

## Red Fox

*Vulpes vulpes*

Foxes have always intrigued man. Storytellers and writers in almost every culture and in every period of history have delighted in depicting foxes as cunning, intelligent and shrewd. In the imaginations of many, the fox is a wily character that uses its native wit to take advantage of other animals. “Smart as a fox” is often meant as a compliment.

The red fox is the most widely distributed canid or wild dog in the world. There are 10 or 11 species of the genus *Vulpes* in the world, depending on how they are counted. Three of these species live in North America—the kit fox, the swift fox and the red fox. The red fox is the only species found in North Carolina. The gray fox belongs to another genus, *Urocyon*.

### History and Status

The red fox is fairly common in North Carolina today. Historically, however, it was probably not present here before colonial times. There are no records establishing red foxes south of Rhode Island before the European red fox was introduced for sport hunting during colonial days. The earliest records of red foxes brought to North Carolina from Europe date from 1740.

High reproductive rates and sustained harvest levels indicate that red foxes can withstand heavy harvest pressure. Despite attempts to exterminate it, and despite outbreaks of disease and high harvest levels, red fox populations in most areas continue to remain stable.

### Description

The red fox is named for its reddish or orangish coloration. The tail, body and top of the head are all some shade of yellow-orange to reddish-orange. The undersides are light, and the tips of the ears and lower legs are black. The tail is long (about 70 percent as long as the head and body length), bushy and has a white tip. Adults are the size of a small dog and weigh from 7.7 to 15.4 pounds.

### Habitat and Habits

Red foxes, like other wildlife species, prefer a diversity of habitats rather than large tracts of one habitat type. Preferred habitats include farmland, pastures, brushy fields and open forest stands. They frequently hunt the edges of these open habitats.

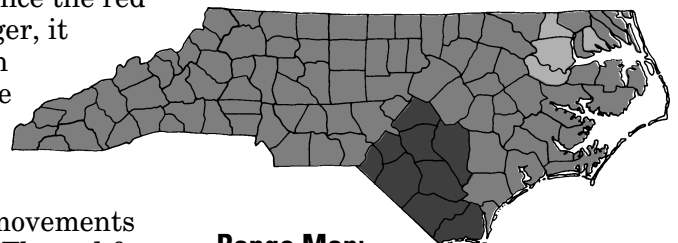
Although the red fox forages on a variety of prey, mice, meadow voles and rabbits form the bulk of its diet. It will eat insects, birds, eggs, fruits and berries in spring, summer and fall. Since the red fox is also a scavenger, it may also eat carrion and garbage in some locations.

Most red fox activity occurs at night but daytime movements are not uncommon. The red fox mates once a year, and in North

Carolina this generally occurs in January. The pups are born during late February through April. Five pups is an average litter, and they are born in a den that the parents dug themselves or that was dug by woodchucks or skunks.

While pups are being raised, the parents center their activity around the den site. Males bring food to the female until the pups can be left alone. When she can leave them alone, the female nurses the pups during the day and hunts during the night. Pups remain at the den for the first month, and when they are 10 weeks old they begin to explore areas around the den on their own. As they grow older they explore farther from the den site, and during September or October, they disperse to establish their own home range. Female red foxes may breed when they are about 10 months old.

Rabies is common among foxes in some areas of the world, but it



#### Range Map:

High ■ Moderate ■ Low ■

has not been recorded in North Carolina until recently.

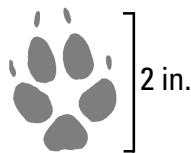
## Range and Distribution

The red fox's home range is a territory and it marks the boundaries of its territory with urine. Home ranges may vary in size with the abundance of food, the degree of competition with other animals and other red foxes, the types and diversity of habitats, reproductive seasons and the presence of natural barriers. The average size of a home range is from 1,235 to 4,940 acres.

The red fox ranges across the entire Northern Hemisphere. It occurs throughout the continental United States except for parts of the West and Southwest. There is some question whether the red fox was native to North America or an introduced species. Current theories suggest that it was native to Canada and then expanded its range southward. Among the reasons offered for this expansion in range are changing climate, increased agriculture, extirpation of the gray and red wolves, introductions of European red foxes (same species), and interbreeding with released European red foxes.

## People Interactions

Foxes are shy and nonaggressive animals. One is not very likely to encounter a red fox in the wild, mainly because it is primarily a nocturnal species. It is economically important both as a furbearer and as a predator. As a predator, its appetite for mice and woodchucks has been of great benefit to most farming operations. As a furbearer, its coat or pelt is quite valuable—the value of the North American fox harvest has exceeded \$20 million, although the value of fox pelts fluctuates.



(Red fox tracks never show the entire pads. The feet are heavily furred so most of the track is hair with only a portion of the pad showing. The black areas show where the pad actually touches ground.)

## References

- Fox, M.W. *The Wild Canids* (Robert E. Krieger Publishing Co., Inc., 1983).
- Lee, David, J. Funderburg, and Mary K. Clark. *A Distributional Survey of North Carolina Mammals* (N.C. Museum of Natural Sciences, 1982).
- Lloyd, H.G. *The Red Fox* (B.T. Batsford Ltd., 1980).
- Russell, J.K. and D.R. Voight. *The Encyclopedia of Mammals*, ed. D. Macdonald (Facts on File, 1984).
- Webster, William David, James F. Parnell and Walter C. Biggs Jr. *Mammals of the Carolinas, Virginia and Maryland* (The University of North Carolina Press, 1985).

## Credits

Written by Karen A. Day, David Sawyer, Perry Sumner.

Illustrated by J.T. Newman.

Produced August 1992 by the Division of Conservation Education, North Carolina Wildlife Resources Commission.

The Wildlife Resources Commission is an Equal Opportunity Employer and all wildlife programs are administered for the benefit of all North Carolina citizens without prejudice toward age, sex, race, religion or national origin. Violations of this pledge may be reported to the Equal Employment Officer, N.C. Wildlife Resources Commission, 512 N. Salisbury St., Raleigh, N.C. 27604-1188. (919) 733-2241.

# WILD Facts

## RED FOX

### Classification

Class: Mammalia  
Order: Carnivora

### Average Size

Length: 36 in.-42 in. from nose to tip of tail.  
Height: 16 in. at the shoulder.  
Weight: 7.5-15 lbs. Males average about 2 lbs. heavier than females.

### Food

Fruits and berries such as blueberries, raspberries and wild black cherries. Meat such as small rodents, rabbits, poultry, insects and carrion.

### Breeding

Females called vixens. Considered by some observers to be monogamous. Both males and females are sexually mature in 10 months. Adults mate generally in January in North Carolina.

### Young

Called pups. Adults have one litter per year. Gestation period is about 52 days. Litter size averages about five. The pups' eyes open in 9 days. Weaned at 8-10 weeks. Learn to hunt at 3 months. The family unit remains together until early fall when the pups disperse.

### Life Expectancy

About 5 years, although due to the many mortality factors, most do not live that long.