

OBSERVATIONS OF INTERACTIONS BETWEEN SWIFT FOX AND BADGERS -- Swift fox (*Vulpes velox*) and badgers (*Taxidea taxus*) are sympatric inhabitants of some prairie regions in North America. Although badgers have been found to prey on swift fox, (Carbyn et al. 1994, D. Ausband 2005) we report three observations of species interactions made during the summer of 2004 that did not involve predation by badgers. All three observations are from a reintroduced population of swift fox and occurred on the Blackfeet Indian Reservation, Glacier County, Montana. The Blackfeet Tribe and Defenders of Wildlife reintroduced 123 captive-reared swift fox from 1998 – 2002 and subsequent monitoring discovered wild-born kits every year since the initial release.

On 10 July, at 1950 hr, we watched a badger foraging at a suite of burrows on a short-grass prairie hillside. There was an active swift fox natal den 0.5 km from the badger. After watching the badger for several minutes an adult swift fox appeared in view and began heading directly toward the badger. The badger saw the fox immediately and ceased foraging to watch its approach. When the swift fox was within 2 m of the badger it crouched low to the ground and approached the badger head on whereupon it lunged and snapped at the badger's face region. We could not discern if the swift fox made contact with the badger. The badger immediately sat upright, shook itself and traveled away from the burrows without stopping. The swift fox then sat at the burrows for 20 minutes after which we left the area.

We also made two separate observations of swift fox in close proximity to foraging badgers. On 17 August, at 2200 hr, we spotlighted a badger foraging at burrows in a short-grass prairie pasture within 15 m of an active swift fox natal den. We first thought that the badger may have been predated upon the kits, but after a few minutes we discerned one radio-collared adult and two kits in alert postures watching the badger that was foraging just 10 m away. We

proceeded to watch the foraging badger and nearby foxes for 25 minutes after which the authors left the area due to an approaching thunderstorm. Subsequent observations at this natal den site showed that all kits and both adults were still present and had not been predated upon. On 10 September, at 2200 hr, two field technicians spotlighted a swift fox kit watching a badger forage at a set of burrows in a short-grass prairie pasture. An active, late summer swift fox natal den was within 0.25 km of the badger. The swift fox kit was within 15 m of the badger and stayed in close proximity to the animal for the 15 minutes that the field technicians watched.

One possible explanation for the latter observations could be that swift fox were cooperatively, or opportunistically, foraging with badgers. This behavior has been documented widely between coyotes (*Canis latrans*) and badgers (Robinson and Cummings 1947, Cahalane 1950, Lehner 1981, Kiliaan et al. 1991, Cook 2000). At no time during our observations did we witness a swift fox obtain food as a result of badger foraging, although we cannot discard the possibility that this indeed does occur. However, we believe swift fox may have been avoiding predation by badgers, not by going into a den as they typically would at the approach of a predator, but rather by remaining above ground and relying on their speed and agility to escape the badger. Such a strategy may be more effective for avoiding predation than escaping into a single-exit den when a badger is in close proximity.

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