

Learning from Lonesome George:

Lessons for Endangered Species Conservation Campaigns from a Conservation Icon

Introduction

Endangered species conservation campaigns take many different forms. One such form is the “flagship” approach, whereby a campaign focuses public attention on a named individual of a species. This approach is usually employed only for large mammals. However, one of the most iconic flagships in recent years is the reptile “Lonesome George,” who was until recently the last living member of a subspecies of giant tortoise. Several non-government organizations have made Lonesome George the face of their conservation campaigns—an unusual spokesman of sorts whose story is used to draw visitors, donations, and attention to the Galapagos Islands and the unusual species they hold, and to raise awareness of endangered species issues around the world. This past June, Lonesome George passed away unexpectedly. Since efforts to mate him during his lifetime failed, his passing marked the official end of his subspecies (at least as far as we know). His death sparked worldwide responses, including significant news coverage, articles, and even poetry.

Despite the popularity of the flagship approach and Lonesome George’s iconic status, neither has been studied rhetorically to understand: (1) what aspects of the flagship approach make it so successful; (2) how Lonesome George, a reptile, became one of the most well-known flagships in the conservation arena; and (3) what the ramifications for conservation campaigns utilizing the flagship approach are when their flagships inevitably pass away. Studying these issues will serve several important and beneficial purposes. For campaigns that utilized

Lonesome George as their flagship, exploring these issues can help them identify what course of action to take now that Lonesome George has passed away—whether to continue using Lonesome George’s story and image as their flagship, select a new flagship, or adopt a different strategy altogether. For other flagship campaigns, increased knowledge of these issues can help them understand how to make their campaigns more effective, and how to prepare for the fallout from the eventual deaths of their flagships. Lastly, because reptiles are notoriously overlooked in conservation efforts and campaigns to protect them have had scant luck utilizing the flagship approach, examining how Lonesome George became a successful reptile flagship may allow them to create successful flagship campaigns as well. To accomplish these ends, it is useful to first ascertain what is already known about what motivates people to care about and protect endangered species, what the flagship approach is and how it works, and how Lonesome George became a successful flagship.

Review of Literature

In this section, I first examine existing research on what spurs people to care about the environment and species protection, so as to better understand how the flagship approach utilizes or could better utilize these motivations. Second, I review existing literature about the flagship approach in general, to ascertain what is known about how this approach works both during and after a flagship’s lifetime. Finally, I explore what scholars already know about Lonesome George’s success as a flagship, to determine what is left to learn about how this massive reptile became a global symbol for conservation.

What Makes People Care about Species Conservation

Much research has been done in an effort to understand exactly why people care about environmental issues, yet there is little consensus beyond the general recognition that there is no simple answer. Scholars tend to agree that peoples' values and attitudes towards nature are correlated to some extent with their actions, though the degree of this correlation is disputed (Dietz 2005 357-358; Serpell 2008 14, 25; Schultz et al. 2005 459).

Models of Motivators for Environmental/Species Concern

Scholars have posited various models for understanding humans' primary motivators for environmental concerns. These models include the self-enhancement v. self-transcendence model, whereby people who value self-transcendence are motivated to protect the environment while those who value self-enhancement generally are not (Schwartz 101). The related egoistic, social-altruistic, and biospheric model is similar to Schwartz's model, and posits that people who value social-altruism are more likely to be concerned about environmental issues than those who hold egoistic values (Schultz and Zelezny 2003 129; Scultz et al. 2005 470). Scholars note through research using both of these models that while environmental campaigns often appeal to social-altruistic/self-transcendent values, most Americans prioritize self-interest/self-enhancement over altruism (Schultz and Zelezny 2003 130). Another model for understanding human motivators for environmental concern and action are the ecocentrism (valuing nature's intrinsic value) and anthropocentrism (valuing nature for its maintenance and enhancement of humans' quality of life) model (Thompson and Barton 149).

While these models consider humans' attitudes about and behaviors towards the environment more generally, J.A. Serpell has proposed an affinity and utility model for humans' attitudes towards animals in particular (Serpell 2004 S146-147). Serpell explains this model as an axis comprised of two continuums, where the affinity continuum represents people's affective

and emotional responses to animals and ranges from love, sympathy and identification to fear, loathing and disidentification, and the utility continuum represents people's perceptions of animals' instrumental value and ranges from detrimental to beneficial to human interests (Serpell 2004 S147). Indeed, subsequent scholars have found that anthropomorphic concerns, i.e. affinity, and anthropocentric concerns, i.e. utility, are far more influential in people's attitudes towards animals than scientific considerations (Martin-Lopez et al. 79). Serpell views this model as merely a baseline that is modified by several other factors, discussed below.

