

In 1926 the last *Canis Lupus*, otherwise known as the Gray Wolf, was eliminated. What was once a species that roamed most of Northern America was then found to be extinct. It was not until the winter of 1955 that the National Park service and US Fish and Wildlife service brought 14 Gray Wolves by trucks back to the Yellowstone Park. These wolves were brought from Canada to once again repopulate their natural habitat. With the reintroduction of the wolves came many changes to the neighboring species in the area.

Before the reintroduction of the wolves, species such as Elk had high populations in Yellowstone. "Elk over browsed the streamside willows, cottonwoods, and shrubs that prevent erosion. Birds lost nesting space. Habitat for fish and other aquatic species declined as water became broader and shallower and without shade from streamside vegetation, warmer." <sup>4</sup> The high levels of Elk also caused Aspen trees in Yellowstone to decline, due to the fact that the Elk act all the new sprouts. Thus by the 1930's no new trees had grown. Along with Elk number the number of Coyotes had also risen. Although they often kill Elk calves these also attacked small mammals, reducing the food available for foxes, badgers, and raptors.

By the 1990s the Wolf was fully reintroduced to the Yellowstone with thriving populations and multiple packs. With this introduction came the decrease in the Elk population. Fear instilled by the wolves caused the Elk from lingering at streamside. Thus with the decline of the Elk population new Aspen trees were able to grow. "New Groves were formed in some areas that now reach 10-15 feet tall." <sup>4</sup> There was also a reduced population of Coyote allowing a resurgence in Pronghorn's population. Willows, cottonwoods, and other vegetation began also to thrive once more along stream banks which in turn helped restore the natural flow of water. These overhanging branches thus caused shade that allowed for the water to be cooled. This welcomed birds once more and the chance of larger fish. With the reintroduction of the trees and vegetation also came the Beaver population. The Beavers created ponds and marshes through their dams supporting the fish, birds and small mammals around them.

Ultimately the reintroduction of the wolves has caused a rise in the biodiversity found in the ecosystem of the Yellowstone park. The Gray wolves serve as a keystone in the ecosystem assuring other species population. This idea of conservation is known as Genetic/Phylogenetic conservation which focuses in on Hot Spots. The conservation of an ecosystem through the reintroduction of the Keystone species was able to save more species. <sup>2</sup>

However In 1974 the Gray Wolf was declared endangered. State such as Wyoming had unlimited range on these animals, thus killing large numbers of as they call them “pests”. Ranchers in Western Montana feared their cattle herds being killed by attacks or hormonal stress caused by the wolf. 5

For my final project I have created a children’s book that reflects the reintroduction of the Gray Wolves into Yellowstone Park. Through this book I have depicted the wolves as a Keystone species in the Yellowstone’s ecosystem and show the many contributions to biodiversity that these wolves have provided. By supporting an ecosystem more animals can be reached. The method of conservation used was a resource based conservation. The wolves not only contributed to diversity but also served as a tourist attraction. All of these factors would be included in the children’s book in an illustrative and educational manner.

Since a children’s book requires a less complicated story, I altered the narrative to get small examples of what changes were caused by the wolves. This can be seen in pages where the book talks about how the beavers returned to the park after the reintroduction of wolves due to the more trees. This in turn caused the fish to grow bigger.

Although the main storyline was founded through facts, I did take some creative liberty with the story. In the spirit of a children’s book I explained the reintroduction of wolves as a pack of wolves taking a road trip. Another creative liberty I took was invented the notion of “Elk Burgers” to get around the idea of the wolves preying on the Elk upon their arrival in the ecosystem.

Through small additions to the narrative, my children’s book goal and intention was to create an informative story about the reintroduction of wolves into Yellowstone Park.

## Annotated Bibliography

1. Sartore, Joel. *Rare: Portraits of America's Endangered Species*. Washington, D.C: National Geographic, 2010. Print.

The following book depicts photographs of endangered animals, one being the Gray Wolf. I will use the pictures as a reference for my illustrations for the children's book.

2. Nijhuis, Michelle. "What Species Will Live?" *Scientific American* (2012): 76-79. Print.'

The following article presents multiple conservation ideas such as the notion of hot spots and triage. The concept of conservation triage is based loosely on medical triage, where decision making system used during the Napoleonic Wars. It consists of sorting through "patients" or species in difficult situations where time, expertise or supplies are scarce. The other method known as the Genetic/Phylogenetic concept uses Hot Spots as their key concept. They try to protect the maximum number of species by focusing on land areas that were full of plants found nowhere else on the planet and that were under environmental threats. By focusing on ecosystems rather than specific animals they are able to save more.

3. Kareiva, Peter. "Conservation for the People." *Scientific American* (2007): 50-57. Print.


The following article depicts the different views of conservation. The article says that preserving biodiversity for its own sake, in regions known as hot spots, is not a working conservation strategy. Focusing on protecting ecosystems that people need makes more sense. By saving these sites biodiversity can be conserved and ensure that people are a priority.

