diego History, Winter 1999, Volume 45, 1, Richard W. Crawford, Editor, <http://www.sandiegohistory.org/journal/99winter/tuna.htm>

Managed by the federal government, the MMPA is broken up into three branches. The National Marine Fisheries Service (NMFS), which is part of the National Oceanic and Atmospheric Administration (NOAA) within the Department of Commerce, is responsible for managing cetaceans (dolphins and whales), otariids (eared sea lions) and phocids (earless seals). The U.S. Fish and Wildlife Service (FWS) part of the Department of the Interior, is responsible for managing odobenids (walruses), sirenians (manatees), otters, and polar bears. The last branch is The Animal and Plant Health Inspection Service (APHIS), part of the Department of Agriculture, which is responsible for the regulations managing the facilities, such as aquariums, that house marine mammals in captivity. As strictly as the laws were enforced in 1972, regulations for animals in captivity were not indicated, leaving the decisions about how to care for marine mammals up to the facilities themselves. By 1979 an agreement between the APHIS and the NMFS was made on the standards for marine mammals in captivity. Care and maintenance for the animals was reported to the APHIS while additional permit standards under the MMPA would be sent to the NMFS. In order for a facility to hold marine mammals in captivity, it must have a license under the APHIS, which would make it subject to the care and maintenance standards as long as those animals are exhibited in its facility.

Between 1979 and 1994, all branches had some responsibility for captivity care, until the MMPA was again updated. The APHIS was then given primary authority for the care of captive marine animals, changing many of the laws that at one time required facilities to submit necropsy reports or apply for transfer permits. After the law was changed, facilities were only required to give a 15-day advance notification if their animals were being transferred to a different facility, and then 30 days later they were required to

notify the NMFS that the animals had been transferred. Facilities were also required to update their National Inventory of Marine Mammal 30 days after the status change of an animal, which could be birth, death or transfer. The MMPA has not been updated since 1994.

Even though the MMPA clearly states that it prohibits the “take” of marine mammals in U.S. waters, the NOAA Fisheries can authorize a take for certain situations such as for scientific research, enhancing the survival or recovery of a marine mammal species or stock; commercial and educational photography; first time import for public display; capture of wild marine mammals for public display; incidental take during commercial fishing operations, and incidental take during non-fishery commercial activities.¹⁵ When it comes to facilities applying for these permits for the certain authorizations listed above, the facility must follow all application rules, which require notifying the NOAA on the status of the selected marine mammal, whether it is part of the Endangered Species Act (ESA) or the non Endangered Species List (non-ESA). For some of the authorizations to pass, such as the commercial/educational photography permit, certain requirements must be followed. Even though there is no permit required to maintain marine mammals in public display, they must follow criteria outlined by the MMPA that requires that all public display facilities offer an education or conservation program; be open to the public on a regularly scheduled basis; and be licensed or registered with the APHIS, which is under the Animal Welfare Act (AWA). The facility must, if necessary, require a scientific research or enhancement permit if the animal of choice is recognized as a threatened or endangered species under the Endangered Species Act.

¹⁵ “Marine Mammal Permits Authorizations,” June 27, 2014, NOAA Fisheries Office of Protected Resources, www.nmfs.noaa.gov/pr/permits/mmpa_permits.htm (November 20, 2014)

With the major changes of the MMPA in 1994, which included removing the requirement for governmental approval for the public display industry, activists and marine mammal scientists, such as Dr. Naomi Rose, Senior Scientist for Humane Society International and overseer of the HIS's campaign to protect wild and captive whales, believe that public facilities did not receive enough oversight when it comes to the care and stewardship of their marine mammals. Over the years, these concerns increased when certain incidents started to appear at aquariums and marine parks such as Sea World, which is viewed as a major educational and conservation amusement park for families. In the spring of 2013, a paper by Stephanie Dodson Dougherty, an attorney with a background in biology, ecology and environmental studies, outlined the unethical practices of the management and stewardship of marine mammals in captivity. The paper explains the history of the MMPA and how the updates of 1994 were defects for the MMPA and that the regulations support public display facilities. Before the MMPA changed in 1994, the law was created for the wellbeing of all marine mammals, wild and in captivity. Dougherty writes,

“According to the House of Representatives, when presenting the legislation: The effect of this set of requirements is to insist that the management of the animal populations to be carried out with the interests of the animals as the prime consideration....the primary objective of this management must be to maintain the health and stability of the marine ecosystem; this turn indicates that animals must be managed for their benefit and not for the benefit of commercial exploitation.”¹⁶

Though Dougherty's paper highlights public display and the setbacks of the MMPA, it is argued by the NOAA that the MMPA's mission is specifically for the benefit of the animal

¹⁶ Stephanie Dodson Dougherty, “The Marine Mammal Protection Act: Fostering Unjust Captivity Practices Since 1972,” *The Future of Ocean and Coastal Law & Policy*, 28, no.2 (The Florida State University, 2013) 338.

and not for commercial exploitation. For example, we will discuss the 2012 case of The Georgia Aquarium.

Since its opening in 2005, The Georgia Aquarium has built its mission to “provide an entertaining, engaging and educational experience inspiring stewardship in conservation, research and appreciation for the animal world.”¹⁷ The Georgia Aquarium is home to the largest collection of aquatic animals in the U.S and is home to 4 whale sharks, the largest sharks in the world. The Georgia Aquarium also holds 4 beluga whales and 13 bottlenose dolphins on display. In 2012, the aquarium submitted a permit to the NMFS for the transport of 18 wild caught beluga whales from Russia to the aquarium that would then be loaned out for breeding programs to other aquariums such as the Shedd Aquarium and all three SeaWorld parks, which are located in Florida, Texas and California. This would mark the first time in over twenty years that wild caught cetaceans were imported. The last time wild-caught cetaceans were imported to the U.S. was in 1988, when the NMFS granted a five-year permit allowing wild-caught beluga whales from Canada to be placed on display in the U.S. Over the years, though scientists have recognized that of all the captive cetaceans, large sized species, like the beluga whale, seem to suffer crucial trauma when captured and removed from their social group.¹⁸

Under federal law, facilities are allowed to import captured wild cetaceans for display. The law also designed limits to protect certain cetacean species that are vulnerable. Once the application for the permit was sent in, the NOAA investigated the cetacean candidates only to find that the Georgia Aquarium did not meet certain

¹⁷ “Georgia Aquarium: 2012 Year End Summary,” The Georgia Aquarium, 2, www.georgiaaquarium.org/2012AnnualReport.pdf (December 15, 2014.)

¹⁸ “Protection of Beluga Whales,” Animal Welfare Institution, The AWI has followed the Georgia Aquarium’s case, providing updated statuses for the case, a summary of the case and background on the protection of beluga whales. <awionline.org/cases/protection-beluga-whales>

requirements. The NMFS declined The Georgia Aquarium's permit for three reasons: one, the NOAA was unable to determine whether or not the proposal importation, by itself or in combination with other activities, would have significant adverse impact on the Sakhalin-Amur beluga whale stock, which is the stock that these whales were taken from; two, NOAA Fisheries determined that the requested import will likely result in the taking of marine mammals beyond those authorized by the permit; and three, NOAA determined that five of the beluga whales proposed for import, estimated to be approximately 1 ½ years old at the time of capture, were potentially nursing and not yet independent.¹⁹ The third reason raised red flags for the NMFS due to the age of the whales, which most likely signified that they were nursing at the time of the capture, and thus the permit was denied completely since it would then cause the import to be illegal under the MMPA. In Section 102 of the MMPA, it is strictly prohibited to import any marine mammal that is pregnant, nursing at the time that it was taken, or is taken in a manner that is deemed inhumane.²⁰

In September of 2013, the Georgia Aquarium filed a lawsuit against the NMFS' decision to deny the permit, stating that the aquarium followed all regulations and international laws and that the import of these cetaceans would sustain the population of beluga whales in captivity and "would be essential to the survival of belugas everywhere."²¹ In January of 2014, several environmental organizations including AWI, Whale and Dolphin Conservation, Cetacean Society International and Earth Island Institution intervened with

¹⁹ Donna S. Wieting to Billy Hurley, 5, August 2013. United States Department of Commerce, NOAA, Silver Spring, MD. Final denial letter to the Georgia Aquarium from NOAA, NMFS. <http://www.nmfs.noaa.gov/pr/permits/sci_res_pdfs/17324_denial_letter_final.pdf>

²⁰ "The Marine Mammal Protection Act of 1972 As Amended 2007," NOAA. Marine Mammal Commission, MD, Section 102, Prohibitions. - Section 102(b) 18. (December 28, 2014) explicitly prohibits the import of any marine mammal that was- 1) pregnant at the time of taking; 2) nursing at the time of the taking, or less than eight months old; 3) taken from a species or population stock which designated as depleted; 4) taken in a manner deemed inhuman by the Secretary. Section 102 (c) prohibits the importation of any marine mammal that was taken in violation of the MMPA or any applicable foreign law.

²¹ Alicia Graef, "Georgia Aquarium Just Won't Give up Trying to Get Wild-Caught Belugas," 8/22/2014, Care2Inc, <http://www.care2.com/causes/georgia-aquarium-just-wont-give-up-trying-to-get-wild-caught-belugas.html> (December 2, 2014)

the lawsuit, providing support for the NMFS and evidence that the population of beluga whales in Sakhalin-Amur (where these cetaceans were captured) shows that since the 90's large amounts of these certain cetaceans have been captured for public display from this area. It is noted by the Whale and Dolphin Conservation that the population of this group of cetaceans may soon be depleted, authorizing the MMPA to designate the whales as a restricted population. Environmentalists have also emphasized the stress the cetaceans would be under during the 24-hour transportation from Russia to Georgia, which could affect their health and could possibly lead to death. In August 2014, representatives from the Georgia Aquarium and the environmental organizations met with the U.S. District Court Northern District of Georgia to dispute the case. Both sides presented evidence in support of their stance, but unfortunately the final decision of whether the permit will pass has not been shared with the public as of now.

