

The Ugly Truths of Conservation

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Project Summary

Conservation groups use a triage system to decide which endangered species are worth saving and which ecosystems to preserve. One major problem is that the main way they do this is by preserving charismatic mega fauna, which are animals that are appealing to the general public (polar bears, pandas, elephants, whales, eagles, etc). Often, these animals are not the most beneficial species to ecosystems, and many do not provide many, if any, ecosystem services to humans. While we spend all this money, time, and energy saving charismatic mega fauna, other species that may be more beneficial to ecosystems and humans are left to die off. [2]

Additionally, due to the fact that conservation funds are limited, and we simply cannot afford to save all of the species in the world, triage may choose to save “cheaper” species. In the long run, having a larger quantity of these cheaper species in surviving numbers may be completely useless as far as being beneficial to the human population. [5]

My final project is three-part advertising campaign that makes a political statement about conservation efforts. I want to try to promote saving endangered species that aren't typically used to represent conservation efforts in order to educate the general public about this underlying ecological process, and why it is important to preserve these species. By promoting the saving of charismatic mega fauna, we may be hurting ecosystems and ourselves more than helping. Each of the three advertisements features an endangered species that isn't typically used to represent conservation efforts and promotes why we should save them (what ecosystem services they provide / their importance to their ecosystem, etc.) Additionally, the tag lines compare them to similar species that fall under the charismatic mega fauna category. The campaign is meant to shine a new light of species that are typically forgotten about or not exposed in the media, but is not meant to promote killing off charismatic mega fauna. [9]

Advertisement 1 features a horseshoe crab. [4] Various species of horseshoe crabs have been used in eye research and eye medicine, ensuring that these medicines are free of damaging bacteria. Additionally, the blood of horseshoe crabs is extracted and used in LAL (Limulus amoebocyte), a crucial pharmaceutical that is used in testing human pathogens in human blood, tissues, and intravenous drugs. Additionally, the crabs' eggs are a food source to many bird species. Human interaction and destruction of sandy habitats (beaches and shorelines) and overfishing are the main reasons why this species is in decline. Not only are horseshoe crabs crucial in human medicine, but they also have an important role in marine ecosystems. [6]

Advertisement 2 features a gray bat. [3] Many species of bats are endangered because humans simply do not understand the economic and environmental importance of these creatures as pollinators and insect controllers. They provide these free services to many plants, fruits, and nuts, which rely on bat pollination for reproduction. With the loss of bat species comes the loss of plant and fruit species, and potentially the loss of many foods that humans eat. Bats are often viewed as pests themselves, which contributes to their diminishing numbers. Additionally, their cave habitats are being obstructed by human interference in many places throughout the world. [1]

Advertisement 3 features an eskimo curlew. [8] Many migratory bird species are crucial indicators of climate change because they rely on a certain time during a specific to migrate, often to breeding grounds. The eskimo curlew, in particular, originally migrated to the Arctic tundra to breed and spent winters in the grasslands of South America during the 1870s. However, since then, the Arctic's climate has been warming, and there is evidence that the birds have been resorting to breeding in agricultural fields instead. Additionally, the birds main food source, the Rocky Mountain grasshopper has gone extinct – which has had direct impact on the eskimo curlew population. This demonstrates how the extinction of one species carries a domino effect to other species within the same food web. Humans have also been contributing to the decreasing numbers of eskimo curlew because they are targets of unregulated hunting. [7]

Annotated Bibliography

1. "Bats: Ecologically Important Mammals Endangered Species Handbook." *Bats: Ecologically Important Mammals Endangered Species Handbook*. Animal Welfare Institute, 1983. Web. 22 Apr. 2013. <http://www.endangeredspecieshandbook.org/projects_bats.php>.

This source discusses the importance of bats as pollinators in ecosystems. It also discusses humans' typical view of these creatures as pests, when they are actual pest controllers themselves (as natural predators of insects).

2. Ehrlich, Paul R., and Anne H. Ehrlich. *Extinction: The Causes and Consequences of the Disappearance of Species*. New York: Random House, 1981. Print.

