



Restoration of Native Animals



If the biota, in the course of aeons, has built something we like but do not understand, then who but a fool would discard seemingly useless parts? . . . to keep every cog and wheel is the first precaution of intelligent tinkering. -Aldo Leopold

A Loss Unpredicted The scenery stretching out in front of you during a visit to Badlands National Park supports a web of living and nonliving components known as an ecosystem. Delicate and highly sensitive to modification, ecosystems are best left intact. The removal of even a small portion of an ecosystem affects the entirety in some manner. As the United States expanded westward, a variety of wild animals were forced out of their native habitat - such as the mixed grass prairie of the South Dakota Badlands.

It is the mission, in part, of all units of the National Park Service *to preserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations.* In order to protect the plants and animals of the national parks, it is often crucial that we restore missing components of the ecosystem.

A Case Study: *The Wolves of Yellowstone*

After much debate, Yellowstone National Park, brought wolves back in 1995 after nearly a century of absence. Positive effects have since cascaded through the park like dominos. Elk, a natural and abundant prey item for the wolves, moved into the high country to escape the predators. This allowed the plant life in surrounding valley streams to recover from overgrazing by the elk, creating beautiful riparian corridors similar to those seen by the first Europeans to enter the Yellowstone country. Further, the return of native streamside plant life has allowed the once suffering trout populations living in those streams to recover as well. Not only can Yellowstone visitors today catch glimpses of a notorious predator, but they can also enjoy a more fruitful ecosystem throughout the park. This seems to prove naturalist John Muir's thought: *When one tugs at a single thing in nature, he finds that it is attached to the rest of the world!*

The Chosen Four

Badlands National Park has similar wildlife reintroduction success stories. Four species have been brought back to the park since the Badlands was first set aside as a National Monument in 1939. With luck, visitors today may catch a glimpse of animals missing from the area for decades.

American Bison

Also known as buffalo, bison once roamed the Badlands and the rest of the Great Plains freely with numbers estimated at 30 million. Due to over hunting, bison were nearly eliminated by the early 1900s and extirpated (*entirely removed*) from North America. Efforts to regenerate the population from the few remaining animals began immediately. Bison returned to the Badlands in 1963 and have flourished - our population currently has nearly 800 members.

Rocky Mountain Bighorn Sheep

The first European explorers to reach the Badlands were greeted by a majestic animal - bighorn sheep. Similar to bison, westward expansion of our nation brought about over hunting, resulting in the decline of this species. In 1964, the National Park Service reintroduced the Rocky Mountain bighorn to (then) Badlands National Monument. Successfully refilling its niche, today's Badlands' sheep number over 100 in three distinct subpopulations and can be seen thriving on the rugged buttes of the park.

Black-footed Ferret

This small, nocturnal weasel made its home within the vast prairie dog towns of the west and fed on their residents. As ranches replaced prairie dog towns, the ferrets' population dwindled. In 1987, only 18 individuals remained, living on a remote Wyoming ranch. As one of the most endangered land mammals in the world, a captive breeding program was quickly begun. By 1992, ferrets were being released back into the wild and were returned to the Badlands just two years later. The current population has rebounded to approximately 300 through the Conata Basin and Badlands area administered by the National Park Service and U.S. Forest Service.

Swift Fox

Populations of this small native fox declined due to mortalities from predator control, targeted at wolves and coyotes. This species is our park's newest restoration project, returned in the fall of 2004 after a hiatus of over 40 years. The population is now estimated at 60 to 80 individuals and will be augmented in the upcoming years. The largest percentage now lives in the Buffalo Gap National Grassland surrounding the park, successfully raising new pups.

The Decision Tree

After identifying a native species with potential for restoration, several criteria must be considered including:

- The ability of the species to prosper under the park's current conditions
- The public opinion of the local community and the nation
- Economic impacts to the park and its neighbors
- Environmental impacts to the local ecosystem

If park management, supported by science, determines a restoration to be feasible, they must next cooperate with other agencies and individuals to secure a source population and ensure that there will not be problems at the national, state, or local level. The work must also continue once a species is brought back. Researchers must determine survival rates, impacts on the ecosystem, and individual home ranges. They also decide if more individuals will need to be brought in to increase genetic health and how to prevent the past from re-occurring so that the species is not lost again.

An Ecological Crystal Ball

What does the future hold for the animals of the Badlands? Each year, students of wildlife biology take on research projects supporting our restoration efforts. The genetic diversity of the animals is carefully monitored to insure a healthy population. New studies are revealing the inner workings of the mixed grass ecosystem. This is critical because less than 2% of the native North American prairie remains. The National Park Service does not plan any new reintroductions to Badlands National park at this time. Other native animals not likely to be brought back include grizzly bears and wolves. Native to the area, these species would likely either cause too much harm to the economy of the region or simply could not be sustained by the relatively small size of the park. In our effort to restore the complete picture of the Badland, humans must now accept that this snapshot will remain incomplete.