Swift Fox on the Prairies: Dispersal is Underway

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Fall is upon us, and as kids head back to school and seem to grow up before our eyes, swift fox pups are also taking steps toward independence. At this time of year, the pups leave their natal territories to travel 10 to 15 kilometres to establish home ranges of their own—a natural transition that carries special significance for a species that has come a long way. There was a time when the swift fox was extirpated from Canada; today, its status on the Canadian Prairies is considered a conservation success story.

The last swift fox was seen in Saskatchewan in 1928, but they were not officially designated as extirpated until 1978. A reintroduction program was initiated in 1983, which was a collaborative effort involving the federal and provincial governments, the University of Calgary, several zoos and conservation organizations.

This collaborative program reintroduced wild born and captive-raised swift foxes from the United States to Southeastern Alberta and Southern Saskatchewan. The Canadian swift fox population currently appears stable, although at very low numbers. Following the reintroduction program, the official status of swift fox population in Canada was changed from Extirpated to Endangered, and then to Threatened, in 2009.

The swift fox is a member of the canid family and is related to wolves, coyotes, dogs, and other foxes. The swift fox is about the size of a domestic cat, about 68 to 88 centimetres (26 to 35 inches) long and 30 to 32 centimetres (11 to 13 inches) tall at the shoulder. They weigh three to six pounds, where the males are slightly larger than the females.

The fur on the swift fox's back is a dark buffy grey; the sides, legs and under the tail are an orange-tan; the undersides are beige to pure white; and the tail is fluffy and tipped in black. The key differentiating factors between a swift fox and other foxes is their small size, the black spots on each side of its nose, and its black-tipped tail. That being said, the swift fox is elusive and hard to find in the wild as they are primarily nocturnal; especially, in the summer. As their name implies, the swift fox can reach speeds up to 60 kilometres per hour.

Swift foxes are considered opportunistic foragers, as they eat small mammals, birds, insect, plants, and carrion. Their diet can vary seasonally, based on the diversity and abundance of prey species. In the summer, grounds squirrels and grasshoppers can be an important food source, while in the winter, their diet may be primarily mice, voles, and hares.



The swift fox is primarily nocturnal but can be spotted during the day
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They are highly dependent on underground dens year-round. They commonly modify burrows created by badgers and ground squirrels and can dig their own dens; although, frequency of this behaviour in Canada is unknown. Burrows vary in depth and complexity depending on their function. Natal dens are used to give birth and raise their pups, while shelter dens protect against extreme climate conditions or predators. Swift foxes in Canada have used up to eight dens in a single season. They require relatively large home ranges, averaging 30 to 40 square kilometres, compared to their American counterparts, likely due to lower burrow density and reduced rodent abundance.

The swift fox is considered a prairie specialist and prefers open habitat in short or mixed-grass prairie where vegetation is 30 centimetres or less, sparse, and characterized by limited elevation changes or topographic features like steep hills or coulees. These foxes avoid tall vegetation, cropland, trees and dense shrubs. Consequently, habitat loss, degradation and fragmentation are considered primary threats to swift fox populations, as reductions in suitable habitat can limit access to food, shelter, and denning sites.

In addition to habitat-related threats, mortality from causes have significant impacts on swift fox populations. Coyotes are important predators, while golden eagles and great horned owls may also prey on the swift fox. Vehicle collisions are another contributing source of mortality. Swift foxes may use dens within one to two kilometres of roads, increasing their exposure to traffic. This is particularly true of juvenile foxes that are dispersing from their natal home ranges, as they may travel farther and may experience roads more frequently.

Swift foxes are also vulnerable to other human-caused mortality due to their curious nature. They can be susceptible to trapping, poisoning, and attacks by domestic dogs. Historically, poisoning campaigns targeting wolves, prairie dogs, and coyotes are thought to have contributed to the decline of swift fox populations. These historical pressures, combined with ongoing habitat loss and other sources of mortality, have contributed to the species' vulnerability across the Canadian prairies.

How Can You Help?

- Maintain existing grasslands.
- Avoid insecticides or toxicants in native rangelands.
- Avoid trapping and snaring to control coyotes, red foxes, etc.
- Slow down on gravel roads to less than 80 kilometres per hour; especially, in grassland areas from dusk until dawn.

For more information see: COSEWIC. 2021. COSEWIC assessment and status report on the Swift Fox *Vulpes velox in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 61 pp.*

Background Photo: Swift foxes prefer open, short-grass prairie with vegetation less than 30 centimetres. © SKPCAP