This book provides a thorough overview of the importance of saving endangered species, and the problems we face as more species are becoming increasingly extinct as a result of human activities and behavior. It discusses many topics that my project addresses such as the importance of many plants, insects, amphibians, and marine organisms in medicine. It also discusses how the loss of one species has direct effects on other species within an ecosystem through the food web. Lastly, this source was extremely valuable in discussing ecosystem services and how loss of biodiversity is leading to a loss of many of these services – many of which are irreplaceable.

3. "File:Gray Bat USACE.jpg." *Wikimedia Commons*. N.p., 14 Mar. 2006. Web. 22 Apr. 2013. <http://commons.wikimedia.org/wiki/File:Gray_Bat_USACE.jpg>.

This is the source for the gray bat image.

4. "File:Horseshoe Crab in Sand.jpg." *Wikimedia Commons*. N.p., 25 Feb. 2013. Web. 22 Apr. 2013. <http://commons.wikimedia.org/wiki/File:Horseshoe_crab_in_sand.jpg>.

This is the source for the horseshoe crab image.

5. Groc, Isabelle. "Should Conservationists Allow Some Species to Die Out." *Discover Magazine*. N.p., 9 May 2011. Web. 22 Apr. 2013. <<http://discovermagazine.com/2011/mar/10-should-allow-some-species-die-out>>.

This article discusses the process and some of the politics involved in conservation triage. Specific to my project, it references how charismatic mega fauna and “cheaper” species are often favored for being saved over species that offer ecosystem services relevant to humans.

6. "Horseshoe Crabs Are One of the Most Fascinating Organisms!" *Endangered Species International*. N.p., 2011. Web. 22 Apr. 2013. <<http://www.endangeredspeciesinternational.org/horseshoecrabs.html>>.

This source provides information about the importance of the horseshoe crab to both humans and marine ecosystems. It also explains why the species is in decline.

7. "WatchList Species Account for Eskimo Curlew (*Numenius Borealis*)." *American Bird Conservancy*. N.p., n.d. Web. 22 Apr. 2013.
<http://www.abcbirds.org/abcprograms/science/watchlist/eskimo_curlew.html>.

This source provides information about the eskimo curlew's migration and its relevance as an indicator to climate change. This source also discusses some of the other reasons why the bird is disappearing, one of which being the extinction of the birds main food source – a species of grasshopper. This demonstrates how extinction of one species has a direct effect on another.

8. Wells, Jeff. "CCB Eagle Nest Blog." N.p., 25 Sept. 2012. Web. 22 Apr. 2013.
<<http://eaglenest.blogs.wm.edu/2012/09/28/ccb-transmitted-whimbrels-in-national-geographic-news-watch/>>.

This is the source for the eskimo curlew image.

9. "Why Save Endangered Species?" *U.S. Fish and Wildlife Service Endangered Species Program* (July 2005). Web. 22 Apr. 2013.
<http://www.fws.gov/nativeamerican/graphics/FWS_Pub/WhySaveEndangeredSpecies.pdf>.

This article further discusses the importance of saving endangered species from extinction and discusses similar topics seen in *Extinction: The Causes and Consequences of the Disappearance of Species*. Additionally, this source provides examples of overlooked endangered species and gives a general and brief overview of why those species and the loss of those species would be detrimental to both humans and ecosystems. I used this source to help curate which species to promote in my advertisements. There are many species that provide important resources, and this source providing a great starting point for which species I should further investigate.

**I MAY NOT BE A BEAUTIFUL
BELUGA WHALE, BUT I HOLD
THE SECRETS TO IRREPLACEABLE
MEDICINES FOR HUMANS**



Once horseshoe crabs are gone, so are
the medical services they provide us.
Save our endangered species.



**I MAY NOT BE A CUDDLY
PANDA BEAR, BUT I PROVIDE
FREE AND IRREPLACEABLE
PEST CONTROL AND PLANT
POLLINATION FOR HUMANS**



Once gray bats are gone, so are the free pollination
and pest control services they provide us.

Save our endangered species.



**I MAY NOT BE A MAJESTIC
BALD EAGLE, BUT I
INDICATE WHEN THE CLIMATE IS IN
TROUBLE FOR HUMANS**



Once eskimo curlews are gone, so are the
climate change indications they provide us.
Save our endangered species.