

COYOTE KILLS FEMALE AMERICAN MINK NEAR DEER CARCASS IN UPLANDS -- The American mink (*Mustela vison*), hereafter mink, is the most wetland-dependent mammalian predator that commonly inhabits the Prairie Pothole Region (PPR) of midcontinent North America (Eagle 1989). Mink forage primarily in and along the edges of wetlands, where they are relatively safe from terrestrial mammalian predators, and are not thought to suffer significant mortality from predators other than humans (Linscombe et al. 1982). In the PPR, mink presumably are most vulnerable to attacks by larger predators in winter, when traveling across frozen surfaces of lakes, ponds, and rivers in search of food, and during periods of extreme drought, when traveling long distances overland as ponds go dry. However, we found no records in the ecological literature of the coyote (*Canis latrans*) or other large mammalian predators attacking wild mink in the PPR.

During the early afternoon of 7 December 2003, while hunting ring-necked pheasant (*Phasianus colchicus*) in a 19.4-ha field of planted tall wheatgrass (*Thinopyrum ponticum*) and intermediate wheatgrass (*T. intermedium*) located 11.7 km north of Fullerton (T. 132 N., R. 62 W., SW1/4, Sec. 2), in Dickey County, North Dakota, the senior author discovered a fresh carcass of a female mink lying crosswise on a deer trail. Closer inspection of the carcass revealed the mink probably died during the previous night as rigor mortis had not fully developed. Fresh coyote tracks were present in the snow on a game trail on both sides of the mink and coyote had been observed within the same quarter section in preceding weeks.

The female mink weighed 740 g, was 56.5 cm in length, and appeared to have been in good physical condition. A necropsy revealed the mouth of the mink was filled with blood, the crown of the upper right canine tooth was fractured, and extensive subcutaneous hemorrhage and muscle contusions were present in the dorsal cranial area. The parietal bones were separated along their suture lines and from the frontal, occipital, and temporal bones, resulting in gross instability of the cranium and extensive hemorrhages within the cranial cavity and in the brain. In addition, the mink had 16 puncture wounds 4-7 mm in diameter in the thoracic and intercostal muscles extending from the right second to thirteenth ribs, and 12 similar puncture wounds in the thoracic and intercostal muscles from the left second to eleventh ribs. The general size of the puncture wounds (i.e., approximately 4 mm) was consistent with bites from canine teeth of a mammal the size of a coyote. Large numbers of puncture wounds prevented matching specific wounds to determine distance between teeth. Results from the necropsy suggested that the mink died quickly from a bite to the head, was bitten several times across the thorax, and dropped.

The mink carcass was located approximately 50 m from the frozen carcass of an adult male white-tailed deer (*Odocoileus virginianus*) that died from unknown causes approximately 3 weeks earlier. The carcasses of the white-tailed deer and mink were about 100 and 150 m, respectively, from the edge of a frozen 80-ha semipermanent

wetland. We suspected that the female mink might have been attracted to the white-tailed deer carcass by its scent and either was at the white-tailed deer carcass when the coyote arrived or approached the carcass when the coyote was present. Extensive scavenging already occurred on the white-tailed deer carcass by the date of the attack. Mink generally do not feed on carrion (Linscombe et al. 1982); however, cool temperatures prevented decomposition of the white-tailed deer carcass and thus might have maintained the carcass in a state suitable for mink foraging. Coyotes are capable of killing wild mink, particularly females, which in North Dakota are only about half as large as males (Eagle 1989). This female mink might have been a young of the year based on bones of the cranium having separated along suture lines when bitten by the coyote. The coyote made no attempt to eat the mink suggesting hunger was not a motivation for the attack. Mink remains were recorded in one of 8,263 coyote stomachs containing food that were examined from collections in the western and midwestern United States (Sperry 1941). It is unknown whether the mink's remains, which accounted for 75% of the stomach sample, were scavenged or from a depredated animal.

Whether the coyote commonly kills mink when encountered under circumstances that do not allow a mink to make a quick escape is uncertain. Black-footed ferret (*Mustela nigripes*) reintroduced into prairie dog (*Cynomys* spp.) colonies in Montana survive at a higher rate in association with intensive management of the coyote (Biggins et al. 1998), suggesting coyote presence might lead to reduced densities of mustelids, particularly when both are competing for the same food source. Mink are the primary predator of young waterfowl and other water birds in the PPR (Eberhardt and Sargeant 1977, Pietz et al. 2003, Krapu et al. 2004), so presence of coyotes potentially could influence mink densities and affect productivity of water birds. However, further study will be required to identify whether the coyote has a significant effect on American mink densities in PPR landscapes.

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