The Georgia Aquarium case is one of the first times in twenty years that an institution has tried to import wild-caught cetaceans from international waters. Even though the MMPA allows facilities to display cetaceans to the public as long as they fulfill certain requirements, the debate has begun on whether facilities are truly respecting the MMPA's regulations. When the NOAA denied the Georgia Aquarium's permit, it was not only denying this certain case, but future cases that might allow other institutions to take advantage of this opportunity.

Activists and some scientists believe that the NOAA's decision was the right thing to do, keeping the line drawn on where facilities lie when it comes to permits. The Georgia Aquarium and other facilities, such as the Shedd Aquarium and SeaWorld, believe that the

NOAA is in the wrong and believe that the population of belugas in captivity is at the risk of extinction. The Georgia Aquarium's public statement about the NOAA's decision included the following: "Clearly, maintaining a sustainable population of belugas in human care is essential to the survival of belugas everywhere....With just 34 beluga whales in human care in accredited North America facilities, and relatively poor genetic diversity among those animals, our community is facing certain extinction of our beluga whale population in human care."²²

The question must be asked, should aquariums be allowed to import wild-caught cetaceans for the purpose of conservation or should facilities begin developing new plans that no longer involve public display? The Georgia Aquarium even stated that once the cetaceans in captivity are gone, the opportunity to build their stocks would not be possible. It has been argued on both sides whether the MMPA should be updated once again. Anti-captives bring up concerns about the stewardship of the animal's health while the pro-captive side strongly believes that their cetacean exhibitions bring educational opportunities to families and supports the conservation of both captive and wild cetaceans.

Throughout the rest of the paper, we will discuss multiple cases that involve the MMPA and the facilities that manage cetaceans in captivity. These cases will be compared to Dougherty's paper, which discusses certain setbacks of the MMPA. In order to discuss the cases, we must be aware of the different facilities in the U.S that hold cetaceans on display and how they meet the code of ethics in both the Association of Aquariums and Zoos and the Alliance of Marine Mammal Parks & Aquariums. Both these organizations

²² "Beluga Whale Conservation Project-Acquisition," Beluga Whale Research & Conservation at Georgia Aquarium, October, 2012, <<http://www.georgiaaquarium.org/belugaconservation.aspx>> (January 2, 2015)

recognize and approve facilities that hold marine mammals and assure the public that these represented facilities maintain their mission to conserve and educate.

Chapter 3: Code of Ethics for Zoos and Aquariums.

As with any museum facility, museum professionals must run their institutions with both legal and ethical principles in mind. While federal and state laws protect museums, ethics help strengthen the expectations and values of these institutions which are significant for educational and community purposes. With the help of organizations such as the American Alliance of Museums, museums are guided with ethical guidelines and standards in order for museums to operate in a professional and ethical manner. Since museums and institutions educate the public through different subjects such as art, history, natural science, etc., there are many associations that represent the institution's management for both their collections and mission statements. Seven professional associations deal with aquariums and zoos that hold marine mammals. Each association deals with different departments of an institution, such as veterinary and training. Two of the associations that will be discussed in this chapter represent the animal care and management of an institution's collection, the Association of Zoos and Aquariums (AZA) and the Alliance of Marine Mammal Parks and Aquariums (AMMPA). Both associations have developed their own code of ethics and regulations for their members to abide by in order to reassure the public that all institutions follow the guidelines that pertain to the wellbeing of its entire living collection and the management of its facility.

AZA represents institutions worldwide that educate the community through living collections. AZA's mission is to "provide its members the services, high standards and best practices needed to be leaders and innovators in animal care, wildlife conservation and science, conservation education, the guest experience and community engagement."²³

²³ "AZA 5-Year Strategic Plan," Association of Zoos and Aquariums, < <https://www.aza.org/StrategicPlan/>> (March 1, 2015.)

Accredited zoos and aquariums that are members of AZA follow its strategic priorities which consist of four sections, 1) Caring for Wildlife and Wild Places, 2) Educating and Engaging Public, Professional and Government Audiences, 3) Enhancing Members and 4) Developing a Robust and Sustainable Economic Model. All four of these stages, which will be explained briefly, all reflect AZA's mission and the institutions that engage in wildlife conservation.

The first section, caring for wildlife and wild places, ensures the stability of diverse wildlife in both facilities and animals in their natural habitat. Institutions are held responsible for the welfare of their animals and for implementing the best practices that both sustain their populations in captivity and maintain a healthy collection. The second, educating and engaging public, professional and government audiences, ensures that all its members are trusted leaders which follow all animal welfare regulations and will educate the public on wildlife conservation. The third, enhancing membership, provides services that support and expand communities and facilities of all sizes while achieving the AZA mission. The last stage, developing a robust and sustainable economic model, will help institutions strengthen their revenues and fundraising potential in order to provide strategic support to conservation programs and their conservation actions.²⁴

In order for aquariums and zoos to obtain official recognition from AZA, potential members must be examined by AZA board panels who are expert leaders in zoo and aquarium operations, animal management, and veterinary medicine. Potential members must meet AZA's standards for animal management and care, which include health and living conditions. The institutions are also evaluated on their involvement with

²⁴; *Ibid*'

conservation of wildlife, the institution's management, programing and safety policies and procedures. Once the institution is approved, they are accredited for five years. Since AZA's standards continuously change, all members must be reevaluated at the end of the five years. All members of AZA must follow the standards, policies, and Code of Professional Ethics.

Even though AZA institutions develop their own values based on their mission, AZA's Code of Professional Ethics outlines the professional conduct institutions must follow in order to receive recognition for the animals in their care. The professional code of ethics is followed not only by the institution's executive director, but also by all trustees and staff members who are affiliated with the zoo or aquarium. AZA's code of ethics is broken down into sections that discuss the member's obligations as an AZA member; its mandatory standards; and general advisories, which include animal auctions and the consequences of any violations.

As members of AZA, an institution's staff must realize their responsibilities and leadership roles when it comes to representing their institution and its mission. Members must always "promote the interests of wildlife conservation, biodiversity, and animal welfare to the public and to colleagues."²⁵ Along with promoting the conservation and welfare of its collections, members should always share their achievements of breeding husbandry, medical technology, etc. with other members of AZA in order to increase the success of more institutions by improving their tactics and programs. The second section of the Code of Ethics reviews the Mandatory Standards, which advises members to always be honest when it comes to record keeping or public statements that provide information on

²⁵ "Code of Professional Ethics," Association of Zoos and Aquariums, < <https://www.aza.org/Ethics/> > (March 4, 2015.)

an animal in the collection. The general advisories were subjects that were added in order to expand AZA's Code of Professional Ethics. These advisories included Animal Auctions, which was developed in 1981. This advisory states that any AZA member who offers wildlife for sale at auctions attended by the general public violates the Code of Ethics and by decision of the ethics board, could lose membership if found guilty. The Code of Professional Ethics provides guidance to institutions that must manage their organization and make decisions based on their professional conduct.

Unlike AZA, who represents institutions that house all types of species of animals, the AMMPA is an international organization that specifically recognizes institutions that maintain marine mammals including cetaceans. Founded in 1987, the AMMPA's mission is to

“Represent marine life parks, aquariums, zoos, research facilities and professional organizations dedicated to the highest standards of care for marine mammals and to their conservation in the wild through public education, scientific study and wildlife presentation.”²⁶

Along with its mission, the AMMPA follows a specific set of standards and guidelines that represents the association's values and regulations. Institutions interested in joining the AMMPA must follow all standards in order to be accepted. The Standards and Guidelines indicate all of its members' commitment to marine mammal conservation through public display, population management, education, rescue and rehabilitation of stranded animals, and research.

The Standards and Guidelines cover all collection management policies, including the acquisition of marine mammals through the proper breeding programs and the

²⁶ Alliance of Marine Mammal Parks and Aquariums, <http://www.ammpa.org/index.html> (March 4, 2015.)

deaccessioning of an animal, whether through death or sale. These regulations also require its members to create their own animal training policy, which includes “the facility’s philosophy, principles, and management oversight, as well as a behavior development and management plan.”²⁷ Trainers of institutions must follow the program guidelines of the International Marine Animal Trainer’s Association (IMATA), which is an association that provides training, programs and membership for organizations that provide husbandry training for marine animals. Other departments such as education and in-water interactive programs are believed to be important aspects of each member’s mission and it is required by the AMMPA that members offer multiple levels of learning opportunities in order to enhance the public’s knowledge of marine life. In-water programs must have fully trained staff, and participating animals must be properly trained. All regulations mentioned in the Standards and Guidelines play a role in assuring the care for marine mammals in the AMMPA members’ facilities.

The most common cetacean found in marine facilities and institutions around the world is the bottlenose dolphin. Through years of experience, facilities have shared their standards and guidelines in order to provide the best practice for caring for this specific species. Similar to the Standard and Guidelines, AMMPA has also created its own *International Code of Best Practices for Dolphin Facilities* in order to provide the correct animal care, education, programming, and conservation for dolphins in the wild. Since bottlenose dolphins are the most well known cetaceans in all aquariums and zoos, the guide was developed to guide all institutions, including aquariums, on the correct

²⁷ “Standards and Guidelines: Alliance of Marine Mammal Parks and Aquariums,” Alliance of Marine Mammal Parks and Aquariums, 1, http://www.ammpa.org/docs/S_GSummary2010_2.pdf (March 10, 2015.)

standards and practices in order for their cetacean collections to thrive. For example, the code discusses the environmental quality that collections should thrive in:

“Dolphins in human care require close attention to water quality and environmental conditions ensure the animals’ health and comfort. The water in dolphin facilities should replicate their environments in the wild through the use of natural salts that approximate levels found in seawater.”²⁸

The code goes on to list the different standards that are required when caring for dolphins. AMMPA advises all members to follow the code if dolphins are incorporated into their collection. Dolphin facilities that are nonmembers of AMMPA are encouraged to follow this code for guidance.