Factors that Influence Human Attitudes Toward Species Conservation

Several factors influence people's attitudes towards species conservation. First, animals' attributes, especially their physical appearance and behavior, affect how people respond to them (Ceriaco 1; Serpell 2008 16). Specifically, humans tend to have greater empathy for animals that are phylogenetically close to humans, such as other primates, or that are physically, behaviorally, or cognitively similar to them, and be more concerned for the welfare of those animals than that of animals that are dissimilar, such as reptiles, fish, and invertebrates (Gunnthorsdottir 211; Knight 101; Martin-Lopez et al. 77; Nicholls 2006 73). Additionally, animals perceived as "cute," attractive, or especially vulnerable evoke more concern from humans than those that are not (Ceriaco 8; Gunnthorsdottir 211). In other words, people's attitudes and concern-levels are based on superficial characteristics—on "public appeal and charisma"—rather than on ecological criteria such as rarity, taxonomic uniqueness, and importance to ecosystems (Gunnthorsdottir 211; Konteleon 497; Martin-Lopez et al. 78).

In addition to an animal's attributes, humans' demographic attributes also affect their attitudes towards species conservation. These factors include gender (females tend to be more

concerned about animal welfare than males), age (younger adults appear more concerned than seniors), and religiousness (more religious people tend to have less affection for animals) (Kollmuss and Agyeman 248; Serpell 2004 S148; Serpell 2008 18). Likewise, the more knowledge (Tisdell and Wilson 156) and education (Monroe 122) a person has, the more likely he or she is to care about and be willing to fund conservation efforts. Indeed, while empathy and likeability may be more influential on people's attitudes in the short term, Tisdell and Wilson have argued that increasing knowledge about biodiversity is more important as a long term strategy, as people's emotions may change and their motivations based on them may fade (Tisdell and Wilson 156). Positive experiences with animals, both in childhood and as adults, also correspond to increased concern for animals (Serpent 2008 19).

As noted above, people's values are also thought to impact their attitudes and actions towards the environment and species conservation, although the precise relationship between values, attitudes, and behaviors, is the subject of much research and is not yet well-understood (Dietz 2005 357-358; Serpell 2008 14, 25; Schultz et al. 2005 459). Scholars have identified two types of human values that impact our relationships with nature: those that are culturally transmitted, and those that are biologically transmitted. Scholars have referred to the culturally transmitted values, beliefs, and norms that influence human attitudes and behaviors towards animals and nature as worldviews (Serpent 2008 20, citing Myster and Russell 2003). Worldviews vary substantially across cultures, as different religions, cultural practices, and beliefs view various animals very differently (Serpent 2008 20-21). In particular, the folklore and negative views a culture holds of a particular species impact attitudes about conservation, especially in the case of amphibians and reptiles (Ceriaco 8).

In contrast to culturally inherited values, many scholars believe that some values that affect humans' attitudes and actions towards species conservation are biologically inherited. This is in part because human emotional responses towards animals are "generally immediate and spontaneous" (Serpell 17). This "biophilia hypothesis" posits that humans are biologically predisposed to value nature and animals in nine basic ways: (1) utilitarian value, in the "narrow sense of physical and material benefits derived from the natural world" (Kellert 52); (2) dominionistic value, which "reflects the desire to master and control the natural world" (Kellert 52); naturalistic value, which "reflects the perception of nature as a source of stimulation, detail, and diversity (Kellert 52); (4) scientific value, whereby nature is viewed as "a source of empirical knowledge and intellectual understanding" (Kellert 53); (5) symbolic value, which values nature as a "source of imagination, communication, and thought" (Kellert 53); (6) aesthetic value, which "reveals the natural world as a source of beauty and attraction (Kellert 54); (7) humanistic value, by which nature is valued "as a source of emotional affection and attachment" (Kellert 55); (8) negativist value, which reflects the tendency to fear and avoid nature (Kellert 56); and (9) moralistic value, which views nature as "a source of moral and spiritual inspiration" (Kellert 56). Kellert posits that by realizing the physical, emotional, intellectual, and moral benefits conferred by of these values, people can develop "an ethic of concern for the natural environment" (Kellert 50).

