

## **SWIFT FOX MANAGEMENT ACTIVITIES IN MONTANA**

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### **ABSTRACT**

During 1998, there were three major swift fox (*Vulpes velox*) conservation/management activities underway or in development which relate to Montana's commitment to the national Swift Fox Conservation Team (SFCT) conservation strategy objectives (Kahn et al. 1997). Fish, Wildlife and Parks (FWP) sponsored the first annual meeting of the Montana Swift Fox Working Group which represents state, federal, tribal wildlife managers and private organizations interested in swift fox restoration and habitat conservation in the state. The Blackfeet Nation cooperated with private organizations in the reintroduction of 30 captive-raised foxes onto tribal land. FWP has committed to funding a statewide species distribution survey for swift fox in 1999. In addition, the Canadian Swift Fox Recovery Team is apparently investigating the feasibility of determining a density estimate of the northcentral Montana population which is adjacent to the Canadian swift fox population.

### **INTRODUCTION**

Information describing historical status and the recent recolonization of swift fox in Montana is provided in Giddings and Knowles (1995), Giddings and Zimmerman (1996), and Zimmerman and Giddings (1997). FWP and Montana State University (MSU) completed a 2-year swift fox research project in northcentral Montana during 1998 which documented an established resident population in the state (Fig. 1). This telemetry study investigated swift fox home range size, movements, habitat use and documented reproducing pairs by locating natal den sites (Zimmerman 1998).

The swift fox remains classified as a state furbearer, providing protection from take through a closed harvest season. Previous statewide habitat assessments have identified approximately 8,000,000 acres of suitable swift fox habitat in Montana (Fig. 1).

To address the swift fox conservation strategy objectives as outlined in the Conservation Assessment and Conservation Strategy of Swift Fox in the United States (Kahn et al. 1997) FWP has completed swift fox habitat surveys in central and eastern Montana (Giddings and Knowles 1996) (Obj. 5) and completed initial swift fox research to assist in determining status and delineating distribution of the species within the state (Zimmerman and Giddings 1997) (Obj. 2) in addition to investigating swift fox biology and ecology (Obj. 10). Montana remains an active member of the SFCT (Obj. 1) and in 1998 formed a state swift fox working group (Obj. 1) which will provide an avenue to accomplish Obj. 6, 7, 8, and 9 in the state of Montana.

### **METHODS**

Appropriate individuals representing state and federal wildlife/land management agencies and private organizations that would be able to contribute toward swift fox management were invited

by FWP to participate in the Montana Swift Fox Working Group. The first annual meeting was held in northcentral Montana at Chinook during the month of June, 1998. The Blackfeet Nation provided tribal ranch land for a swift fox reintroduction effort in August, 1998 in cooperating with Defenders of Wildlife and the Cochrane Ecological Institute, a captive-breeding facility in Canada. Also during 1998, the state furbearer program requested FWP to allocate funding to conduct a statewide species distribution survey of swift fox.

## **RESULTS**

The Montana Swift Fox Working Group has been organized and is active. Participants include representatives from FWP, Montana Natural Heritage Program, MSU, US Fish and Wildlife Service, USDA/APHIS Wildlife Services, Bureau of Land Management, Blackfeet Tribe Fish and Wildlife, Fort Belknap Reservation, Defenders of Wildlife, Predator Project, and FaunaWest Wildlife Consultants. The group's function is to compile ongoing state status information in an effort to provide information and management recommendations to state and federal wildlife/land managers, as well as private landowners. Information and conservation efforts will be exchanged with the national SFCT. Current state group assignments include producing a GIS-based swift fox distribution/suitable habitat/land ownership map and the development of informational brochures which describe the swift fox and its habitat requirements.

