

# ENDANGERED SPECIES

## Technical Bulletin Reprint

Wildland Management Center  
School of Natural Resources  
The University of Michigan

### Black-Footed Ferret Recovery: Just a Matter of Time?

by Dr. Tim Clark

Discovery of a small black-footed ferret population by ranchers near Meeteetse, Wyoming, in September 1981 has brought renewed hope that this species, previously believed extinct by many, can be recovered from its critically endangered status.

Black-footed ferrets formerly occupied all or parts of 12 states and 2 Canadian provinces. They were the unintended victims of habitat loss as prairie dogs, their primary food source, were decimated by poisonings. The promise of ferret recovery has yet to be fulfilled, but the prospect is bright. This optimism is supported by the encouraging results of over 3 1/2 years of field work and the slowly emerging institutional apparatus needed to make recovery a reality.

Following an invitation from Meeteetse ranchers who found the new ferrets and from the local game warden who requested aid in their identification, my colleagues and I (from the Idaho State University/Biota Research and Consulting, Inc. of Jackson, Wyoming) generated a 38 + month conservation and recovery plan which we have followed since then. My comments here reflect a view of the ferret recovery plan from an informal, on-the-ground perspective.

The recovery plan we conceived addresses six elemental questions, beginning with the determination of ferret abundance and distribution and threats to the Meeteetse population, and ending with a specific recovery plan. We have believed all along that the Meeteetse ferrets held the key to the recovery of the species. By studying this population we could at least learn how to better locate other ferrets (assuming some exist); or, if the

Meeteetse ferrets were producing "surplus" young, these could be used in captive breeding and translocation efforts to reestablish the species in portions of its former range.

The isolated Meeteetse ferret population occupies 37 white-tailed prairie dog colonies totaling about 2,990 ha., ranging from 0.5 to 1,302 ha., scattered over 200 sq. km. These colonies contain about 125,000 prairie dog burrows in which ferrets find food and shelter. The nearest large colony to this complex is 38 km. away and has not shown conclusive evidence of ferrets in three years. The mean density of the Meeteetse population is 1 ferret/57 ha. The average distance ferrets moved ( $n = 15$ ) between colonies is 2.5 km. Our 1984 summer nighttime searches located 129 individual ferrets, including 43 adults (25 females, 13 males, and 5 unknown) and 86 young in 25 litters (3.44 young/litter).

These counts are similar to our 1983 results and suggest the population is stable or slightly increasing. A fall live capture/recapture study in cooperation with the U.S. Fish and Wildlife Service and Wyoming Game and Fish Department estimated 130 ferrets present.

Ferret mortality comes from raptor predation and other causes and may exceed 60% per year. We have snow-tracked ferrets on about 250 occasions over three winters and know that each individual travels an average of about 3,000 m. per night investigating an average of 65 prairie dog burrows. Snowtracking revealed that one female used 16 ha. and was overlapped by a resident male which used 136 ha. Companion radio tagging studies by the U.S. Fish and Wildlife Service showed a young female used 13 ha.

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A nighttime search spotlights an elusive black-footed ferret

photo by Tim Clark

# Ferret Recovery continued

The Meeteetse prairie dog/ferret complex is too small to ensure long term survival of the small ferret population. Ferrets are susceptible to demographic and environmental fluctuations, and because all the ferrets known to exist in the world occur in this single population, these chance events could plunge this population to extinction in a relatively short time. As Tom Thorne of the Wyoming Game and Fish Department said: "Diseases are a profound threat to any animal whose population is as small and self-contained as the ferrets'." This fact alone urges us to move ahead quickly with recovery while the time is ripe.

The input of the U.S. Fish and Wildlife Service, Bureau of Land Management and Wyoming Game and Fish Department to the recovery process has been well publicized. Ferret recovery efforts also include a less visible, but significant, role played by the nonprofit conservation community. The current nonprofit conservation

community program complements and supports the role traditionally taken by federal and state wildlife agencies and is led by the New York Zoological Society and Wildlife Preservation Trust International, with considerable support by the World Wildlife Fund-U.S., National Geographic Society, Charles A. Lindbergh Fund, and others. The nonprofit conservation community supports the research team of Idaho State University/Biota Research and Consulting, Inc., of Jackson, Wyoming, and has jointly contributed over \$450,000 in direct financial aid and in volunteered labor. This level of nongovernmental participation is occurring in other endangered species programs and may forecast the future direction in many threatened/endangered species programs.

On the federal level, the U.S. Fish and Wildlife Service Field Office has been active along several fronts, including (1) serving on Wyoming's state level ferret advisory team, under which much of the Meeteetse field work falls, (2) searching for other ferret populations in Montana, and (3) most importantly, beginning to coordinate the interstate efforts ultimately essential for ferret recovery. In addition, the U.S. Fish and Wildlife Service's 1978 Black-Footed Ferret Recovery Plan, now under revision, and based in part on our Meeteetse studies, defines ferret recovery as at least five minimum viable populations, consisting of at least 200 animals each within its former range. An extensive cooperative program coordinated by the U.S. Fish and Wildlife Service is needed to meet this ultimate goal. The U.S. Fish and Wildlife Service Regional Office recently appointed a Black-Footed Ferret Coordinator to begin this effort.