More recently, RJG Van Den Born et al. have proposed an updated set of Western biophilic values based on several recent questionnaires and interviews in Norway. Van Den Born and his team found that despite the general perception of Western culture as characterized by an ideology and exploitation of nature, "the general public in the Western countries has developed a new biophilia, characterized by an almost universal acknowledgement of the

intrinsic value of nature and a rich variety of recognized types of nature and ways in which nature is experienced.” Van Den Born’s study showed that the top three reasons Western people currently value the environment are human health, nature’s intrinsic value, and the value for future generations, followed by its beauty, its usefulness for humans, the enjoyment plants and animals provide, relaxation, agriculture, science, and recreation (Van Den Born et al. 72).

Humans’ motivations for their attitudes and actions towards species conservation have thus been heavily studied, but not yet fully understood. Despite the lack of consensus on precisely which human values impact behaviors and how to measure them, enough research exists to allow scholars to analyze how particular conservation strategies function rhetorically to capitalize on these values or how they could do so more effectively. Yet until now no one has taken up this task in regards to the Lonesome George flagship campaign.

The Flagship Approach

The flagship approach is the most common strategy used by conservation campaigns (Konteleon 483). This approach typically utilizes an individual of a “charismatic,” well-known species that is immediately recognizable and identifiable by name (e.g. chimpanzee or panda), and is associated with a particular geographical location or habitat (e.g. Africa or bamboo forests) (Konteleon 483). Because of the flagship species’ association with its habitat, this approach benefits not only the flagship species, but lesser known species that reside in its habitat as well (Konteleon 484). These campaigns enjoy much broader support than more abstract issues like climate change, because they are “much more immediate and ‘real’” (Kollmuss and Agyeman 253). In addition, because these campaigns typically focus on “charismatic mega-fauna” (i.e. large mammals) and humans are generally much more empathetic to these creatures than those who are phylogenetically or behaviorally dissimilar to them (Gunnthorsdottir 211;

Knight 101; Martin-Lopez et al. 77; Nicholls 2006 73), they appeal to Kellert's biophillic humanistic value (Kollmuss and Agyeman 253).

Unfortunately, because most flagship species are large mammals that do not reside in biodiversity hot spots, this approach currently has little overall impact on biodiversity conservation (Konteleon 497). Accordingly, the flagship approach has been criticized for selecting species based on public appeal rather than on ecological importance (Entwistle 239). Likewise, while it has been described as a "convenient strategy," researchers have stressed the necessity of raising awareness about less attractive species as well (Martin-Lopez 80). Because of the flagship approach's potential to resonate with humans, however, scholars have called for attempts to create new charismatic species that are more closely associated with biodiversity hot spots (Konteleon 497). Although no one has yet looked in-depth at how to do this, Lonesome George is a rare example of a reptile succeeding as a flagship, and examining his rise to fame would shed light on how other non-mammals might become flagships as well.

Lonesome George

While many scholars and conservationists have researched and written about Lonesome George from a scientific perspective, few have examined the ways conservation campaigns have utilized him to promote endangered species awareness. A notable exception is Henry Nicholls, who explores how this "conservation icon" captured the imagination of many and was used to focus attention on the crisis of preserving biodiversity (Nicholls 2006 190). Nicholls describes Lonesome George as a "reptilian poster boy for the Galapagos conservation effort" (Nicholls End of An Era) and "the world's most famous reptile," whose story "touches all who see and hear about him" (Nicholls 2006 xvi, xviii). As Nicholls explains, Lonesome George was a flagship, a "celebrity with a double whammy of charisma and a conservation message" (Nicholls

2006 74-76). This is a rare feat for a reptile, as flagships are usually cute, cuddly mammals with facial features not dissimilar to people's, because people tend to react well to "fluffy, anthropomorphized caricatures" (Nicholls 2006 73). According to Nicholls, Lonesome George was able to attain his iconic status as a flagship, and as the face not just of one organization but many, because "his one-of-a-kind condition and his reclusiveness are things people can relate to—his story triggers a sympathetic response" (Nicholls 2006 76). A testament to his flagship success, Lonesome George's enclosure at the Charles Darwin Research Station bore a sign that read "Whatever happens to this single animal, let him always remind us that the fate of all living things on Earth is in human hands" (Nicholls 2006 73).

