

Ferrets Home on the Range

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Tom Jones and Rose Stoneberg release a ferret from its transport box through a plastic hose to a new home in the wild.

Fort Belknap Fish & Wildlife Dept. photos

The reintroduction of black-footed ferrets to the wild began in the Shirley Basin, Wyoming, in 1991.

Additional reintroductions have taken place at the Conata Basin/Badlands area of South Dakota in 1994; Charles M. Russell National Wildlife Refuge, Montana, also in 1994; Aubrey Valley, Arizona, in 1996; Ft. Belknap Reservation, Montana, in 1997 (see related article in this edition of the *Bulletin*); and the Coyote Basin, which straddles Utah and Colorado (1999). Between 1991 and 1999, we released a total of 1,185 ferrets at these sites.

The black-footed ferret (*Mustela nigripes*) has come a long way since the late 1970s, when many people feared that it was extinct. This species once ranged over an enormous area spanning 11 Great Plains/Rocky Mountain states and 1 Canadian province. It was decimated by conversion of much of North America's native prairies to crop land and by decades of persecution against its principal prey, the prairie dog (*Cynomys* spp.). Hopes were raised when a small remnant population of ferrets was discovered near Meeteetse, Wyoming, in 1981. But canine distemper and sylvatic plague (*Yersinia pestis*) were detected in the Meeteetse population in 1985, and the black-footed ferret slipped perilously close to genuine extinction by 1987. The U.S. Fish and Wildlife Service finally captured the last 18 ferrets known in an effort to keep disease from claiming the species.

Although we kept looking for additional wild black-footed ferrets throughout the west following the loss of the wild Meeteetse population, our recovery priorities shifted to development of captive breeding techniques, establishing a secure captive population, and reintroduction programs. Other than reintroduced ferrets and their descendants, we have been unable to find any others since the last wild individual was removed from Meeteetse.

In 1988, the Service approved a revised Black-footed Ferret Recovery Plan. It called for reestablishing a prebreeding population of at least 1,500 free-ranging black-footed ferrets (in 10 or more populations, with no fewer than 30 breeding adults in any population) by the year 2010. When we attain this goal, we can downlist the black-footed ferret from "endangered" to the less critical status of "threatened."

Recovery of a species from captive stock alone presents many significant obstacles not faced by species still occupying natural habitats. Housing, husbandry, propagation techniques, maintenance of genetic diversity, retention of wild behaviors, and development of release and field protection strategies are factors potentially affecting ultimate success. Early captive breeding attempts were unsuccessful (Carpenter 1985, DonCarlos et al. 1989). Moreover, what little we know about the biology of the ferret in the wild, a rare and secretive species, is limited. It was obtained from two small remnant populations from fragmented habitats that soon died (Fortenbury 1972, Hillman 1974, Biggins et al. 1985).

Given the precarious status of the black-footed ferret following the Meeteetse population collapse and the challenges that still confront ferret recovery, progress has been nothing short of remarkable. Today, captive breeding population objectives have been reached, with a core breeding population (currently 269 prime breeding age ferrets) being retained in 5 zoos and 1 Service facility across the United States and Canada. To increase the number and quality of ferrets available for reintroduction, additional "field breeding" projects have been initiated in Arizona, Colorado, Montana, and New Mexico over the past 2 years, resulting in 133 total ferret kits born in 1998 and 1999.

The most promising reintroduction programs have been on National Forest lands in the Conata Basin, South Dakota, and at the Charles M. Russell National Wildlife Refuge. Ferret populations at both sites are approaching potential carrying capacity, and the population of wild born ferrets is more

than double that of captive born, reintroduced ferrets. As many as 350 black-footed ferrets were alive in the wild following the late 1999 ferret reintroduction efforts, well surpassing the number that existed in captivity and the peak level of the last known wild population near Meeteetse (128 ferrets).

As with other endangered species programs, overall progress in black-footed ferret recovery is the product of numerous trials, failures, successes, and hard work involving many partners. To facilitate recovery and gain more input from affected interests, the Service established a Black-footed Ferret Recovery Implementation Team in 1996. The team is represented by 26 state and federal agencies, conservation organizations, and Indian tribes. Although enormous progress has been made in the black-footed ferret recovery program, success is far from assured. Indeed, ferret recovery will largely depend on the redoubled efforts of the team to help restore and conserve large the prairie dog complexes upon which the black-footed ferrets depend.

To a large extent, we now have the technical capability to reestablish ferret populations. We can produce the ferrets and precondition them to survive in the wild (Vargas et al. 1996, Biggins et al. 1998). Yet, during the time when recovery efforts were most focused on practical ferret management applications, ferret habitat was disappearing at an alarming rate. Current reintroduction efforts suggest that a self-sustaining black-footed ferret population may require about 10,000 acres (4,050 hectares) of somewhat contiguous black-tailed prairie dog (*C. ludovicianus*) habitat, or a relatively greater acreage for the lower density colonies of white-tailed prairie dogs (*C. leucurus*) and Gunnison's prairie dogs (*C. gunnisoni*).

Diminished prairie dog populations now face the even greater catastrophe of sylvatic plague, an introduced contagious disease for which prairie dogs have little immunity. Many of the

large prairie dog complexes that existed in western states in the late 1980s are now gone or have been reduced to the point that they will no longer support ferret populations. Fewer than 10 quality ferret reintroduction sites remain in North America today. Two reintroduction areas, Ft. Belknap, Montana, and portions of the Colorado/Utah release area, experienced new episodes of sylvatic plague in 1999. Continued degradation of prairie dog habitats across North America will have serious implications for the black-footed ferret and many other sensitive and threatened species that depend on healthy, native prairie ecosystems. This is the challenge that must be met by the Black-footed Ferret Recovery Implementation Team and other wildlife managers across the West who are involved in the conservation of prairie wildlife communities.

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Biologists use sensitive equipment to identify ferrets in the wild.



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