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## Black-footed Ferret



The rarest native mammal in the United States, the black-footed ferret is a short-legged, slender-bodied weasel. It measures just 1 1/2 feet (46 cm) nose to tail. This small carnivore once was widely distributed throughout the North American Great Plains from Alberta, Canada, south through the Rocky Mountains to the southwestern United States.

The last wild black-footed ferrets were taken into captivity in 1987. Today, the ferrets have been reintroduced to a few limited areas in the state of Wyoming.

### **Natural History**

The black-footed ferret is a nocturnal prowler whose fate is closely tied to that of the prairie dog. The ferret eats ground squirrels, mice, birds, and insects. It lives in burrows dug by prairie dogs, which also are its primary prey. A colony of prairie dogs 100 to 148 acres in size is necessary to support one ferret.

## **Causes of Endangerment**

### **Killing of Prey and Habitat Loss**

Massive hunting and poisoning campaigns against the prairie dog, its main food source, caused the ferret to decline. Since the pioneers arrived on the Great Plains, ranchers and farmers have conducted an extensive campaign to get rid of prairie dogs, which were considered pests.

Discovery of sylvatic plague in the colonies stepped up efforts to eliminate the prairie dogs. From 1900 to present, prairie dog populations plummeted to about 5 to 10 percent of their former numbers.

The wholesale conversion of prairie to crop land further impacted the ferrets and their prey. Just one percent of the United States' native prairie remains today (see Spotlight on the Prairie). With patches of prairie becoming fewer and farther between, ferret habitat became increasingly fragmented. The remaining black-footed ferrets became more isolated, and unable to reproduce.

Crowding wildlife into smaller islands of habitat causes inbreeding. The lowered immune responses of inbred animals increases the likelihood of epidemic disease. In 1984, an outbreak of canine distemper brought by domestic dogs and coyotes devastated the already-precarious ferret population. By 1985, there were just 10 known black-footed ferrets in the wild.

## **Conservation Actions**

### **Protection Under the Law**

The black-footed ferret was first officially recognized by the United States government as threatened in 1967 and was listed as endangered when the Endangered Species Act (ESA) was created in 1973. By the time the United States Fish and Wildlife Service adopted a recovery plan for habitat protection in 1978, however, the ferret had declined to near extinction. The recovery plan has since been modified with emphasis on captive breeding and reintroduction.

### **Captive Breeding and Reintroduction**

The Wyoming Department of Game and Fish coordinates the Species Survival Plan (SSP) for black-footed ferrets. Captive breeding populations are maintained at the Sybille Wildlife Research Station in Wyoming and several zoos.

After the black-footed ferret population was decimated by disease, biologists determined that the remaining wild ferrets were not a viable breeding population. The last 12 ferrets were captured

and combined with 6 ferrets already in captivity to bring the world total to 18 ferrets, all in captivity, in 1987.

Captive breeding has been successful.

Sufficient numbers of prairie dogs were born to allow reintroduction to be attempted after just a few years. In 1991, the first reintroduction of 49 juvenile ferrets was completed. Careful monitoring showed that 12 percent of these ferrets were able to survive the winter. The discovery of two wild-born litters was a particularly good sign. A second group of 90 captive-bred ferrets was released in 1992.

Follow-up indicates that survival may be about 25 percent. The majority of ferrets are lost to predation by coyotes. The objective of the recovery effort is to establish ten geographically distinct free-ranging populations totaling 1,500 ferrets by the year 2010.

Obviously, black-footed ferret reintroduction will be successful only if there are sufficient numbers of prairie dogs to support the ferrets. Efforts are being made to preserve habitat and reduce other pressures on prairie dogs.

This is a prime example where saving one species means saving a whole ecosystem: the prairie dog colonies are a complex natural system supporting many other species besides the black-footed ferret, including birds, mammals, reptiles, insects, and even plants.

## **Questions for Thought**

Captive breeding saved the black-footed ferret from extinction. Other endangered animals have not been successfully bred in captivity. What factors might make captive breeding more likely to be successful for a given species?

All of the black-footed ferrets alive today descended from just 18 individuals. Why do you think this might be of particular concern to the species survival?

Some species that are extinct in the wild still survive in captivity but are unlikely to ever be reintroduced to the wild. Why do you think this is?

Activities: [CS1-1, CS1-8, CS2-5, General]

Words in bold italics can be found in the glossary.