Unanswered Questions

While some research exists on what makes flagship campaigns in general—and Lonesome George's in particular—successful, more work is needed to fully understand the rhetorical strategies at play and the ways these campaigns could better capitalize on human motivators for species protection. Examining how Lonesome George defied the odds to become a reptile flagship will guide flagship campaigns on which of an animal's attributes to emphasize, and will pave the way for conservationists to heed researchers' advice to create other non-mammal flagships. Specifically, such examination will reveal whether Lonesome George succeeded due to his unique status as the very last of his kind, or rather due to other characteristics like his personality traits. This knowledge will inform conservationists as to whether other endangered reptiles that are not the last living member of their species have the potential to succeed as flagships. Lastly, while Nicholls and others discuss the ways scientists are reacting to Lonesome George's death (*see, e.g.,* Nicholls 2012), no one has yet addressed the impact Lonesome George's death will have on the conservation and awareness campaigns that

were based on him. Exploring the ramifications of Lonesome George's death for the campaigns that utilized him as their flagship will prove useful in understanding the strengths and drawbacks of a flagship approach, and will aid other flagship campaigns in preparing for the inevitable deaths of their flagships.

Research Questions

In light of both the pressing need for more effective reptilian species advocacy and the dearth of knowledge regarding flagship campaigns noted above, I will explore the following questions in this study:

- (1) Which of Lonesome George's attributes caused this reptile to become an iconic flagship?
- (2) What are the ramifications to the conservation campaigns that utilized Lonesome George as their flagship now that he has passed away?

Research Methods

This study aims to understand how and why Lonesome George succeeded as a flagship, and how his death will impact the campaigns that made him their face. To do this, I will conduct a targeted survey of those persons most likely to have been swayed by Lonesome George: persons who have donated to the campaigns that utilized him as their flagship. Specifically, I will collaborate with the Charles Darwin Foundation, the Galapagos National Park Service, and the Galapagos Conservation Trust to reach past and present donors with a questionnaire. This questionnaire, attached hereto in the Appendix, will be mailed or emailed to all persons who donated to these organizations since they began featuring Lonesome George as their flagship,

and will appear in a pop-up window at the end of the online donation process for donations made during the survey period of the study.¹ The questionnaire will ask participants to submit their responses within 30 days, and will be accompanied by the following statement: “Thank you for supporting species conservation. We invite you to take a brief survey to help us improve endangered species conservation efforts! Your participation will help ensure that we, and other organizations like ours, are doing everything we can to protect endangered species.” Although participation in this survey is voluntary, it is likely that a sizable number of people will respond, as all of the potential subjects have already shown an interest in species conservation through their donations. Moreover, because Lonesome George has been a flagship for several decades, the pool of potential respondents is quite large, such that even if only a small percentage of questionnaire recipients participate, the study will still yield a substantial amount of data.

This questionnaire consists of two separate sets of questions, one for participants who are familiar with Lonesome George and one for those who are not. Both sets of questions are intended to measure what particular aspects of Lonesome George’s story influence people to protect endangered species. Both sets ask readers to respond to each question on a scale of 1 to 5, with 1 meaning “strongly disagree” and 5 meaning “strongly agree,” a measurement scale used frequently in studies assessing people’s attitudes towards the environment (*see, e.g., Knight 97; Thompson 151*). The variables in both sets are different pieces of information about Lonesome George: his name, his status as a member of an endangered species, his status as the last living member of his subspecies, his reputation as a recluse, his reputation as being gentle and well-liked by his caretakers, his failure to bear offspring, his death, and his closely-related

¹ In the event that none of these organizations agree to distribute the Questionnaire to their current or prior donors, I will revise it to eliminate all questions that reference prior donations and instead frame the questions as ones about a hypothetical species conservation campaign (in the vein of Question Set A) and distribute it to students in all School of Sustainability courses offered at ASU during the survey period.

fellow giant tortoise, Super Diego (who may become the next flagship of the campaigns that previously used Lonesome George). The photograph of Lonesome George in this survey portrays him in the same position as the graphics used by the organizations for which he was a flagship, so as to most accurately gauge Lonesome George's impact on people who donated to these particular organizations.