The swift fox reintroduction effort was funded by Defenders of Wildlife with 30 captive-raised foxes provided by the Canadian-based Cochrane Ecological Institute. The Blackfeet Nation, located in northcentral Montana, permitted the release to occur on a tribal-owned ranch of approximately 20,000 acres in size (Fig. 1). The reservation and adjacent lands to the south along the east front of the Rocky Mountains maintain some of the best swift fox habitat and comprises the second largest contiguous prairie grassland region in Montana (Giddings and Knowles 1995, Knowles 1998a). A pre-release survey of the reintroduction site was conducted by Knowles (1998a) to assess habitat suitability and relative prey abundance, both of which were considered very good. The operation secured necessary importation permits and inspections occurred at the U.S./Canada border. Prior to release, the foxes were grouped according to litters and provided water, fed day-old chicks, and contained in covered kennels. Eight portable protective shelters (PPS) were provided at previously selected sites centered over badger excavated ground squirrel burrows (Knowles 1998b). Foxes were released from the kennels in eight groups and had the opportunity to use a PPS or move off into the prairie habitat. According to Knowles (1998b), generally one animal entered a PPS, while others in the group slowly moved off. The release operation itself was considered successful (Wilkinson 1998). To date, two known mortalities occurred from vehicles hitting foxes on a paved secondary highway.

During 1998 FWP committed to funding a statewide (18-20 counties) swift fox distribution survey which will most likely be conducted in 1999. This survey will probably be contracted with a private wildlife/ecological service, with oversight and assistance from FWP. Survey methods will be developed from information on techniques provided by the SFCT and from similar efforts in adjacent states. The survey will be conducted during the swift fox dispersal period (August 15-November 15).

## **DISCUSSION**

Members of the state's swift fox working group are interested in accomplishing the SFCT conservation strategy objectives outlined in Kahn et al. (1997) for Montana. Activities have already been initiated to achieve these as a long-term goal. However, several agencies and organizations were absent from the first meeting and need to participate in the future to make this group completely functional. These would include representatives from Montana Natural Resources and Conservation, Montana Farm Bureau, USDA Natural Resources and Conservation Service, and USDI Bureau of Indian Affairs.

It is uncertain if the swift fox reintroduction effort that took place during 1988 will promote species restoration in Montana. The release site is located in suitable habitat, foxes have immediate access to additional tracts of extensive prairie grassland to the south, and a resident wild swift fox population exists within 100 miles from the reintroduced group of foxes (Fig. 1). However, none of the released foxes were fitted with radio transmitters (C. Knowles, pers. comm.), which was recommended by FWP, although periodic monitoring through random track searches and observations may be conducted (I. Newbreast, pers. comm.). Any long-term evaluation involving survival and reproduction of reintroduced foxes will be difficult to assess. There is additional uncertainty concerning future releases over the initial planned four-year period, which could be a pivotal factor in accomplishing the apparent goal of establishing a local, self-sustaining swift fox population on the Blackfeet Reservation (C. Smeeton, pers. comm.).

This rather rapidly conceived and implemented reintroduction effort demonstrates the ability of wildlife/land managers and conservation groups to restore swift foxes to vacant habitats (M. Johnson, pers. comm.). This reintroduction also highlights problems which need to be addressed by the SFCT such as prioritizing reintroduction sites on a national basis, develop release site criteria, and to recommend appropriate long-term evaluations of reintroduction activities. It has also generated discussion concerning the role of wild or captive-raised foxes in reintroductions in the United States, although Canada has apparently dealt with this issue. Government agencies and private organizations should be informed when SFCT guidelines exist, while communication among all interested parties should be established early in the process to facilitate discussions on the best use of reintroduction efforts for specific restoration or augmentation purposes.

FWP will utilize a standard species detection (presence/absence) technique recommended by the SFCT which is comparable with other state inventories. Determining current species distribution in the state provides baseline data to measure future population expansion or contractions, through population monitoring activities at three to five year intervals.

The Canadian Swift Fox Recovery Team has expressed initial interest in determining a population estimate for swift fox in northcentral Montana in an effort to combine population estimates for the adjacent Canada/U.S. population. This is anticipated to provide a total area population figure which may actually be closer to their recovery goal. FWP expects to discuss this further assuming Canada remains interested. Field activities could occur during the winter period in 1999-2000.

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