



**U.S. Department of the Interior
National Park Service
Natural Resource Information Division**



Fact Sheet

Restoration of the Black-footed Ferret in the National Park Service

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Background

The black-footed ferret (*Mustela nigripes*) is among the most critically endangered mammals in North America. The historic range of the black-footed ferret, the only ferret species native to North America, extends from Saskatchewan and Alberta, Canada, southward to Mexico through the Great Plains states and New Mexico and Arizona. Living as long as 4 years in the wild, the solitary territorial black-footed ferret uses prairie dog (*Cynomys* sp.) burrows for shelter while preying almost exclusively on prairie dogs. Juvenile mortality varies and often exceeds 60%, resulting in a 2:1 female:male adult ratio. The black-footed ferret is an obligate of the prairie dog, and its decline to near-extinction in the wild presaged the continuing rangewide extirpation of prairie dogs to levels of less than 2% of the historic extent. The last known black-footed ferret populations were discovered in South Dakota (1964) and Wyoming (1981). When plague and canine distemper drove the Wyoming population to near extinction during 1985-87, 18 animals were captured to initiate a captive breeding program.

Captive breeding of the black-footed ferret began with seven breeding animals of uncertain lineage and rendered more than 350 individuals. These animals are the species' essential population and are located in seven zoos and breeding facilities. The goal of captive breeding is the maintenance of 80% of the genetic diversity of founders for more than 200 years. Invariably, management of the captive population produces individuals with higher inbreeding coefficients. The number of these genetically redundant individuals is greater than needed to replace loss of breeding animals in captivity, and the animals therefore become available for reintroduction into the wild. Annually, the U.S. Fish and Wildlife Service evaluates the status of the captive population and allocates candidates for reintroduction.

Reintroduction

The current objective of the *National Recovery Plan* of the black-footed ferret is the re-establishment of at least 10 free-ranging populations of 1,500 breeding animals in the species' former range by 2010. Since 1991, four non-essential Experimental Population Areas (Shirley Basin, Wyoming; Conata Basin/

Badlands, South Dakota; Phillips County, Montana; and the Aubrey Valley, Arizona) have been designated by the Secretary of the Interior through special rule amendments to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq, Pub. L. 93-205).

The Conata Basin Badlands Experimental Population Area encompasses 478,500 ha that include Badlands National Park, portions of the Buffalo Gap National Grassland of the U.S. Forest Service, the Pine Ridge Reservation, and private lands. In this experimental population area, a reintroduction area of 17,000 ha on lands of the National Park Service and the U.S. Forest Service includes 3,240 ha of a prairie dog colonies. The habitat in the reintroduction area can ultimately support about 150 breeding black-footed ferrets.

Reintroduction management in the Conata Basin/Badlands area has varied from a 10-day on-site acclimation period (soft release) to an immediate (hard) release when the animals arrived. Management of the associated predator guild in the park to facilitate transition of the ferrets to the wild has included surrounding entire prairie



dog colonies with an electric net-fence exclosure (originally developed to reduce livestock predation), live-trapping great horned owls (*Bubo virginianus*), and selective taking of predators known to frequent reintroduction sites or harass ferrets.

Juvenile black-footed ferrets are about 90-120 days old when they are brought to reintroduction areas. They are either cage-reared and have had no prior exposure to prairie dog burrows and live prey, or they are

preconditioned by having had as many as 90 days of exposure to prairie dog burrows and live prey. Preconditioned 3-5 year old adult black-footed ferrets have also been allocated for release. Since fall of 1994, 134 juvenile and 36 adult black-footed ferrets have been reintroduced in the Conata Basin/Badlands area. Among them were only 25 preconditioned juvenile females.

Program Status

After reintroduction, the growth of black-footed ferret populations is principally dependent on female survivorship and fecundity. In the Conata Basin/Badlands area, a minimum 54% of the preconditioned juvenile females, 10% of the cage-reared juvenile females, and 0% of the adult females survived the transition to the wild (i.e., >30 days after release). At least 25% of the

reintroduced preconditioned juvenile females reach breeding yearling status, and a minimum of 75% of them rear litters. These rates are comparable to those of a free-ranging wild population. During summer 1996, litters were detected from preconditioned candidates that were reintroduced in 1994 and 1995 and from yearlings that were wildborn in 1995. Conversely, adult or cage-reared animals have not been observed to rear litters and contribute to population growth. Although short-term, post-release survivorship is greater of preconditioned juvenile males (25%) than of cage-reared males (12%), surviving males are sufficiently distributed across the reintroduction landscape to ensure recruitment into the population. At present, a small, growing black-footed ferret population in the Conata Basin/Badlands area includes an estimated 20-25 breeding adults. Reintroductions are expected to continue through 1998. Yet, until this population exceeds viability

thresholds (>50 breeding adults), it remains at critical risk to local extinction from the myriad threats that face small populations.

Position of the National Park Service

In keeping with the Endangered Species Act of 1973, the National Park Service continues to cooperate with all interested parties to resolve concerns and return this native species to portions of its historic range. As one of three major federal cooperators in the Conata Basin/Badlands area and as a lead agency on the national level, the National Park Service must encourage the U.S. Fish and Wildlife Service to prioritize the recovery of the black-footed ferret. Having provided more than 50% of the costs for the reintroductions in the Conata Basin/Badlands area, the National Park Service demonstrated its commitment to cooperative funding of a field oriented black-footed ferret

reintroduction program. Current multi-year funding by the Natural Resources Preservation Program ends in Fiscal Year 1998. The continuity of the program and its contribution to the recovery of the species will be jeopardized if the service does not institutionalize park-based funding for long-term population inventory, monitoring, and management.

For further information contact:

Dr. Glenn Plumb
Black-footed Ferret Field Coordinator
(605) 279-2464
Badlands National Park
P.O. Box 6
Interior, South Dakota 57750

Bruce Bessken, Chief
Resource Management
(605) 433-5260
Badlands National Park
P.O. Box 6
Interior, South Dakota 57750