4. Robbins, Jim. "Lessons from The Wolf." *Scientific American* (2004): 76-81. Print.

The following article depicts the changes that occurred in the Yellowstone Park in the winter of 1955 when the National Park Service and US Fish and Wildlife Service brought 14 Gray wolves by truck. Ultimately the wolves altered the ecosystem by balancing the number of Elk. The wolves reemergence in the park has caused a come back in species such as beavers, bigger fish and more vegetation.

5. Chadwick, Douglas H. "Wolf Wars." *National Geographic* (2010): 34-55. Print.

The following article discusses the debate between created by the reintroduction of the Gray wolf population into Yellowstone park. In 1974 the *Canis Lupus*, otherwise known as the Gray Wolf, were declared endangered. Although some groups find that the reintroduction of these species to the Yellowstone's was vital and created an ecosystem with higher levels of biodiversity, groups of Ranchers feared the loss of their cattle herds being killed off.



ONCE UPON A TIME YELLOWSTONE  
PARK WAS FILLED WITH ANIMALS OF  
ALL SHAPES AND SIZES.

UNTIL ONE DAY ELK BURGERS WENT  
OUT OF BUSINESS AND ALL THE WOLVES  
LEFT.



THE ELK STARTED EATING  
EVERYTHING, LEAVING NO  
FOOD FOR THE OTHER ANIMALS  
AND NO BABY TREES.



SOON THE  
BEAVERS LEFT





AND THE FISH FOLLOWED.  
IF WAS LIKE OL'YELLOWSTONE  
PARK WOULD NEVER BE  
THE SAME.



HUNDREDS OF MILES AWAY  
IN CANADA, A GANG OF  
WOLVES WAS PLANNING  
FOR A ROAD TRIP DOWN  
TO OL' YELLOW STONE PARK.



WHEN THE WOLVES ARRIVED  
THEY DECIDED TO REBUILD  
ELK BURGER.

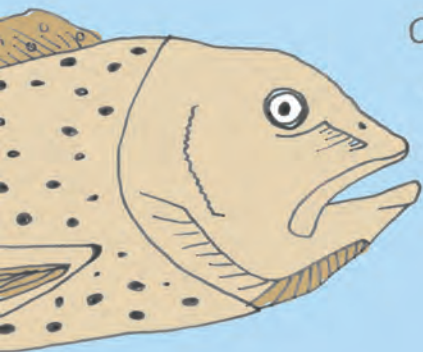


SOON ALL THE WOLVES WERE LINED  
UP WAITING TO GET AN ELK BURGER

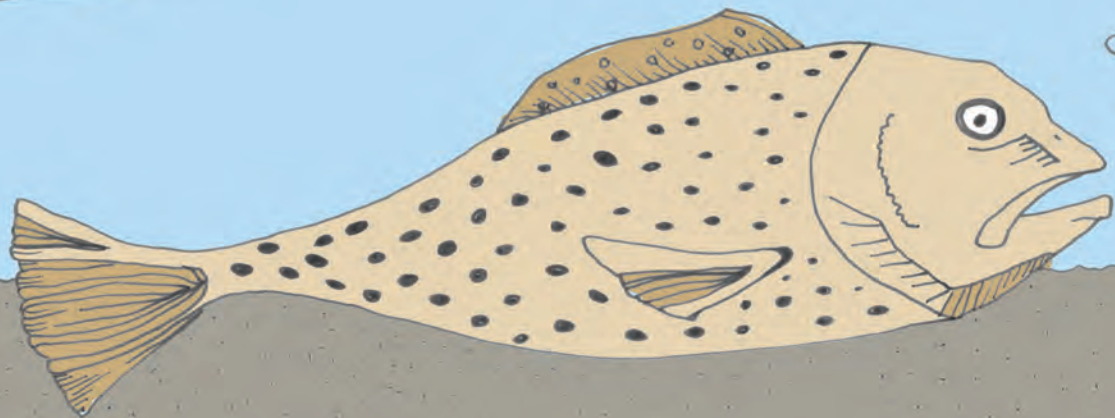



WITH ELK BURGER AROUND MORE  
TREES GREW AND THE BEAVERS  
CAME BACK TO BUILD.





THE FISH WERE BACK AND BIGGER  
THAN BEFORE



A stylized illustration of a landscape. In the foreground, several tall, thin evergreen trees with brown trunks and green foliage stand on a grey, textured ground. A light blue river flows through the middle ground. In the background, there are purple and pink mountains under a light blue sky with a few white clouds. The text is positioned in the upper right quadrant of the image.

AND YELLOWSTONE PARK WAS  
FILLED WITH ANIMALS OF ALL  
SHAPES AND SIZES ONCE MORE.