**The Comeback**

**Has the return of the gray wolf to Yellowstone National Park helped revive the park’s wildlife?**

 The gray wolf may be the most controversial animal in U.S. history. The species was once so reviled that it was all but killed off in the lower 48 states. Now the animal is at the center of a new controversy, this time in Yellowstone National Park.

 The gray wolf is native to North America. But starting in the late 1800s, it was hunted in the United States because it preyed on livestock owned by farmers and ranchers. By 1926, it was gone from Yellowstone. By 1960, it was largely extinct south of Canada.

 As the gray wolf population declined, scientists began to realize how important the species had been to the ***ecosystem***. So in 1995 and 1996, 31 gray wolves were trapped in Canada and released in northern Yellowstone.

 They have since reproduced, and now they number more than 80. Although that sounds small, the wolves have had a major impact on the park’s wildlife, says William Ripple of Oregon State University. That’s because wolves prey on elk. After the gray wolf became extinct in Yellowstone, the elk population exploded. The elk overgrazed the park’s vegetation, especially its young trees, leaving behind stunted forests of aspen, willow, and cottonwood. One scientist described the park’s condition “deplorable.”

 Ripple says that the new wolf population is largely responsible for reducing the number of elk from about 15,000 to fewer than 6,000 and that’s started a chain reaction in the park’s ecosystem.

 “In one area, willows used to grow no higher than 50 centimeters. Six years later, they were five times taller,” he says. “In another area, the number of cottonwood trees went from zero to more than 150 in just 10 years.” The flourishing trees and shrubs are improving the park’s biodiversity, says Ripple. Large, woody plants offer more habitats for birds, insects, and other animals. In particular, more willows have enabled beavers to repopulate the park’s waterways. Beavers eat willow and build dams in it. In 1996, only one beaver colony lived in northern Yellowstone. Now there are at least a dozen. When beavers build dams, water backs up behind the dams to form ponds. With more beaver ponds in Yellowstone, says Ripple, more fish, reptiles, amphibians, waterfowl, and river otters are likely to move in. One study in Wyoming found that streams with beaver ponds have 75 times more waterfowl than stream without.

 But not all scientists agree. They think that the wolves get all the credit for the elk reduction (and everything that has followed). “Human hunting, growing bear numbers, and severe drought have also reduced elk populations,” Arthur Middleton, of the Yale School of Forestry and Environmental Studies, wrote in *The New York Times.*

 Lisa Baril, a wildlife biologist at Yellowstone, also questions whether the decline in elk is responsible for the improved plant life in the park. She says that climate change may be causing an increase in the amount of rainfall and the height of the winter snowpack. Some or all of those changes may be promoting the new plant growth.

 But even though they may disagree about the wolves’ impact, most scientists agree that reintroducing them to the park was a good idea. Large carnivores are essential to the health of ecosystems. One of the big challenges now, experts say, is helping humans co-exist with these animals – including gray wolves.

 “People get along great with the wolves in Yellowstone,” Baril says. “It’s outside of the park where we are still trying to balance the needs of wolves and ranchers.”

 -**Hugh Westrup, Junior Scholastic, April 2014**

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| Vocabulary: ***ecosystem*** [n]: a biological community of organisms and their physical environment |

Title of the Article:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Source of Article:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. In your own words, summarize this article in three sentences.

2. In lines 6-7 the text states, “…starting in the late 1800s, it was hunted in the United States because it preyed on livestock owned by farmers and ranchers.” What changes happened in America at this time that brought the wolves and ranchers into conflict?

3. In line 16, a scientist described Yellowstone’s condition as “deplorable.” Based on the context “deplorable” was used, what does deplorable mean? What examples in the text were given to support the park’s condition was deplorable?

4. In line 21, what does biodiversity mean? How did the reintroduction of gray wolves improve Yellowstone’s biodiversity? *Cite evidence from the text including line numbers.*

5. Do you think the reintroduction of gray wolves into Yellowstone National Park’s ecosystem was the key component in the park’s improved conditions? Using text evidence support your position.

6. What makes this topic important to society?