Like AZA, facilities interested in becoming members of AMMPA must successfully complete the association’s application process. The AMMPA membership process is open to all zoological parks and aquariums. AMMPA requests that the interested facility submit an accreditation application along with two letters of recommendation from current AMMPA members who have evaluated the facility and can verify that the applicant meets the Alliance standards. Once the application has been completed, the applicant must prepare a presentation at the association’s annual meeting. The presentation must explain to the membership the mission of the facility and its services such as its marine mammal programs, education, training, veterinary care programs, food preparation, research, and the history of each marine mammal at its facility. Once the applicant has presented to the membership, a team of experts will perform an on-site inspection and evaluation to ensure full compliance with the AMMPA’s standards. For both the AMMPA and AZA, all aquariums and zoos are encouraged to become members, but it is not mandatory. Applicants that do

²⁸ “International Code of Best Practices for Dolphin Facilities,” 2013, Alliance of Marine Mammal Parks and Aquariums, 4, http://www.ammpa.org/docs/130911_IntlCodeBPDolphins.pdf (March 10, 2015.)

not meet the standards of the application process are encouraged to reapply the following year.

Even though AZA and the AMMPA present different codes of ethics and regulations, they both share the same mission in the conservation of and care for living collections that are held in these facilities. By understanding the legal and ethical standards, we can now move forward to discuss in detail cases that deal with the management and care of cetaceans and how institutions are affected by current issues. These following cases will help determine whether aquariums are using their collections solely for the purpose of profit or for their true mission, which is to educate and enrich the community about the importance of marine life.

Chapter 4: Aquariums and their Audience.

There are many important functions for zoos and aquariums. Many would say their purpose is to educate the public on important issues such as conservation and other ecological concerns. Along with education, recreation is one of the most popular reasons for zoos. Zoos and aquariums entertain visitors through exhibitions and interactive programs in order to provide a closer connection to exotic animals. AZA states, “AZA-accredited zoos and aquariums provide the public with essential connections to the natural world.”²⁹ Admission tickets and interaction programs that create these connections also provide revenue, which many non-profit aquariums and zoos use in order to fund their institutions.

In all museums, it is significant that a museum’s mission connects with its audience. Aquariums and zoos that display cetaceans in their collections mainly focus on shows and interaction programs that demonstrate the unique, physical traits and power of cetaceans while allowing their audience to connect with these animals in a number of ways. All over the world, institutions offer one-on-one interactions with their cetacean collections along with shows and feeding sessions. In the U.S, there are 21 institutions which provide education and interaction programs with their collections. Out of the 21, between 14 and 18 institutions provide Swim with the Dolphin Programs.³⁰ In this chapter we will review the multiple cetacean programs that pertain to zoo and aquarium audiences and how they benefit the community and the institution itself. Along with the benefits of each program, we will also discuss the audience’s experience when it comes to educational programs

²⁹ “Public Benefits of Zoos and Aquariums,” Association of Zoos and Aquariums, < <https://www.aza.org/public-benefits/>> (March 5, 2015.)

³⁰ “Swim-with-the-Dolphins Attractions,” September, 2009, The Humane Society of the United States, http://www.humanesociety.org/issues/captive_marine/facts/swim_dolphins.html (March 15, 2015.)

versus dolphin shows, and how the new documentary *Blackfish* has influenced visitors and their experience with cetaceans.

For thousands of years, humans and cetaceans have interacted with each other. Because cetaceans are animals that are made up of social groups, humans have always found that they could relate and connect with these animals. As we discussed in our first chapter, on the history of cetaceans in captivity, in the middle of the nineteenth century, cetaceans in captivity were a high demand for institutions. Because cetaceans are intelligent animals, they are easy to train, attracting visitors from all over. Since visitors might find it difficult to travel to an exotic destination where they can observe cetaceans in the wild, the demand for marine mammals in captivity has risen. Aquariums have used this opportunity to provide visitors with that up-close experience through programs.

In order for aquariums and zoos to maintain their membership with AZA, one of the benefits institutions must provide is science education to their visitors. All programs that involve engagement between cetaceans and guests must represent the mission of their institution. For example, the Georgia Aquarium's *AT&T Dolphin Tales* show represents "the beauty and agility of dolphins,....It's a timeless tale of good against evil, with exhilarating performances and a powerful, enlightening subtext of the importance of caring for and about aquatic creatures."³¹ Along with shows that display the power of cetaceans, through leaps and jumps, other programs that aquariums might offer to visitors include activities such as trainer for a day, cetacean encounters, and even a chance to swim with the dolphins. Through these programs, the participants are informed about the basic anatomy of the animal, how it is cared for and trained, and then for a limited amount of time are

³¹ "AT&T Dolphin Tales," The Georgia Aquarium, < <http://www.georgiaaquarium.org/experience/explore/galleries/dolphin-tales/>> (March 9, 2015.)

allowed to interact with the animal through physical contact, feedings and with programs that involve swimming with dolphins, sometimes with the opportunity to allow the animal to carry the participant across the pool.

Even though many of these interactive programs are targeted specifically for the education and entertainment of visitors, some institutions also provide dolphin-assisted therapy programs for young children with disabilities. Studies between the 1960's and the 1970's proposed that dolphins could help children with post-traumatic stress disorder, autism, Down syndrome, cancer and other neurological, physical, or psychological conditions. The procedure was developed under clinical psychologist David Nathanson. His theory states that the program is "to encourage children with disabilities to engage in desired responses in accordance with the child's individualized therapy programs."³² By using institutions that operate dolphin-swim programs, dolphin-assisted therapy (DAT) has grown throughout the years and is available at certain institutions such as the Clearwater Marine Aquarium in Florida. Clearwater Marine Aquarium is home to Winter, the bottlenose dolphin who lost her tail to an entanglement in a crab trap. Winter has been used in many DAT programs in order to help children with severe diseases and disabilities.

Many associations such as the AMMPA have praised education and therapy programs as an up-close educational experience with animals that are in a safe, controlled environment. Even though the AMMPA might deem these types of programs as safe and controlled due to the high standards that are prepared, activists and scientists have found this practice to be dangerous since there have been incidents where cetaceans have harmed by not only trainers, but participants as well. In the *International Code and Best*

³² "Tracy L. Humphries, "Effectiveness of Dolphin-Assisted Therapy as a Behavioral Intervention for Young Children with Disabilities," Bridges, May 2003, Volume 1, Number 6, 2, < http://www.waterplanetusa.com/images/Effectiveness_of_Dolphin_Assisted_Therapy.pdf> The dolphin assisted therapy sessions are designed to "jump start" the child and to complement or reinforce other, more traditional, therapeutic procedures.

Practices for Dolphin Facilities, one of the standards required for interactive programs is to “Ensure that dolphins participating in interactive programs are specifically trained for interacting with the public.”³³ All participating animals in these programs are trained differently than show dolphins since they are handled by the public more than others, but critics such as World Society for the Protection of Animals (WSPA) have remarked that even the most trained cetaceans are still wild animals and should be considered dangerous.

Since the early 2000’s, several incidents of cetaceans attacking visitors in interaction programs have been reported throughout the country. The majority of these incidents occurred in all of SeaWorld’s Petting Pools, which allows visitors to feed dolphins for a fee of \$15. In 2003, the WDCS and the Humane Society of the United States (HSUS) prepared reports that documented one hundred hours of observation during the years of 1996 through 2002 at all of SeaWorld’s dolphin petting pools. Not only did the reports reveal the unsafe and unsanitary conditions of the dolphins, but also that the visitors were at risk of physical harm: “Due to their size and sheer numbers, dolphins frequently make abrupt and aggressive movements and occasionally aggressively compete for food. Several incidents of bites, head butts and trapped hands were observed during the research.”³⁴ With unsupervised access to these animals, visitors are allowed to feed these animals numerous times. These animals face multiple health issues such as obesity, due to the irregular diets from overfeeding. The public’s direct interaction with cetaceans has caused other problems, as well. For example: “Items like paper fish containers, sunglasses and coins have

³³ “International Code of Best Practices for Dolphin Facilities,” 2013, Alliance of Marine Mammal Parks and Aquariums, Pg.7, http://www.ammpa.org/docs/130911_IntlCodeBPDolphins.pdf (March 13, 2015.)

³⁴ “Biting the Hand that Feeds: The Case Against Dolphin Petting Pools,” Whale and Dolphin Conservation Society, <http://uk.whales.org/sites/default/files/dolphin-petting-pools.pdf> (March 18, 2015.)

been seen tossed or dropped into the pool. Each of these has the potential to cause gastrointestinal blockage, poisoning, or even death if ingested by the dolphins.³⁵ Ingestion of foreign objects is not the only hazard these dolphins face. Bacteria from unhygienic hands of visitors can make their way into fresh wounds on the dolphins, causing sickness and infections.