The purpose of using two separate sets of questions is to identify and account for any disparities between retrospective and concurrent reactions to information about a flagship species. That is, those already familiar with Lonesome George will respond to this survey based on their memories of what knowledge they had about him and how it influenced them at the time they donated, and it may be difficult for them to parse out which particular elements of his story moved them. Asking a separate set of questions to those unfamiliar with Lonesome George as they are learning about him for the first time will yield two sets of data that can be used together to ascertain a more accurate picture of which specific information about Lonesome George is most important for spurring people to act to protect endangered species.

The question set for those already familiar with Lonesome George (Question Set B) seeks retrospective product measurements, using only textual questions without images since readers will be responding based on their memories of their prior states of mind. The question set for those unfamiliar with Lonesome George (Question Set A) is designed to yield direct, concurrent product measurements. This second set consists of two versions, which will be distributed to participants at random. Both versions show participants simulated promotional materials in the form of sequential photographs of Lonesome George with varying information about him in order to capture their real-time, immediate reactions to these images. This study thus builds on Knight's novel methodological approach of using pictures of animals to measure

participants' perceptions of and support for protection of various species (Knight 95). Version 1 tells respondents only that Lonesome George is a member of an endangered species, while Version 2 tells respondents that he is the last living member of his subspecies. Version 2 also intentionally introduces information about Lonesome George's personality before introducing his status as the last of his kind. The purpose of these variations is to determine whether Lonesome George's success as a flagship was dependent on his unique status as the very last of his kind, or rather due to attributes shared by other potential flagships. Understanding this is key to knowing whether other potential flagship reptiles—who are one of multiple living members of their species—can attain the iconic status of Lonesome George. In addition, the final question, about another endangered tortoise named Super Diego, is intended to gauge the potential of a reptile other than Lonesome George to become a successful flagship and to further determine whether Lonesome George's particular personality traits were a factor in his flagship success.

To interpret this data, I will, for each of Question Set A Versions 1 and 2 and Question Set B, calculate the median and mean responses to each question. These results will allow me to identify trends in participants' responses. These trends will shed light on which particular aspects of a flagship most influence participants' attitudes towards, and tendency to take action on, endangered species protection. Further, comparing the results of Question Set A Versions 1 and 2 will allow me to ascertain whether the unique fact that Lonesome was the last of his species played a role in his rise to stardom, and if so, to what extent. Lastly, comparing the results of Question Set A with those of Question Set B will provide a check on how people's recollections may differ from their immediate reactions to images of and information about endangered species. These results will be presented in chart form and accompanied by explanatory narratives, organized in one chart by level of knowledge about Lonesome George,

and in a second chart by demographic information. The results of this study will offer guidance to conservation campaigns about whether to adopt a flagship approach, which specific attributes of an animal to include and emphasize in their promotional materials, which animals offer the most promise for success as flagships, and what repercussions to expect after a flagship's death.

Limitations and Possibilities for Future Research

There are of course several limitations to this study. In particular, surveying only people who have already been spurred to act to protect endangered species will provide no information on how flagship campaigns can most effectively motivate people who currently have no concern over this issue. In addition, Question Set A is limited in its ability to fully assess the independent roles that Lonesome George's various attributes play in participants' perceptions of endangered species conservation: because respondents to Question Set A are exposed to information about Lonesome George's personality before learning that he never mated or that he died, their responses to questions that include the latter information may be colored by their knowledge of the former. Similarly, respondents to Question Set B already have some knowledge of Lonesome George, which may also limit their ability to accurately assess the impact of his individual attributes. To obtain more precise information about how isolated attributes of a flagship function, future studies could provide groups of respondents unfamiliar with Lonesome George with different pieces of information, telling some only about his personality, some only about his failure to mate, and others only about his death, and compare participants' resulting impetus to act based on which information they received. Alternatively, a computer-based or in-person survey that randomizes the question order could also serve this purpose, but is impractical for this study, which surveys participants from a variety of countries, not all of whom are

necessarily computer savvy. Lastly, this study uses only one image of Lonesome George and one image of Super Diego. It is possible that other images—of these tortoises in alternative positions, or of Super Diego’s young offspring—would have different emotional impacts on viewers. Thus another additional research project could provide constant information to subjects using a variety of flagship images.

