



Red Fox in New Jersey

Natural History

Historically, Red Foxes were divided into two species, *Vulpes vulpes* in the Old World and *Vulpes fulva* in the New World, but today they are considered to be one species, *Vulpes vulpes*. If red foxes were native to New Jersey during early colonial times, the animals were not abundant. Conflicting records and a presumed difference between the native red fox and the introduced European red fox caused confusion concerning early accounts regarding the distribution and introduction of the red fox in North America. A few accounts have assumed that there was no native race of red foxes, whereas others maintain that introductions were limited in scope, although introductions were undoubtedly made at several sites. The reason for these introductions was augmentation of fox populations for hunting as settlers were unhappy with the sport given by the native gray fox, which treed rather than ran or ran in a much smaller area than would the red fox. Records suggested that red fox were introduced from Europe to the southeastern colonies and to the New England colonies in the late 1700s. Today, red fox is found in North America and nearly all of Eurasia. There are also several populations in North Africa and red foxes were introduced into Australia in the nineteenth century. The red fox is present throughout New Jersey and is a game species and a valuable furbearer.

Male foxes, (both red and gray) are called “dogs” and females are known as “vixens”.

General Description

The pointed ears, slender muzzle, and slanted eyes, bushy and unusually long tail, coupled with its small dog size and typical orange-red coloration, make the red fox instantly recognizable to most observers. The tail is typically up to 70% of head and body length. The eyes of mature animals are yellow. The nose is dark brown or black. The pelt color of red foxes ranges from a pale yellowish red to deep reddish brown on the head, sides and back, and white, ashy, or slate gray on the underside. The lower legs are usually black, and the tail has a white tip.

Two other color variations occur with the range of the red fox, but rarely south of Canada. The cross fox has reddish brown fur and a cross pattern which is a black stripe down its back and another across its shoulders. The silver fox is black or very nearly so with a white tip on the tail and silver frosting on the tips of some or nearly all of the guard hairs.

Reproduction

The exact breeding period for red foxes varies across the geographic range of the species: January-February in the central regions (including New Jersey), December-January in the south, and February-April in the north. Gestation takes about 52 days. Females may mate with more than one male but will establish a partnership with only one. Prior to and for a time after giving birth, the female remains in or at the den. The male provides food for the female but does not enter the den. The male remains nearby and assists the female in raising the young.

Litters size may vary from one to as many as fourteen pups, with an average of about five. Red fox pups are born blind but open their eyes by about 14 days after birth. The pups will leave the den by 4 or 5 weeks after birth and are weaned by 8 to 10 weeks. The family group remains together until the autumn after the birth when the young will disperse. Sexual maturity is reached by 10 months for both male and female young. Red foxes can weigh from about 8 to 15 pounds, but in New Jersey will generally weigh about 12 to 13 pounds for a large, adult male. Males average about 2 pounds heavier than females. Generally, adult foxes measure 39 to 43 inches from the tip of the nose to the tip of the tail. In their first autumn, juveniles are as large as adults.

Behavior

Other than when raising young and during breeding season, the red fox is a solitary animal and does not form a pack like wolves. As with all species, home ranges will vary in size depending on the quality of the habitat. Home ranges normally will be between about 2 and 7.5 square miles. During some parts of the year adjacent ranges may overlap somewhat, but parts may be regularly defended suggesting that red foxes are at least partly territorial.

Family groups and/or individuals use a main earthen den and often other emergency burrows in their home range. Foxes often take over and utilize dens of other animals, such as woodchucks. The dens may be enlarged during the winter and prior to birth and rearing of the young. Several generations of foxes will often use the same den site. Red foxes are strictly terrestrial and rarely enter water. Red foxes most often hunt and move about during evening, nighttime, and early morning hours.

Diet

Being a nonspecific predator, the red fox utilizes a variety of food types and prey. It is also a very efficient scavenger, and garbage and carrion can be important to the fox's diet. Throughout much of the year, however, meadow voles are the major prey, making up about one half of the red fox's diet. Other rodents are also eaten whenever available. In northeastern North America, dependent on season and locale, woodchucks, eastern cottontails (and snowshoe hares where they are present) may also be preferred.

Gamebirds such as bobwhite, ring-necked pheasants and ruffed grouse are seasonally utilized as well as any ground nesting birds and/or their eggs and young during spring and early summer. During late summer and autumn, fruits, berries, and insects may be eaten.