While anti-captive associations such as the HSU and WDCS fight for the well-being and protection of cetaceans in all interactive programs, the AMMPA has fought back claiming that since 1985, no injuries of either visitor or cetacean have been recorded and that over 2,000,000 visitors have participated in Alliance programs with a 99.9% safety record.³⁶ Since the MPPA does not protect captive cetaceans, all standards and regulations have been left in the care of AZA and the AMMPA. Anti-captivity advocates believe that the AMMPA has neglected their duties when it comes to the well-being of collections and have focused more on interactive programs as a mainstream source of revenue for institutions. Despite the constant bickering between anti and pro-captivity members, institutions continued their education through interactive programs until the release of the 2013 documentary *Blackfish*, forever changed the world's view on the public display of cetaceans.

Blackfish is a documentary that explains and dissects the controversy over captive orca whales. Its main focus is on the story and life of one of SeaWorld's famous orcas named Tilikum, who is one of the largest orca whales in captivity in the U.S. Not only is Tilikum known for his size, but he is also known for his involvement in the deaths of three

³⁵ "Biting the Hand that Feeds: The Case Against Dolphin Petting Pools," Whale and Dolphin Conservation Society, <http://uk.whales.org/sites/default/files/dolphin-petting-pools.pdf> (March 18, 2015.)

³⁶ Frequently Asked Questions, "How safe are in-water interactive programs with dolphins?" Alliance of Marine Mammal Parks and Aquariums. <<http://www.ammpa.org/faqs.html#7>> (March 18, 2015.)

people, including his senior trainer, Dawn Brancheau. During one of SeaWorld's shows, Dawn and Tilikum were performing certain stunts for visitors when the whale grabbed Dawn and pulled her into the water. "It took more than thirty minutes to corral Tilikum...out of the G Pool and eventually into the medical pool....Rescuers spent ten minutes prying Dawn from his jaws."³⁷ Dawn's autopsy would report that she had sustained fractures to her jawbone, ribs, and a cervical vertebra. Her scalp and left arm were also removed. After Dawn's death, there was a public outcry when SeaWorld stated it was the trainer's own fault for her death and that Tilikum would continue to breed and perform in shows. *Blackfish's* director, Gabriela Cowperthwaite responded to SeaWorld's public statement by developing this documentary in order to investigate and share with the world the problems and unethical reasons for maintaining not only orca whales, but all cetaceans.

Before the release of *Blackfish*, the public was unaware of the issues that surrounded captive marine mammals. Author of the article "Public Awareness, Education and Marine Mammals in Captivity," Jiang Yixing even states that during his visit to Marineland, more than half of the visitors he encountered believed that the animals were happy in captivity and lived contented lives.³⁸ It was not until after *Blackfish* that visitors began to question the well-being of cetaceans in institutions, leaving aquariums and marine parks to answer to their practices of caring for cetaceans. The National Aquarium in Baltimore, which we will discuss further in the following chapters, decided to close its 33-year-old dolphin show since the director believed that the show did not educate its visitors.

³⁷ David Kirby, "Death at SeaWorld," 2012, Page.313.

³⁸ Jiang Yixing, Michael Luck, E.C.M. Parsons, "Public Awareness, Education and Marine Mammals in Captivity," *Tourism Review International*, Volume 11:237-49, 2007, Pg. 244, Jiang noticed that during his evaluations in Marineland, more than half of the visitors (62.8%) were not aware of the issues of captive marine mammals' welfare. One in five visitors did not think that there was a problem in terms of the captive marine mammal's welfare because they felt that the animals enjoyed their life in captivity.

“The era of modern aquariums began here in 1981, and a lot has changed,” says John Racenlli, director of the National Aquarium.³⁹ The 20-minute dolphin show, which includes tricks and jumps, has now changed into an observation deck where visitors can visit throughout the day and interact with the trainers on site. While other aquariums such as the Georgia Aquarium have spent millions of dollars to enhance the music and special effects to increase their audience, the National Aquarium has looked for ways to continue the enhancement of education to its guests.

In order to really understand the changes made by the National Aquarium, I have sat in on the dolphin exhibition and have evaluated the audience and their reactions. During my weekend visit, I observed the exhibition for an hour, where I witnessed the attendance of at least 70 visitors. During the hour, trainers gave a 15-minute lecture that discussed the diet, anatomy and care for the aquarium’s dolphins. They also briefly at the end spoke about the importance of recycling and caring for the dolphins in the wild. The dolphins during the lecture were signaled to approach the glass in order for the visitors to view them and were also directed to jump at least once or twice out of the water, which had the audience clapping and cheering. Once the lecture was over, docents that were throughout the amphitheater walked around answering any questions visitors might have. I overheard a woman with a child ask what the line marks were on one of the dolphin’s backs. The docent explained to the woman and child that the lines found on the dolphins were called rake marks, which is common in both captive and wild dolphins. It is a way for the dominant dolphins to signify their dominance of the rest of their group. The docent went on to explain that the dolphins in the aquarium do not mistreat each other and that it is a

³⁹ Yvonne Wenger, “National Aquarium considers whether to keep dolphins on exhibit,” May 14, 2014. The Baltimore Sun, <<http://www.baltimoresun.com/news/maryland/baltimore-city/bs-md-national-aquarium-dolphins-20140514-story.html#page=1>> (March 19, 2015.)

form of interaction. The docents and trainers overall were extremely knowledgeable and engaging with visitors and the visitors were open to asking different questions when it came to the care and training of the dolphins. I did overhear one group of visitors complain as they left, that the dolphins did not perform enough tricks for the kids and that the lecture was dry. After my visit to the aquarium, I reviewed the remarks from followers on the aquarium's social platform, Facebook. I saw a mix of comments referring to the raised prices and the disappointment of not seeing the dolphins perform. Even though there were a handful of negative remarks, the majority of the comments were positive, praising the aquarium for the new exhibition and the opportunity to connect with the animals. Visitors commented saying that they were able to take away more meaning and appreciation for them.

In the following chapter we will discuss the aquarium's decision more, but from my visit, I believe that this exhibition has more potential to grow. Even though the trainers and docents would speak to the audience about the animals and the importance of conservation, there were a few times I felt the trainers should have reached out to the audience and asked them a question about what they already knew. Not only would it break the moments of awkward silence, it would keep the audience interested in the exhibition. The aquarium's new exhibition overall is a new form of education that gives visitors a better understanding of dolphins. With the shows no longer in operation, the aquarium separates fantasy from reality and presents the dolphins for the animals they truly are.

When it comes to an institution's mission, it is important that the audience remains part of that mission in some way. As the American Alliance of Museums states in the

introduction to their Code of Ethics, “Loyalty to the mission of the museum and to the public it serves is the essence of museum work...Where conflicts of interest arise-the duty of loyalty must never be compromised.”⁴⁰ Museums like the National Aquarium, must be able to balance their mission of caring for their collections while serving the public, but unfortunately many aquariums and marine parks might not know where to draw the line between education and entertainment, leaving the public misunderstanding the importance of these collections and why they are here today. With recent events and anti-captivity documentaries such as *Blackfish*, institutions must evaluate their management and mission in order to determine whether they make the decision to either sink or swim when it comes to the new views regarding cetaceans on public display.

⁴⁰ “Code of Ethic for Museums,” American Alliance of Museums, < <http://aam-us.org/resources/ethics-standards-and-best-practices/code-of-ethics>> (March 23, 2015.)

Chapter 5: Cetacean Management: Breeding and Conservation.

As discussed in the previous chapter, aquariums and zoos are important for many reasons. They educate the public, connect visitors with exotic animals, and can be a form of recreation. Like all museums, aquariums and zoos have a mission to provide care for their collections, educate the public and last, but not least, find ways to conserve their animals. Conservation is one of the most critical topics in today's society. Because of many factors, numerous species of animals have become extinct or have found themselves on the Endangered Species List. To protect the endangered species that live in captivity, institutions have focused on conservation breeding as a way to increase a species numbers. AZA manages numerous conservation initiatives that typically involve participation and collaboration amongst many AZA partnerships and committees, which include research projects and numerous conservation strategies.⁴¹ Some of the species that AZA focuses their conservation on are apes, tigers, elephants and marine mammals. AZA provides conservation and financial support on behalf of marine mammals and maintains partnerships with associations such as the AMMPA and the International Marine Animal Trainers Association (IMATA) in order to raise awareness of issues and promote conservation for marine mammals.⁴²

Even though conservation breeding is found to be important for all animals, including cetaceans, it is argued by environmental groups and some marine mammal scientists that institutional breeding tactics are inhumane and unethical. In this chapter, we will discuss certain cases that involve the management of cetaceans in aquariums, which include topics such as the conservation for both wild and captive cetaceans, breeding

⁴¹ Conservation Initiatives, Association of Zoos & Aquariums, < <https://www.aza.org/conservation-commitments-and-impacts/>> (March 28, 2015.)

⁴² Marine Mammal Conservation, Association of Zoos & Aquariums, < <https://www.aza.org/marine-mammal-cons/>> (March 28, 2015.)

programs, and the care of animals. This chapter will help us understand the obstacles aquariums and marine parks have encountered when it comes to the continuance of their cetacean collections and how management of these species comes with severe consequences such as injury and even death to the animal.