Schedule

- Jan.-Feb. 2013: Work with partner organizations to gather donor records and post Questionnaire on organization websites.
- Mar.-May 2013: Survey period—distribute Questionnaire to mail and email recipients; Questionnaire active on websites. Recipients have 30 days to respond.
- June 2013: Receive Questionnaire responses from participants.
- July-Aug. 2013: Analyze data.
- Sep.-Oct. 2013: Complete draft research findings and conclusions.
- Nov. 2013: Revise draft; develop quantitative/comparative charts.
- Dec. 2013: Finalize research findings and conclusions, including charts.

Appendix

Questionnaire

Thank you for supporting species conservation! We invite you to take a brief survey to help us improve endangered species conservation efforts. Your participation will help ensure that we, and other organizations like ours, are doing everything we can to protect endangered species.

If you **do not know** the name of this individual animal, please complete Question Set A²

If you **do know** the name of this individual animal, please complete Question Set B



Question Set A Version 1

For each question below, please circle 1, 2, 3, 4, or 5.

1 = strongly disagree; 2 = somewhat disagree; 3 = neutral; 4 = somewhat agree; and 5 = strongly agree

1. Viewing the picture above makes me want to donate to or be more involved with this organization.

1

2

3

4

5

² Participants will receive either Version 1 or Version 2, based on randomized computer selection.



My name is Lonesome George.

2. Viewing the picture above makes me want to donate or become more involved with this organization.

1

2

3

4

5



My name is Lonesome George. I am a member of an endangered species.

3. Viewing the picture above makes me want to donate to or become more involved with this organization.

1

2

3

4

5



My name is Lonesome George. I am a member of an endangered species. I am a recluse and mostly just keep to myself.

4. Viewing the picture above makes me want to donate to or become more involved with this organization.

1

2

3

4

5



My name is Lonesome George. I am a member of an endangered species. I am a recluse and mostly just keep to myself. I am a gentle creature and am well-liked by my caretakers.

5. Viewing the picture above makes me want to donate to or become more involved with this organization.

1

2

3

4

5



My name is Lonesome George. I am a member of an endangered species. Despite biologists' efforts to mate me, I have not borne any children.

6. Viewing the picture above makes me want to donate to or become more involved with this organization.

1

2

3

4

5



My name is Lonesome George.

I am a member of an endangered species. I am a recluse and mostly just keep to myself. I am a gentle creature and am well-liked by my caretakers.

Despite biologists' efforts to mate me, I have not borne any children.

7. Viewing the picture above makes me want to donate to or become more involved with this organization.

1

2

3

4

5



My name was Lonesome George. I died in June 2012. I was a member of an endangered species. I was a recluse and mostly just kept to myself. I was a gentle creature and was well-liked by my caretakers. Despite biologists' efforts to mate me, I did not have any children.

8. Viewing the picture above makes me want to donate to or become more involved with this organization.

1

2

3

4

5



I am a distant cousin of Lonesome George and a member of an endangered species. Biologists call me "Super Diego" because I have fathered over 17,000 children.

9. Viewing the picture above makes me want to donate to or become more involved with this organization.

1

2

3

4

5



Question Set A Version 2

For each question below, please circle 1, 2, 3, 4, or 5.

1 = strongly disagree; 2 = somewhat disagree; 3 = neutral; 4 = somewhat agree; and 5 = strongly agree

1. Viewing the picture above makes me want to donate to or be more involved with this organization.

1

2

3

4

5



My name is Lonesome George.

2. Viewing the picture above makes me want to donate or become more involved with this organization.

1

2

3

4

5



My name is Lonesome George. I am a member of an endangered species.

1. Viewing the picture above makes me want to donate to or become more involved with this organization.

1

2

3

4

5



**My name is Lonesome George. I am a member of an endangered species.
I am a recluse and mostly just keep to myself.**

2. Viewing the picture above makes me want to donate to or become more involved with this organization.

1

2

3

4

5



**My name is Lonesome George. I am a member of an endangered species.
I am a recluse and mostly just keep to myself.
I am a gentle creature and am well-liked by my caretakers.**

3. Viewing the picture above makes me want to donate to or become more involved with this organization.

1

2

3

4

5



My name is Lonesome George. I am a member of an endangered species.

I am a recluse and mostly just keep to myself.

I am a gentle creature and am well-liked by my caretakers.

I am the very last living member of my subspecies of Galapagos giant tortoise.

4. Viewing the picture above makes me want to donate to or become more involved with this organization.

1

2

3

4

5



My name is Lonesome George.