The Montana Department of Fish, Wildlife and Parks has taken leadership in systematic, cooperative statewide ferret searches with the Bureau of Land Management, Bureau of Indian Affairs, U.S. Fish and Wildlife Service, the non-profit conservation community, Idaho State University/Biota Research and Consulting, Inc., and others. This effort was launched at a joint meeting with the Montana agricultural community in 1983. Even though no ferrets have been found over the past 1 1/2 years,



photo by Tim Clark

several areas containing large prairie dog colony complexes have been identified in Montana which may be capable of supporting new ferret populations.

The framework for a similar program in Wyoming has been established, and other efforts are getting underway in Utah, Colorado, and New Mexico. Utah spent considerable field time searching for ferrets this last winter, but to no avail. New Mexico is surveying their prairie dogs for ferrets and trying to determine the stability of these prey populations for the eventual reintroduction of ferrets, should no native populations turn up.

Because Wyoming is the only state currently with ferrets, it sits in a pivotal position to influence the direction and pace of ferret recovery. Even though the Wyoming Game and Fish Department is interested in finding or establishing more ferrets in Wyoming, Director Don Dexter has stated that if no ferrets are found elsewhere and recovery depends on translocating some Meeteetse ferrets, then the best sites should be used whether they are in Wyoming or not. With luck, combined federal, state, and private search efforts may find other populations like the one at Meeteetse—relatively large and reproductively active. At the least, several high quality transplant sites will be found and readied to receive "surplus" Meeteetse ferrets, or more

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likely, those from captive breeding facilities.

Field studies strongly suggest that a "surplus" of young ferrets may exist at Meeteetse. Other surveys indicate that potential transplant sites exist in several states. A joint nonprofit conservation community/Idaho State University/Biota document focused discussion on "Some Translocation and Captive Breeding Options" (December 1983), and the Wyoming Game and Fish Department subsequently called a meeting of all interested parties in the spring of 1984 on this topic. Field researchers felt that the Meeteetse population could withstand removal of about 10 ferrets. Among the captive breeding options is a Fish and Wildlife Service endangered species breeding center at Patuxent, which would accept ferrets almost immediately. Washington State University has offered their mustelid breeding facilities, which could be readily enlarged and staffed to raise ferrets, a task they are willing to finance in large part themselves. Other options have been discussed including building a new facility in Wyoming, an idea supported by the Wyoming Game and Fish Department, but to date a complete search of options has yet to be carried out. The U.S. Fish and Wildlife Service will have to make a decision based on time, space and

dollar constraints. Private funds may be available for some of the costs of ferret captive breeding.

Ferret recovery is possible: ranchers, oil/gas interests, trappers and hunters, and the several state and federal land management agencies all support ferret recovery—albeit in various degrees. Ranchers have played a key role in ferret conservation by continuing to manage their lands in a manner consistent with ferret conservation and by their generous cooperation with biologists who prowl their prairie dog colonies night and day studying ferrets. In other states, the agricultural community is supportive of ferret recovery.

The Meeteetse study results along with their management implications are being rapidly and widely disseminated. For example, the Wyoming Bureau of Land Management has published two Wildlife Technical Bulletins—No. 1, published in early 1984, *Handbook of Methods for Locating Black-Footed Ferrets* and No. 2, published in mid 1985, *Black-footed ferret habitat: some management and reintroduction considerations*. Montana BLM plans to publish another Wildlife Technical Bulletin, an *Annotated Bibliography of the Prairie Dog*. The Wyoming Game and Fish Department, U.S. Fish and Wildlife Service and University of Wyoming sponsored a

ferret workshop in the fall of 1984 and the proceedings are now available. The bulk of research results are in a series of papers published or in press in various scientific journals largely authored by the nonprofit conservation community and the Idaho State University/Biota research team. About 30 papers detailing much of the research effort will be available by fall 1985.