As we discussed in our previous chapter on ethics, the AMMPA have produced their own Standards and Guidelines that guide members on the proper care of their cetacean collections. Because the U.S. is prohibited from collecting cetaceans from the wild, aquariums and institutions have turned to propagation, which is the breeding of specimens by natural processes. Unfortunately, many cetaceans are unable to breed naturally due to chronic stress. In many cases, captive cetaceans at one point in their lives have shown signs of chronic stress due to changes in water temperature, transportation, or from sustaining an injury. These cases of stress can play a major part in the failure of both male and female reproductive organs. As Curry states,

“The delicate balance and timing of neuroendocrine events during the female reproductive cycle predisposes her to potential interruption and reproductive failure resulting from stress. ...In addition, stress in females can cause delayed puberty, lack of behavioral receptivity, irregular estrus, delayed ovulation, failure of ovulation, spontaneous abortion and increased infant mortality.”⁴³

There are several options an aquarium might use when it comes to breeding. Institutions are known to isolate a female and male cetacean into a separate section of the tank where the animals are encouraged to mate due to the high sexual frustration of the male. Another option some institutions use a form of vitamin called “Sea Tabs,” which not only maintain the animal’s diet, but also increase sex drive among male cetaceans. The most common

⁴³ Barbara E. Curry, “Stress in Mammals; The Potential Influence of Fishery-Induced Stress on Dolphins in the Eastern Tropical Pacific Ocean,” NOAA Technical Memorandum NMFS, April 1999, Part II, Section C, Pg.51-52.

breeding strategy used by institutions is artificial insemination, which is the collection of male semen that is frozen and stored for future use. When the institution has chosen a female, the female is placed on hormone therapy, monitoring the estrus cycle, and is inserted with an endoscope and catheter with the semen into the uterus.⁴⁴ Artificial insemination is usually performed on all female cetaceans in captivity. Activists and marine scientists argue that this procedure is unethical and causes stress to many of the females. In one case, it was reported that at SeaWorld, if females refused to cooperate with the insemination process, they would have to be “removed from the water under mild or no sedation for the 30 minute procedure.”⁴⁵

Even though artificial insemination is looked at as an unethical breeding practice, the AMMPA has claimed that at the end of 2008, more than 64% of bottlenose dolphins in their members’ facilities were born in parks and aquariums.⁴⁶ Unfortunately the percentage of successful beluga and orca births has been low. The last two beluga whale births were in 2012. The Georgia Aquarium and The Shedd Aquarium both welcomed two new beluga whales into their collection, but The Georgia Aquarium lost their calf only a few days later due to health problems. The last successful birth of an orca whale was in 2013 at the SeaWorld in San Diego. It is not wholly understood why beluga and orca whales have such low successful birth rates in captivity. Anti-captive experts argue that the chronic stress of captivity might affect the natural gestation period and that mothers are not experienced enough to care for their calves. The Georgia Aquarium shares with the public

⁴⁴ Jamie Coulson, “Wild Breeding VS. Captive Breeding,” Cetacean Inspiration, <<http://www.cetaceaninspiration.com/breeding>> (March 25, 2015.) Artificial insemination has resulted in 35 cetacean calves across five different species.

⁴⁵ Jaime Coulson, “5 Disturbing Facts About SeaWorld’s Captive Breeding Program,” May 31, 2012, Cetacean Inspiration, <<https://cetaceaninspiration.wordpress.com/category/cetacean-captivity/page/8/>> (March 25, 2015.)

⁴⁶ “Frequently Asked Questions,” Alliance of Marine Mammal Parks & Aquariums, <http://www.ammpa.org/faqs.html#13> (April 1, 2015.) Alliance marine life parks, aquariums and zoos make every effort to maintain their collections of dolphins through responsible breeding programs.

that many first-mothers, in the wild and in captivity, usually lose their calves, but Dr. Naomi Rose states in her response to the Georgia Aquarium:

“It’s true that first-time mothers in the wild do lack experience, but in natural cetacean populations, “aunties” assist with births, primiparous females tend to have their own mothers nearby, and basically the “village” raises all calves, first-born and otherwise.”⁴⁷

Since captive cetaceans do not have a social group to rely upon at the time of birth, institutions provide “around the clock” care for their animals from the time they are pregnant to a few weeks after the birth of the calves. By revisiting their notes from previous births, successful or not, the institution can take the correct measures in order to care for the specific animal. In April 2015, The Georgia Aquarium is expecting a birth from one of their beluga whales. If the calf survives, the captive population of belugas in the U.S will grow to 31.⁴⁸

The breeding of cetaceans is an ethical issue that has been argued by both pro- and anti-captivity supporters. The anti-captive side claims that institutions force their collections to breed, placing them in stressful, and at times, deadly situations, while pro-captives state that institutions rely on breeding in order to conserve the population of captive cetaceans that are under human care. The pro-captivity side also believes that the conservation of captive cetaceans will one day benefit wild cetaceans, for reasons unknown. The decision to breed is based on each institution and its mission.

Even though captive breeding has an important role in cetacean conservation, institutions have also managed their collections through breeding loans. By creating a

⁴⁷ Michael Mountain, “Why Newborn Beluga Whale Died at Aquarium,” May 24, 2012, Earth in Transition. <http://www.earthintransition.org/2012/05/newborn-beluga-whale-dies-at-aquarium/> (March 19, 2015.)

⁴⁸ “Captive Cetacean Database; Living Populations, Belugas,” March 12, 201, Ceta-Base, <http://www.ceta-base.com/lugalogue/dl-northamerica.html> (March 30, 2015.)

breeding loan, institutions are able to acquire more cetaceans for their collections in order to fulfill their mission of conservation, education and science. AZA states that it is vital that members who are involved with breeding loans meet all correct standards and requirements. One of the most well known species that is used in aquarium breeding loans are beluga whales. As stated earlier, beluga whales are a species that has had a difficult time thriving in captivity. The beluga is an animal of large size and is known to be extremely vulnerable in any type of stressful environment. In order to sustain the captive beluga whale population, institutions will turn to AZA's Taxon Advisory Group (TAG) for assistance. TAG is a group which examines the conservation needs of an entire taxa (species), and develops recommendations for population management and conservation based upon the needs of the species and facilities that meet AZA's standards.⁴⁹

Each TAG is responsible for developing a plan that specifies the correct manner of how each species should be managed. In one case, TAG has worked with the Vancouver Aquarium in order to acquire more beluga whales. It was recommended that some of their beluga whale collection be loaned out to institutions in the U.S for breeding purposes. The Vancouver Aquarium owns eight beluga whales, but has loaned two to the Georgia Aquarium and four to Orlando, SeaWorld. Unfortunately, in late February of 2015, SeaWorld announced the death of one of the Vancouver Aquarium's whales, Nanuq. The beluga whale, who was there for breeding purposes, was reported to have sustained a jaw injury from another whale and was being treated for an infection. Though the autopsy will not be announced for another few weeks, Dr. Naomi Rose has claimed, "In the wild, a

⁴⁹ "Taxon Advisory Groups," Association of Zoos & Aquariums, <https://www.aza.org/taxon-advisory-groups/> (April 2, 2015.)

broken jaw resulting from contact with another animal seems unlikely.”⁵⁰ AZA has looked into this scenario and has responded to the public that SeaWorld at the time had taken all measures to care for Nanuq’s jaw. AZA also stated to the public that SeaWorld had followed all standards and guidelines for collection loans. It is essential that all institutions participating in the loan “must annually monitor and document the conditions of any loaned specimen(s) and the ability of the recipient(s) to provide proper care.”⁵¹ But even though AZA has stated that SeaWorld would not be held responsible for the accident, it has left the Vancouver Aquarium second guessing their decision to continue with their breeding program, seeing that the efforts to conserve are actually doing more harm than good for belugas in their collection. This is a case that will be discussed further in the next chapter.

After this incident with Nanuq, the question of whether cetaceans should be kept in captivity continues to rise, leaving institutions in the hot seat with the public. The decisions of these institutions are determined through their missions and management, but mostly through the reactions of their public. In our last chapter, we will discuss how directors and boards of trustees of institutions are now re-evaluating the management of their cetacean exhibitions and if they truly are meeting the missions of their institutions.

⁵⁰ Josephin Yurcaba. “Beluga Whale Dies in Captivity at SeaWorld Because of a Broken Jaw...What?!” February 23, 2015, One Green Planet, <http://www.onegreenplanet.org/news/beluga-whale-dies-in-captivity-at-seaworld/> (April 2, 2015.)

⁵¹ “AZA Policy on Responsible Population Management: Acquisitions, Transfers and Transitions by Zoos & Aquariums,” 2014, Pg.6, [https://www.aza.org/uploadedFiles/About_Us/AZA%20ATT%20Policy%202014%20Final\(1\).pdf](https://www.aza.org/uploadedFiles/About_Us/AZA%20ATT%20Policy%202014%20Final(1).pdf) (March 27, 2015.)

Chapter 6: Decisions of Management.

In all organizations, profit and nonprofit, management is one of the most vital parts. Management represents the organization as a whole and assists with the growth of the organization's mission. Unlike profit organizations, nonprofits such as museums, zoos and aquariums must not only govern the institution in order to earn financial revenue, but they must also "protect and enhance the museum's collections and programs and its physical, human and financial resources."⁵² Organizations rely on their directors and board of trustees to govern the staff and collection with both the mission and public trust in mind. As directors and trustees of nonprofit organizations, decisions can impact their organization in either a positive or negative way, but the decisions must be made in the best interest of the institution and the community that it serves. The board of trustees is the primary group of people entrusted with and accountable for the leadership and governance of the nonprofit organization. A nonprofit board member must serve the organization with three fundamental duties in mind: care, loyalty and obedience. The members must honor all these standards when it comes to making decisions for the organization.⁵³ Directors or CEOs are responsible for their leadership of the organization and must oversee the relationships with their board of trustees, while enabling them to carry out their responsibilities.

When it comes to marine institutions and their cetacean collections, we have seen throughout this thesis the different methods of managing this type of collection and the varying opinions on captivity. With the growing dispute about captive cetaceans, marine institutions, especially nonprofit institutions such as The Vancouver Aquarium and The

⁵² Code of Ethic for Museums," American Alliance of Museums, < <http://aam-us.org/resources/ethics-standards-and-best-practices/code-of-ethics>> (March April 1, 2015.)