**I am the very last living member of my subspecies of Galapagos giant tortoise.
Despite biologists' efforts to mate me, I have not borne any children, so when I die,
my subspecies will die with me.**

5. Viewing the picture above makes me want to donate to or become more involved with this organization.

1

2

3

4

5



My name is Lonesome George.

I am the very last living member of my subspecies of Galapagos giant tortoise. I am a recluse and mostly just keep to myself. I am a gentle creature and am well-liked by my caretakers. Despite biologists' efforts to mate me, I have not borne any children, so when I die, my subspecies will die with me.

6. Viewing the picture above makes me want to donate to or become more involved with this organization.

1

2

3

4

5



My name was Lonesome George. I died in June 2012. I was the very last living member of my subspecies of Galapagos giant tortoise. I was a recluse and mostly just kept to myself. I was a gentle creature and was well-liked by my caretakers. Despite biologists' efforts to mate me, I did not have any children so my subspecies is now extinct.

7. Viewing the picture above makes me want to donate to or become more involved with this organization.

1

2

3

4

5



I am a distant cousin of Lonesome George and a member of an endangered subspecies of Galapagos giant tortoise. Biologists call me "Super Diego" because I have fathered over 17,000 children and helped save my subspecies from extinction.

8. Viewing the picture above makes me want to donate to or become more involved with this organization.

1

2

3

4

5

Question Set B

For each question below, please circle 1, 2, 3, 4, or 5.

1 = strongly disagree; 2 = somewhat disagree; 3 = neutral; 4 = somewhat agree; and 5 = strongly agree

1. I did not know who Lonesome George was prior to donating to this organization.

1 2 3 4 5

If you answered Question 1 with a 1 or 2, please continue to Question 2. If you answered Question 1 with a 3, 4 or 5, please jump to Question 14.

2. I recognized the animal in this picture as a member of an endangered species before donating to this organization.

1 2 3 4 5

3. Recognizing this animal in this organization's promotional or informational materials influenced my decision to donate to this organization.

1 2 3 4 5

4. I knew that this animal was named Lonesome George before donating to this organization.

1 2 3 4 5

5. Before donating to this organization, when I saw Lonesome George, I thought of endangered species.

1 2 3 4 5

6. My decision to donate to this organization was influenced by my knowledge of Lonesome George.

1 2 3 4 5

7. Knowing Lonesome George's name influenced my decision to donate to this organization.

1 2 3 4 5

8. I knew that Lonesome George was the very last of his subspecies of Galapagos giant tortoise before donating to this organization.

1 2 3 4 5

9. Knowing that Lonesome George was the very last of his subspecies of Galapagos giant tortoise influenced my decision to donate to this organization.

1 2 3 4 5

10. I knew that Lonesome George was reclusive before donating to this organization.

1 2 3 4 5

11. Knowing that Lonesome George was reclusive influenced my decision to donate to this organization.

1 2 3 4 5

12. I knew that Lonesome George was considered gentle and was well-liked by his caretakers before donating to this organization.

1 2 3 4 5

13. Knowing that Lonesome George was considered gentle and was well-liked by his caretakers influenced my decision to donate to this organization.

1 2 3 4 5

14. Had I known that this animal was named Lonesome George before donating to this organization, I would have wanted to donate more or be more involved with this organization.

1 2 3 4 5

15. Had I known that Lonesome George was the last of his subspecies of Galapagos giant tortoise before donating to this organization, I would have wanted to donate more or be more involved with this organization.

1 2 3 4 5

16. Had I known that Lonesome George was reclusive before donating to this organization, I would have wanted to donate more or be more involved with this organization.

1 2 3 4 5

17. Knowing something about Lonesome George's personality makes me want to donate to or be more involved with this organization.

1 2 3 4 5

18. Knowing that Lonesome George declined biologists' efforts to mate him with other giant tortoises makes me want to donate to or be more involved with this organization.

1 2 3 4 5

19. Knowing that Lonesome George was gentle and well-liked by his caretakers makes me want to donate to or be more involved with this organization.

1 2 3 4 5

20. Knowing that Lonesome George died in June 2012 makes me want to donate to or be more involved with this organization.

1 2 3 4 5

21. Knowing that Lonesome George died in June 2012 makes me *not* want to donate to, or be *less* involved with, this organization.

1 2 3 4 5

22. Learning about Diego, an endangered Galapagos giant tortoise of a different subspecies than Lonesome George who has fathered over 17,000 children, makes me want to donate to or be more involved with this organization.