These papers collectively describe ferret habitat, population status and historical and current land uses of the Wyoming ferret area; estimate needed minimum viable population sizes; give a systematic analysis of the species including a taxonomic examination of ferret remains found at Meeteetse; offer a habitat suitability index model that can aid in identifying transplant sites; provide descriptions of ferret ethology; analyze scats for foods habits; estimate genetic variability of the ferrets; offer and describe various techniques to locate and study ferrets; give a comprehensive annotated bibliography on the ferret; provide guidelines for ferret management; and discuss ferret conservation and recovery options. These results combined with those of the U.S. Fish and Wildlife Service's Denver Wildlife Research Center on radio tagging studies each fall provide much new information about ferrets and offer clear

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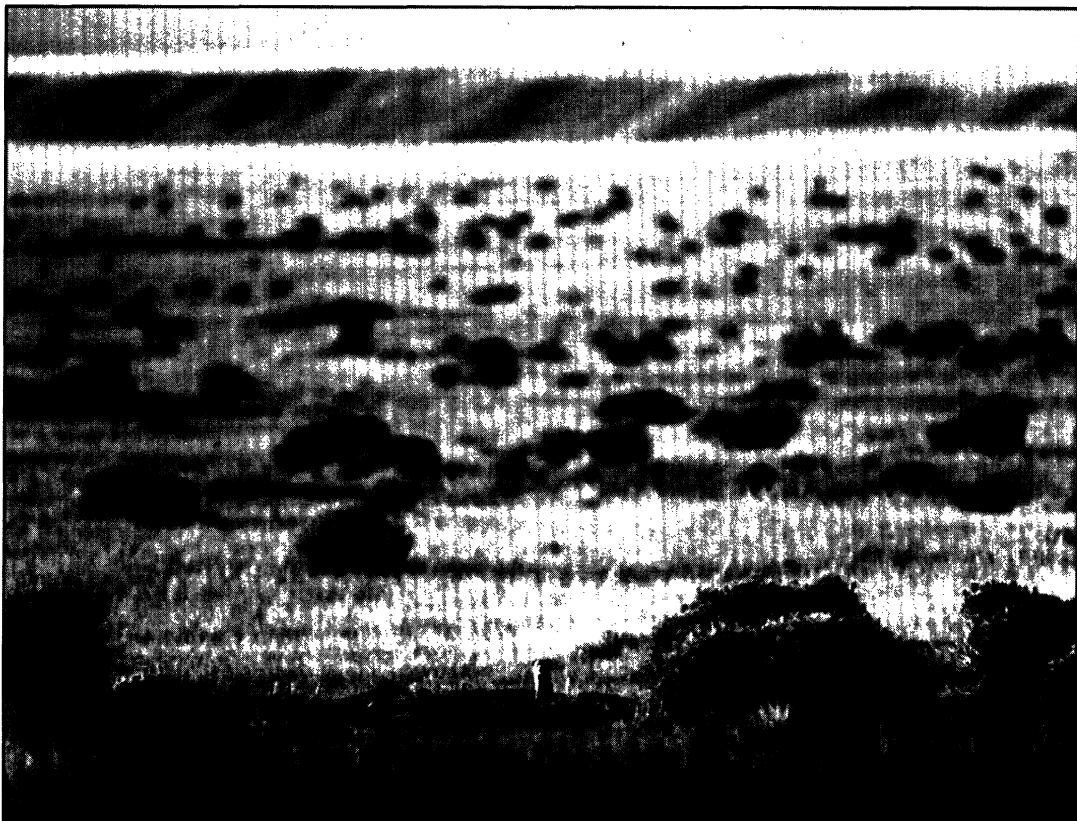


photo by Tim Clark

## Ferret Recovery continued

direction for ferret recovery.

The black-footed ferret could become a case study of successful recovery, brought back from the edge of extinction, all within a reasonable time and at a reasonable cost. This is not to deny that significant problems exist. At the Ferret Workshop, a presentation on the "Needs and directions for future black-footed ferret research" by Dr. Mike Bogan of the U.S. Fish and Wildlife Service pointed out some of the challenges that need to be met. In particular, he focused on the need "to constitute a new advisory board to direct and monitor ferret research, particularly with the important questions that are fast coming at us, and that the board have as its first charge, the development of plans and priorities for ferret research. The state must realize that it is protecting an animal that has national significance and interest and thus the responsibilities go beyond state boundaries. The federal government must realize the rights and needs of state and private agencies to be involved in ferret research and management. I think we need a more open forum for discussion and a better representation of researchers on the board than we have at present, while maintaining the current representation of land managers and private interests. Furthermore, we need a greater shouldering of responsibility by both the states and federal government for where we are going in ferret research."

Only time will tell if we can collectively meet the black-footed ferret conservation challenge and our responsibility to this fascinating animal.

Dr. Tim Clark is a Research Associate with the New York Zoological Society and the Department of Biological Sciences at Idaho State University and has worked extensively on black-footed ferret conservation. This article was written in conjunction with the New York Zoological Society, the Wildlife Preservation Trust International, and the World Wildlife Fund - US.



photo by Tim Clark

### To Our Readers

I want to thank all of you who renewed your subscriptions this past month. We have recovered a good percentage of you who hadn't renewed since February, and this is very heartening. The more subscriptions we receive, the less we have to rely on outside funding and the more we can justify the continued operation of the *Reprint*. Any help you can give as far as names of organizations and individuals who might like to receive the *Reprint* would be much appreciated.

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Paul Larmer  
*Reprint* Editor

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