⁵³ David O. Renz and Associates, "The Jossey-Bass Handbook of Nonprofit Leadership and Management," 3rd Edition, 2010, Pg. 128.

National Aquarium, have left board members and directors re-evaluating the management of these specific collections to gauge if they are truly meeting the mission of their institution. In this last chapter, we will discuss two cases of institutions that made changes to improve the management of their cetaceans, and we will examine the issues they face, such as public interest and revenue. The decisions made by these two specific aquariums not only impacted their collections, but also has changed directors and trustees' views on maintaining cetaceans in captivity.

Back in 2012, one of the most well-known aquariums in the U.S., The National Aquarium, located in Baltimore, MD, decided to end its two-decade-old bottlenose dolphin show and instead re-open the exhibition as an all-day access for visitors. Visitors are able to interact with trainers and staff and observe the dolphins for as long as they wish. With growing changes in zoo and aquarium environments, officials at the National Aquarium re-evaluated their dolphin display in order to meet their mission, which includes the importance of conservation.

Prior to the change in the display, the aquarium received over 10,000 visitors on a single Saturday, and with four scheduled dolphin shows, each running for 20 minutes, 4,800 of those 10,000 visitors would see the dolphins for an additional \$3 on their admission pass. With the dispute over whether keeping cetaceans in captivity is unethical, and with the popularity of the documentary *Blackfish*, the National Aquarium is the first marine institution in the U.S to take a step forward and not only end their dolphin show, but also deliberate on retiring their dolphin collection to an ocean side sanctuary. Executive director of the National Aquarium, John Racanelli, stated, "After 33 years, it's

time. The era of modern aquariums began here in 1981, and a lot has changed....As a conservation organization first and foremost, we have to evolve.”⁵⁴

The aquarium is one of Baltimore’s biggest tourist attractions, bringing in over 1.3 million visitors a year. Before the decision was made to end the dolphin show, Racanelli and the aquarium’s board of trustees discussed the issues that would be faced, such as loss in revenue and attendance. Because the National Aquarium is a nonprofit organization, the aquarium survives financially through its members and visitors. The aquarium decided to eliminate their dolphin exhibition fee and enhance their admission prices, which range from \$21 to \$34 a person. Even though some visitors were disappointed to learn that the dolphin show was no longer, many visitors were happy to know that they could visit the dolphins at any time during their visit and stay as long as they wanted. The National Aquarium’s senior director for visitor experience and education, Nancy Hotchkiss, evaluated the new exhibition the first month it was opened and proved that it was more successful with visitors than the dolphin show. Hotchkiss explains in article to *The Baltimore Sun*, “Instead of spending 20 minutes watching the dolphins swim, jump and dive on command, she saw people spending 40 minutes or even an hour in the amphitheater, watching the animals.”⁵⁵ Racanelli believes that the aquarium has captured the attention of its visitors through the changes in their exhibitions, which not only connects visitors, but also ensures the health and well being of the animals in its collection. The National Aquarium hopes that by ending their dolphin shows, all their visitors will have a chance to

⁵⁴ Yvonne Wenger, “National Aquarium to Consider Whether to Keep Dolphins on Exhibit,” *The Baltimore Sun*, May 14, 2014, http://articles.baltimoresun.com/2014-05-14/news/bs-md-national-aquarium-dolphins-20140514_1_ocean-side-sanctuary-national-aquarium-john-racanelli/2 (April 2, 2015.)

⁵⁵ Chris Kaltenbach, “National Aquarium ends dolphin shows in favor of all-day dolphin access,” *The Baltimore Sun*, May 3, 2012, http://articles.baltimoresun.com/2012-05-03/features/bs-ae-dolphin-show-20120503_1_dolphin-show-captive-dolphins-dolphin-program/ (April 2, 2015.)

experience these animals for who they truly are and not for the tricks and stunts. As of now, the dolphin exhibition will remain open and no decision has been made on whether the dolphins will be moved for retirement. The board has hired a team of consultants to assist the aquarium in altering their exhibitions in order to “open people’s eyes to the ocean, and the aquatic places in their lives.”⁵⁶

The National Aquarium’s decision to re-evaluate their cetacean collection has been applauded worldwide by marine scientists and activists. Lori Marino, an Emory University neuroscientist and expert on dolphin cognition, states, “It’s time for kudos...the aquarium is clearly responding to the scientific evidence about dolphins’ cognitive complexity and how they fare in captivity, and to public opinion.”⁵⁷ Even though activists have praised the National Aquarium for this decision, they still believe that the animals must be released back into their natural environment. Unfortunately, this type of project is easier said than done and takes years of preparation and financial resources in order to execute. Not only is the preparation and planning of this project time consuming, but also the well being of the participating animals must be carefully evaluated. Seven of the National Aquarium’s dolphins were born in captivity, and the eighth was captured from the wild before the MMPA was enacted. These dolphins, along with all captive cetaceans, are cared for through human interaction in a sterile, concrete pool. Granted, there are a few cases where cetaceans have been successfully released from captivity and have survived in the wild, for example the star whale, Keiko (also known as Free Willy) is a well-known example when it comes to the release of cetaceans.

⁵⁶ Yvonne Wenger, “An Aquarium Wonders: Is it time to release the dolphins?” The Sunday Star-Ledger, June 1, 2014, Page 2, Section 1,

⁵⁷ Virginia Morell, “Dolphin Exhibits May Close at the National Aquarium,” National Geographic, May 16, 2014,

<<http://news.nationalgeographic.com/news/2014/05/140515-dolphins-baltimore-aquarium-conservation-animal-welfare-science/>> (April 3, 2015.)

Under the management of the Humane Society of the United States, Keiko was transported from captivity to an ocean pen where he underwent training to prepare for his release, which included supervised swims in the open ocean. When he was released, he was spotted integrating with a pod of wild whales and from time to time would be seen attempting to connect with humans. Keiko lived five years in the wild until he died from pneumonia at the age of 26. Cetacean institutions blamed the Humane Society for Keiko's death and went as far as accusing them of murder, while organizations such as the Humane Society went on to deny the accusations and claim that even though Keiko died from respiratory illness, he was able to care for himself during his years in the wild.⁵⁸

Releasing any type of cetacean takes a great deal of time and must be weighed carefully when it comes to each individual animal. The move for the dolphins at the National Aquarium is not a decision that will be determined overnight. It is a scientific decision that will be discussed in upcoming aquarium- sponsored "dolphin summits" in the coming months. The National Aquarium's director continues to take the lead on providing his collection with the most natural environment possible and could most likely start a trend for marine institutions, where ethics and the well being of animals come first. Marino predicts, "All it takes is for one of these institutions to be the leader, and others will follow...I have a feeling that this will start to roll."⁵⁹

Another case that has caused commotion among marine institutions was the Vancouver Aquarium's decision to file a legal challenge against the decision of its own board of trustees to ban the natural breeding of captive cetaceans due to the previous deaths and stillbirths of calves. The aquarium has also filed a challenge to stop the creation

⁵⁸ David Kirby, "Death at SeaWorld," 2012, Chapter 19, Pg.197.

⁵⁹ ;*Ibid*

of an oversight committee that would oversee the well being of all of the cetaceans owned by the aquarium. The president and CEO of the aquarium, John Nightingale, filed the challenge that claimed, "Our marine mammal rescue program will be compromised by the ban on breeding cetaceans. Further, a ban on breeding cetaceans is both impractical and unwise, from an animal-care and animal-welfare standpoint."⁶⁰ Nightingale also stated that board's decision to create an oversight committee, which would be comprised of animal-welfare experts and would assist in the preparation of yearly reports on the well-being of the institution's cetaceans, would put the aquarium's standing in the marine science community at risk.

In late August, 2014 the decision was made by an unanimous vote by the board that the Vancouver Aquarium would end their breeding program and would permit captive breeding for threatened species only. The ban was voted in by the board of trustees because of the high number of protests from activists who deemed that keeping cetaceans in captivity was cruel and unethical. Activists are pushing the aquarium to release the whales back into the wild, and the board whose responsibility is to make decisions not only for the good of the collection, but for the public's best interest, has placed the whales in a sticky situation.

With the ban voted in, Nightingale fears that the end of its breeding program could be the end of the conservation of wild beluga whales. With climate change and the rise of pollution, wild beluga whale populations will slowly disappear, leaving only a memory, if their captive relatives are not conserved. With the decision to ban the breeding program, the aquarium has two options: it can release its whales, although they might be doomed

⁶⁰ Andrea Woo, "Vancouver Aquarium Challenges Cetacean Breeding Ban in Court," The Globe and Mail. August 27, 2014, <http://www.theglobeandmail.com/news/british-columbia/vancouver-aquarium-challenges-cetacean-breeding-ban-in-court/article20222503/> April 3, 2015.

since they have been in captivity for decades, or let the whales currently in captivity die out. Even though the ban has been passed, it is not determined yet how it will affect the aquarium's loaning partnerships with SeaWorld and the Georgia Aquarium. As much as this decision was made for the interest of both the public and the whales, many aquarium staff members and members of the public fear that this decision could harm the future work of the aquarium and place the conservation of whales and its education to the public at risk.

In late February 2015, one of the Vancouver Aquarium's loaned beluga whales, Nanuq, who was discussed in an earlier chapter, died at SeaWorld due to an unknown illness, and had previously undergone treatment for an infection caused by a broken jaw that occurred in an encounter with another animal. Once the board heard of the whale's death, the discussion of keeping cetaceans in captivity was immediately brought back up. The executive director of the AMMPA, Kathleen Dezio, stated that Nanuq's death was an "unfortunate accident" and that "accredited aquariums are rigorously inspected every five years. Animals that might be sent on loan are carefully evaluated for temperament and suitability for blending into the new population."⁶¹ Although the post-mortem examination is scheduled, the results are not expected till the end of May 2015, leaving the Vancouver Aquarium's board members affected by changing times and considering putting an end to cetacean captivity.