1 2 3 4 5

Thank you for your participation in this survey! Please take just a few more moments to tell us a little about yourself (responses are optional and will be used for research purposes only):

Gender: Male Female

Ethnicity: Asian/Pacific Islander Black White Latino
Other (please specify: _____)

Age: under 18 18-24 25-34 35-44 45-54 55+

Education level: High School 2-year college 4-year college Graduate degree

Are you religious? Very Somewhat Not at all

Country of residence: _____

Works Cited

- Ceríaco, Luis Mp. "Human Attitudes Towards Herpetofauna: The Influence of Folklore and Negative Values on the Conservation of Amphibians and Reptiles in Portugal." *Journal of ethnobiology and ethnomedicine* 8.1 (2012): 8-. Print.
- Dietz, Thomas, Amy Fitzgerald, and Rachael Shwom. "Environmental Values." *Annual Review of Environment & Resources* 30.1 (2005): 335-72. Print.
- Entwistle, Abigail. *Guest Editorial*. 34.4, 2000. Print.
- Gunnthorsdottir, Anna. *Physical Attractiveness of an Animal Species as a Decision Factor for its Preservation*. 14 Vol. Bloomsbury Publishers, 2001. Print.
- Kellert, Stephen R. *Building for Life : Designing and Understanding the Human-Nature Connection*. Covelo, CA, USA: Island Press, 2005. Web.
- Knight, Andrew J. "'Bats, Snakes and Spiders, Oh My!'" how Aesthetic and Negativistic Attitudes, and Other Concepts Predict Support for Species Protection." *Journal of Environmental Psychology* 28.1 (2008): 94-103. Print.
- Kollmuss, Anja, and Julian Agyeman. "Mind the Gap: Why do People Act Environmentally and what are the Barriers to Pro-Environmental Behavior?" *Environmental Education Research* 8.3 (2002): 239-60. Print.
- Kontoleon, Andreas, and Timothy Swanson. "The Willingness to Pay for Property Rights for the Giant Panda: Can a Charismatic Species be an Instrument for Nature Conservation?" *Land Economics* 79.4 (2003): 483-99. Print.
- Martín-López, Berta, Carlos Montes, and Javier Benayas. "The Non-Economic Motives Behind the Willingness to Pay for Biodiversity Conservation." *Biological Conservation* 139.1-2 (2007): 67-82. Print.
- Monroe, M. C. (2003). Two avenues for encouraging conservation behaviors. *Human Ecology Review*, 10, 113-125.
- Nicholls, Henry. "End of an Era as Lonesome George Passes Away." *Nature News Blog*. Nature Publishing Group, 25 June 2012. Web. 12 Oct. 2012.
- . *Lonesome George: The Life and Loves of a Conservation Icon*. Macmillan: 2006.
- . "The Legacy of Lonesome George." *Nature* 487.7407 (2012): 279-80. Print.
- Schwartz, S. 1994. Beyond individualism/collectivism: New cultural dimensions of values. In U. Kim and H. Triandis (eds.), *Individual and Collectivism: Theory, Method, and Applications*, 85-119. London: Sage.

- Schultz, P. Wesley, and Lynette Zelezny. 2003. Reframing environmental messages to be congruent with American values. *Human Ecology Review* 10 (2): 126-136.
- Schultz, P. Wesley, et al. "Values and their Relationship to Environmental Concern and Conservation Behavior." *Journal of Cross-Cultural Psychology* 36.4 (2005): 457-75. Print.
- Serpell, JA. 2004. Factors influencing human attitudes to animals and their welfare. *Animal Welfare*, 13: S145-S152.
- . 2008. ON MEASURING PROGRESS IN ANIMAL WELFARE (Report for the World Society for the Protection of Animals)
- Thompson, S. and M. Barton. 1994. Ecocentric and anthropocentric attitudes toward the environment. *Journal of Environmental Psychology* 14, 149-157.
- Tisdell, Clem and Clevo Wilson. "INFORMATION, WILDLIFE VALUATION, CONSERVATION: EXPERIMENTS AND POLICY." *Contemporary Economic Policy* 24.1 (2006): 144-59. Print.
- Van Den Born, RJG, et al. "The New Biophilia: An Exploration of Visions of Nature in Western Countries." *Environmental Conservation* 28.1 (2001): 65-75. Print.