



MAMMALS

Status: Common, Native Resident

RED FOX

(*Vulpes vulpes*)

Description

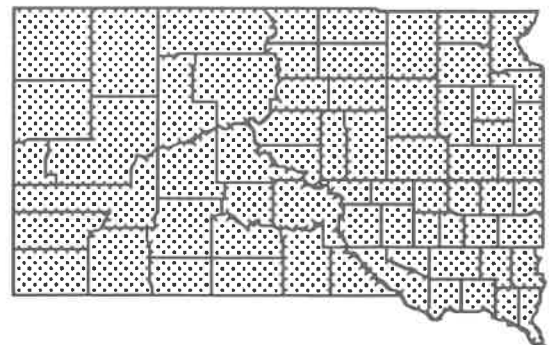
The red fox is a small, thickly-furred mammal of the family Canidae, which in addition to foxes, includes dogs, coyotes, and wolves. There is much color variation within the red fox species; black, brown or silver individuals are not unusual, but red is the most prevalent color. Red foxes usually have black paws, black behind the large, upright ears, a bit of blackish coloring around the muzzle. A lighter or white coloration occurs on the underside of the throat, down the chest, and under the torso. The red color is purest from the top of the head to the middle of the back and on the hind legs. The red fox has a lustrous, long fur coat and a large, bushy tail that may be spotted black, yellow or gray, and can be tipped in white or black. Foxes with white-tipped tails are found in greater numbers in dry, sandy regions.

The average adult size is comparable to that of a small dog. Red fox are agile and lightly built, with a sharply tapered face and pointed ears. Males tend to be slightly larger than females. The average male weighs approximately 13 to 15 pounds (6 - 7 kg) and stands 26 to 28 inches (67 -72 cm) tall. Foxes range in length from 35 to 42 inches (90-112 cm), with the tail comprising about one-third of the total body length. Size varies



according to geographic location: those in the northern regions tend to be larger.

Distribution



The red fox is found across Europe, Asia, and North America. The species is expanding its range in North Africa and Australia, where it was introduced about 100 years ago. In South Dakota red fox can be found in every county, with the greatest numbers occurring in the eastern third of the state and in the northwestern corner. The most sparsely populated areas of the state are in the central and south-central counties.

Natural History

The fox is sometimes perceived as a wily, cunning, and deceitful animal that kills in a daring and blood-thirsty fashion. Foxes are *carnivorous*, and have been known to enjoy the spoils of farmers' chickens. The practice of killing more than it will eat springs from its habit of burying surplus food as a store to ensure future provisions. This frugal and clever nature has been misunderstood as wanton killing in the fox.

Fox can be found in nearly any habitat where they can find concealment and food. Despite the fact that urban foxes may use abandoned buildings for shelter and eat refuse, they are shy, reticent animals, active by night and often moving their dens to avoid contact with people. In the wild, fox make use of deserted badger dens, caves, or hollow logs for a den; preferring the den entrance to be well exposed to the sun. Dens often have multiple openings to allow for emergency escape. The most favorable habitats support 5 to 10 dens per 247 acres (100 hectares) of land. Their home range around a den site is normally between 2.5 and 5 square miles (4 and 8 square kilometers).

Red foxes have an excellent sense of smell and eyesight, making them efficient hunters. Their diet is as diverse as their habitats. Near farms, rodents will probably comprise two-thirds of a fox's diet, but rabbits, waterfowl, fish, eggs, insects, berries, *carriion*, and even garbage will serve as food. In open areas,

rabbits are a substantial part of the fox's diet.

Fox breed once per year. Mating takes place in January and February. Foxes are not always *monogamous*. Sometimes a female, called a vixen, will accommodate several males, if there is enough food to support more than one. A 52 day *gestation* period is followed by an average litter size of 3 to 5 pups, born between March and May, depending upon the time of conception. Born blind, the pups' eyes open in about 12 days. They live off their mother's milk for 8 weeks, then the mother introduces the pups to their first meal of meat by *regurgitating* partially digested meat she has already eaten. Until the pups are old enough to play outside, the mother keeps the male out of the den. Once the pups emerge from the den, their hunting skills, which are instinctive at birth, are *honed* through practice. For about two months both parents bring gifts of live mice for the pups to stalk, kill, and eat. At about 3 months, the pups leave the den to hunt on their own. Some pups may remain near the birth den throughout their lives, if food remains abundant in the area. For the young that survive their first winter, breeding will take place in the spring. The life span of a fox is only 1 to 4 years.

Some natural predators of the fox may be coyotes, wolves, eagles, and large owls, but none has been firmly proven to be a significant predatory threat to foxes. By far, humans cause the greatest mortality of foxes by shooting, trapping, or hitting them with cars. Mortality rates in South Dakota can vary greatly from year to year. Some of this variation can be attributed to the winter conditions; mortality rates being higher in years with very heavy snowfalls.

Significance

Foxes, like all canines, are susceptible to rabies. Because rabies is almost always fatal in humans if left untreated, the disease poses a serious threat to public health, especially in rural areas. In

Canada, vaccine baits have been used to combat the disease in fox populations. These baits are scattered near den sites where the foxes find and eat them. Since foxes are *nocturnal* and shy, typically they are not seen during daylight. Any fox seen in daylight, exhibiting no fear of people, or foaming at the mouth, is probably diseased and should be avoided.

In recent years, an escalating interest in exotic pets has drawn attention to the red fox. While the fox is a beautiful animal, people should remember that they are wild animals. Due to the fox's excitable and nervous nature, a fox makes a very unruly pet. If this knowledge is not enough to discourage attempts to make pets of foxes, people should also know that foxes have a very strong odor to their bodies and their waste, much like that of a skunk.

If you are interested in observing the red fox in the wild, look for well-used trails, usually bordering a somewhat wooded area. A good sign to look for is fox *scat* containing small bits of bone and hair. Do not touch fox *scat* with your bare hands, as the waste contains the eggs of intestinal *parasites* that infest foxes. These *parasites* can also infect humans. *Echinococcus multilocularis* is a dangerous and often fatal example. The area that holds the best chance for seeing

foxes should be near a food source—perhaps a meadow full of field mice. Once you have found signs of foxes, locate a vantage point some distance away. Be prepared to watch and wait. You may have to return several times before the foxes become familiar with your smell or your presence and show themselves. Foxes, while cautious, do exhibit some tolerance of humans, as long as they maintain a reasonable distance.

Management Considerations

In the 1980s, fox fur was a popular and lucrative commodity. The demand for fox furs dramatically reduced fox numbers. However, public appeal for furs has since fallen. Those people who are interested in hunting foxes need a hunting license. To trap foxes, a trapping permit is also required. Fox hunting is open all year. People who want high quality fox fur should hunt in the winter months when the fur is heaviest. To reduce fox populations, hunting should be done in the spring during the breeding season. *Bounties* on foxes, which used to be a popular practice, also have declined. Foxes are gradually becoming more appreciated for their role in controlling rodent populations.

Glossary

Bounties - money offered to hunters for pelts of animals.

Carnivorous - meat eating.

Carrion - dead or decaying animal matter.

Gestation - period of pregnancy or time of development within the mother.

Honed - sharpened or improved.

Monogamous - having only one mate.

Nocturnal - active at night

Parasites - animals that live in or on other animals and use them as their source of nutrition.

Regurgitating - bringing partially digested food from the stomach back up into the mouth.

Scat - animal droppings or feces.

References and Selected Resources

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