The actions taken by the National Aquarium and the Vancouver Aquarium show that decisions by governing officials not only make an impact on the collections in question, but also make an impression on the public. With all the knowledge and scientific evidence available today, the public is advocating for institutions to change. Institutions are built on

⁶¹ The Associated Press, "Beluga whale Nanuq death at Orlando SeaWorld reignites breeding debate," CBC News / British Columbia. February 23, 2015, <http://www.cbc.ca/news/canada/british-columbia/beluga-whale-nanuq-death-at-orlando-seaworld-reignites-breeding-debate-1.2966594> April 3, 2015.

their mission and their public engagement, but with the recession in the U.S., institutions have relied heavily on their cetacean shows as a main source of revenue and have continued to produce shows that include music and special effects. With institutions investing millions of dollars into their shows, it is debated whether their mission is incorporated anymore, but instead is solely interested in the revenue.

The two cases presented in this chapter highlight the governing bodies of two aquariums and their challenge of balancing both revenue and mission without tipping the scale. The National Aquarium's board took a risk by closing their star attraction and raising their admission prices, but was able to win over the public by enhancing their experience with the dolphins. Not only did they make these decisions based on the well-being of their animals, but the aquarium was able to shift the interest of the public from admiring leaping dolphins, to experiencing the true animals that they are. The Vancouver Aquarium's decision to ban the natural breeding program for their beluga whales was influenced by the large number of protestors who spoke out against captivity. This decision has caused a conflict of interest and the governing body is split, trying to strike a balance between the conservation of their whale population and the threat of losing attendance. The compromise to breed only threatened whale species has eased the dispute between the trustees and the director for now, but with the recent death of Nanuq, the governing body must now re-evaluate once again whether their collection is being properly cared for.

Aquariums and zoos are increasingly taking more into consideration the public's opinion about the display of cetaceans and whether their shows are truly representing the mission of the institution, or if they have turned away from it in order to support their financial needs.

Conclusion.

As we come to the end of this thesis, we now have a better understanding and knowledge of the history, laws and ethics of cetacean collections. It is an issue that has not only become important to the public, but is also an ongoing discussion involving the aquariums and zoos that maintain cetaceans in captivity.

Through my year and a half of writing this thesis, I have read the arguments by both pro- and anti-captive supporters. Zoos and aquariums must communicate to the public the importance of our earth and its wildlife while maintaining a healthy collection in order to represent the animals currently living in the wild. I have found what is of great importance for a visitor's experience is to be able to connect with these animals. As a child, I myself made monthly visits to the National Aquarium. That, along with my exposure to the dolphin exhibitions, deepened my desire to educate myself and continue to learn the importance of maintaining a healthy environment for cetaceans. If not for cetaceans in captivity, I probably would not be writing about these animals and why their presence in aquariums is needed, but in the correct and educational way and not through circus tricks.

As discussed in Chapter 3, which pertains to the Marine Mammal Protection Act, the Animal and Plant Health Inspection Service (APHIS) should have more control over the well-being of captive cetaceans since there is now a clearer understanding of the complex behavior of these animals. Many institutions tend to display their animals in bare concrete tanks, leaving the animals no space to make normal postural and social adjustments to the environment they reside in. By amending the standards for the MMPA, institutions will have to correct their facilities in order to fulfill the animals' needs. Not only should the MMPA amend their standards for the protection of captive marine life, but the AMMPA

must be more open to changes needed for a healthier and safer environment for their collections and visitors.

From my review of the AMMPA's website, it appears that the association has the capability of balancing the importance of educating the public without placing the animal in an unethical situation. One example is the Georgia Aquarium's case on the importation of wild beluga whales, detailed in Chapter 3. The AMMPA explains on its website why it supports the Georgia Aquarium's decision to file a complaint against the NMFWS for its denial of the permit to take wild beluga whales from Russia. The AMMPA even states on their website the MMPA's regulations on the "take" of wild marine life. The AMMPA should understand that importing whales that were captured under a certain age would be considered illegal in the United States. My recommendation to the AMMPA, since they are a national organization that protects marine life and ensures the public of the well-being of an institution's collection, is that it needs to research other federal protective laws that impact this case, such as the Lacey Act. The Lacey Act "prohibits the importation, exportation, transportation, acquisition, or purchase of any fish, wildlife, or plant taken or possessed in violation of any law, treaty or regulation of the United States."⁶² By educating the public about these different federal laws, the AMMPA would gain the trust of the public and guarantee its continued support.

After reading numerous cases that involve the laws and ethics of maintaining cetaceans in captivity, I further recommend that in the future, institutions should evaluate their collection in order to understand how their decisions affect not only themselves, but public opinion. In the past few years, visitors have boycotted institutions that hold

⁶² Marie C. Malaro & Ildiko Pogany DeAngelis, "A Legal Primer on Managing Museums Collections," 3rd Edition, 2012, Pg. 136.

cetaceans. For example, since the release of *Blackfish*, attendance at SeaWorld has dropped considerably over the last few years. “For the final quarter of 2014, attendance fell 2.2 percent to 4.4 million.”⁶³ The theme park hopes to regain the public’s support by launching an extensive marketing campaign that will advertise their new display tanks for orca whales, which would provide them with a more natural environment. This is an example of the decisions institutions are now facing when it comes to their survival. But will it be enough to keep them in favor with the general public?

All institutions must educate the public and must make visitors aware of the destruction our wildlife faces in the coming years. Not only cetaceans, but also all animals in captivity must be represented “as ambassadors” for their wild relatives and be respected as the wild animals they are. Without these captive animals, we cannot learn about their wild relatives and why they need our help. In order to keep captive animals thriving, management must take the correct steps to ensure that these intelligent animals are properly and ethically cared for.

Zoos and aquariums hold great potential for the future. Their directors and trustees must represent their mission and understand that their responsibility is to manage their collections in a manner that will allow them to continue to exist. As Thomas French, author of “Zoo Story: Life in the Garden of Captives,” wrote:

“Every corner of the grounds revealed our appetite for amusement and diversion, no matter what the cost. Our longing for the wildness we have lost inside ourselves. Our instinct to both exalt nature and control it. Our deepest wish to love and protect other species even as we scorch their forests and poison their rivers and shove them toward oblivion. All of it was on display in the garden of captives.”⁶⁴

⁶³ Lori Weisberg, “SeaWorld attendance, earnings still falling,” UT San Diego, February 26, 2015, <http://www.utsandiego.com/news/2015/feb/26/seaaworld-revenues-earnings-still-dropping/> April 13, 2015.

⁶⁴ Thomas French, “Zoo Story: Life in the Garden of Captives,” 1st Edition, 2010, This is a look at Tampa’s Lowry Park Zoo, a zoo reinventing itself for the twenty-first century.

Bibliography

Alliance of Marine Mammal Parks and Aquariums. <http://www.ammpa.org/index.html>(March 4, 2015.)

Association of Zoos and Aquariums. *Code of Ethics*. N.p., n.d. Web. 9 July 2014.
<<https://www.aza.org/Ethics/>>.

“AT&T Dolphin Tales.” The Georgia Aquarium. <
<http://www.georgiaaquarium.org/experience/explore/galleries/dolphin-tales/>> (March 9, 2015.)

“AZA Policy on Responsible Population Management: Acquisitions, Transfers and Transitions by Zoos & Aquariums.” 2014. Pg.6.
[https://www.aza.org/uploadedFiles/About_Us/AZA%20ATT%20Policy%202014%20Final\(1\).pdf](https://www.aza.org/uploadedFiles/About_Us/AZA%20ATT%20Policy%202014%20Final(1).pdf)
(March 27, 2015.)

“AZA 5-Year Strategic Plan”, Association of Zoos and Aquariums.”
< <https://www.aza.org/StrategicPlan/>> (March 1, 2015.)

Beluga Whale Conservation Project-Acquisition.” Beluga Whale Research & Conservation at Georgia Aquarium. October, 2012. < <http://www.georgiaaquarium.org/belugaconservation.aspx>> (January 2, 2015)

“Beluga Whale Died at Aquarium.” *Earth in Transition*. May 24, 2014.
<http://www.earthintransition.org/2012/05/newborn-beluga-whale-dies-at-aquarium/>

“Biting the Hand that Feeds: The Case Against Dolphin Petting Pools.” Whale and Dolphin Conservation Society. <http://uk.whales.org/sites/default/files/dolphin-petting-pools.pdf> (March 18, 2015.)

Buck, C.D., and J.P. Schroder. *CRC Handbook of Marine Mammal Medicine: Health, Disease, and Rehabilitation*. 2nd ed. N.p.: CRC, 2001. Print.

“Captive Cetacean Database; Living Populations, Belugas.” March 12, 2015. Ceta-Base. <http://www.ceta-base.com/lugalogue/dl-northamerica.html> (March 30, 2015.)

“Capture of Marine Life.” Animal Welfare Institute. <https://awionline.org/content/capture-marine-life>.

Cavaliere, Victoria , “Newborn Killer Whale Presumed Dead.” Yahoo News, October 2014.

“Cetaceans in captivity: 1861-1915,” The Cetacean Project, May 20, 2012, Blog.

“Changing Perspectives: The First Orca in Captivity.” The Cetacean Project. Friday, May 25, 2012. Blog.
http://www.cetaceanproject.com/2012_05_01_archive.html

Code of Ethic for Museums.” American Alliance of Museums. < <http://aam-us.org/resources/ethics-standards-and-best-practices/code-of-ethics>> (March 23, 2015.)

“Code of Professional Ethics.” Association of Zoos and Aquariums. < <https://www.aza.org/Ethics/>>
(March 4, 2015.)

Conservation Initiatives. Association of Zoos & Aquariums. < <https://www.aza.org/conservation-commitments-and-impacts/>> (March 28, 2015.)

Coulson, Jamie. "5 Disturbing Facts About SeaWorld's Captive Breeding Program." May 31, 2012. Cetacean Inspiration. < <https://cetaceaninspiration.wordpress.com/category/cetacean-captivity/page/8/>> (March 25, 2015.)

Coulson, Jamie. "Wild Breeding VS. Captive Breeding." Cetacean Inspiration. <<http://www.cetaceaninspiration.com/breeding>> (March 25, 2015.)

Curry, Barbara E. "Stress in Mammals; The Potential Influence of Fishery-Induced Stress on Dolphins in the Eastern Tropical Pacific Ocean." NOAA Technical Memorandum NMFS. April 1999.
David O. Renz and Associates. "The Jossey-Bass Handbook of Nonprofit Leadership and Management." 3rd Edition. 2010. Pg. 128.

Dougherty, Stephanie Dodson, "The Marine Mammal Protection Act: Fostering Unjust Captivity Practices Since 1972." *The Future of Ocean and Coastal Law & Policy*. 28, no.2 (The Florida State University, 2013) 338.

"Final denial letter from Donna S. Wieting to Billy Hurley." 5, August 2013. United States Department of Commerce, NOAA, Silver Spring, MD. Final denial letter to the Georgia Aquarium from NOAA. NMFS. http://www.nmfs.noaa.gov/pr/permits/sci_res_pdfs/17324_denial_letter_final.pdf

"Footage of orca and dolphin being caught from the wild." < Youtube.com. > February 11, 2011.

French, Thomas. "Zoo Story: Life in the Garden of Captives." 1st Edition. 2010. This is a look at Tampa's Lowry Park Zoo, a zoo reinventing itself for the twenty-first century.

Frequently Asked Questions." Alliance of Marine Mammal Parks & Aquariums. <http://www.ammpa.org/faqs.html#13> (April 1, 2015.)

"Georgia Aquarium: 2012 Year End Summary." The Georgia Aquarium. 2. www.georgiaaquarium.org/2012AnnualReport.pdf (December 15, 2014.)

Graef, Alicia. "Georgia Aquarium Just Won't Give up Trying to Get Wild-Caught Belugas." 8/22/2014. Care2Inc. <http://www.care2.com/causes/georgia-aquarium-just-wont-give-up-trying-to-get-wild-caught-belugas.html> (December 2, 2014)

Humphries, Tracy L. "Effectiveness of Dolphin-Assisted Therapy as a Behavioral Intervention for Young Children with Disabilities." Bridges, May 2003, Volume 1, Number 6, 2. http://www.waterplanetusa.com/images/Effectiveness_of_Dolphin_Assisted_Therapy.pdf>

"International Code of Best Practices for Dolphin Facilities." 2013. Alliance of Marine Mammal Parks and Aquariums. http://www.ammpa.org/docs/130911_IntlCodeBPDolphins.pdf (March 10, 2015.)

Ip, Stephanie, and Bethany Lindsay. "Park Board Bans Vancouver Aquarium from Breeding Whales and Dolphins." *The Vancouver Sun*. N.p., 1 Aug. 2014. Web. 9 Aug. 2014. <http://www.vancouversun.com/technology/Park+board+bans+Vancouver+Aquarium+from+breeding+whales+dophins+updated/10081127/story.html?_federated=1>.

Kaltenbach, Chris. "National Aquarium ends dolphin shows in favor of all-day dolphin access." The Baltimore Sun. May 3, 2012. http://articles.baltimoresun.com/2012-05-03/features/bs-ae-dolphin-show-20120503_1_dolphin-show-captive-dolphins-dolphin-program>

Kirby, David. *Death at SeaWorld: Shamu and the Dark Side of Killer Whales in Captivity*. New York: St. Martin's, 2012. Print.

Malero, Marie C. & DeAngelis, Ildiko Pogany. "A Legal Primer on Managing Museums Collections." 3rd Edition. 2012. Pg. 136.

Marine Mammal Conservation. Association of Zoos & Aquariums. < <https://www.aza.org/marine-mammal-cons/>> (March 28, 2015.)

"Marine Mammal Permits Authorizations." June 27, 2014. NOAA Fisheries Office of Protected Resources. www.nmfs.noaa.gov/pr/permits/mmpa_permits.htm (November 20, 2014)

"Marine Mammal Protection Act (MMPA)," NOAA Fisheries, < <http://www.nmfs.noaa.gov/pr/laws/mmpa/>> (October 8, 2014)

Mooney, Jerye. "Captive Cetaceans: A Handbook for Campaigners." *A Whale and Dolphin Conservation Society*. March 1998. Section 3, Pg. 16.

Morell, Virginia. "Dolphin Exhibits May Close at the National Aquarium." National Geographic. May 16, 2014. < <http://news.nationalgeographic.com/news/2014/05/140515-dolphins-baltimore-aquarium-conservation-animal-welfare-science/>> (April 3, 2015.)

Mountain, Michael. "Why Newborn Beluga Whale Died at Aquarium." May 24, 2012. Earth in Transition. <http://www.earthintransition.org/2012/05/newborn-beluga-whale-dies-at-aquarium/> (March 19, 2015.)

Norman, Sara. "Park Board Commissioners Want Whales Removed from Aquarium." *News1130 Park Board Commissioners Want Whales Removed from Aquarium Comments*. N.p., 5 Apr. 2014. Web. 15 May 2014. <<http://www.news1130.com/2014/04/05/park-board-commissioners-want-whales-removed-from-aquarium/>>.

"Orcas and Dolphins in Captivity." World Animal Foundation. PDF. www.worldanimalfoundation.net/f/OrcasandDolphinsinCaptivity.pdf

"Protection of Beluga Whales." Animal Welfare Institution. The AWI has followed the Georgia Aquarium's case, providing updated statuses for the case, a summary of the case and background on the protection of beluga whales. <awionline.org/cases/protection-beluga-whales>

"Public Benefits of Zoos and Aquariums." Association of Zoos and Aquariums. < <https://www.aza.org/public-benefits/>> (March 5, 2015.)

Schoell, Mark. "The Marine Mammal Protection Act and its Role in the Decline in the San Diego's Tuna Fishing Industry." *The Journal of San Diego History*. Winter 1999, Volume 45, 1. Richard W. Crawford, Editor. <http://www.sandiegohistory.org/journal/99winter/tuna.htm>

"Standards and Guidelines: Alliance of Marine Mammal Parks and Aquariums." Alliance of Marine Mammal Parks and Aquariums. 1. http://www.ammpa.org/docs/S_GSummary2010_2.pdf (March 10, 2015.)

"Swim-with-the-Dolphins Attractions." September 2009. The Humane Society of the United States. http://www.humanesociety.org/issues/captive_marine/facts/swim_dolphins.html (March 15, 2015.)

Taxon Advisory Groups." Association of Zoos & Aquariums. <https://www.aza.org/taxon-advisory-groups/> (April 2, 2015.)

The Associated Press. "Beluga whale Nanuq death at Orlando SeaWorld reignites breeding debate." CBC News / British Columbia. February 23, 2015. <http://www.cbc.ca/news/canada/british-columbia/beluga-whale-nanuq-death-at-orlando-seaworld-reignites-breeding-debate-1.2966594> April 3, 2015.

"The Marine Mammal Protection Act of 1972 As Amended 2007." NOAA. Marine Mammal Commission, MD. Section 102. Prohibitions.- Section 102(b) 18. (December 28, 2014)

"The Tuna/ Dolphin Controversy." Forsea Institute Of Marine Science. HTML. <http://www.forsea.org/TUNALESSON.html>

Weisberg, Lori. "SeaWorld attendance, earnings still falling." UT San Diego. February 26, 2015. <http://www.utsandiego.com/news/2015/feb/26/seaaworld-revenues-earnings-still-dropping/> April 13, 2015.

Wenger, Yvonne. "National Aquarium considers whether to keep dolphins on exhibit." May 14, 2014. The Baltimore Sun. < <http://www.baltimoresun.com/news/maryland/baltimore-city/bs-md-national-aquarium-dolphins-20140514-story.html#page=1> > (March 19, 2015.)

Wenger, Yvonne. "An Aquarium Wonders: Is it time to release the dolphins?" The Sunday Star-Ledger. June 1, 2014. Page 2, Section 1.

"What is a "Zoo" and what is an "Aquarium," <http://www.americanzoos.info/What.html>, (May 4, 2015)

Woo, Andrea. "Vancouver Aquarium Challenges Cetacean Breeding Ban in Court." August 27, 2014. <http://www.theglobeandmail.com/news/british-columbia/vancouver-aquarium-challenges-cetacean-breeding-ban-in-court/article20222503/> April 3, 2015.

Yixing, Jiang, Luck, Michael, E.C.M. Parsons. "Public Awareness, Education and Marine Mammals in Captivity." *Tourism Review International*. Volume 11:237-49. 2007. Pg. 239.

Yurcaba, Josephine. "Beluga Whale Dies in Captivity at SeaWorld Because of a Broken Jaw...What?!" February 23, 2015. One Green Planet. <http://www.onegreenplanet.org/news/beluga-whale-dies-in-captivity-at-seaworld/> (April 2, 2015.)