

# Red Fox

*Vulpes vulpes*



## Other common names

None

## Introduction

The red fox is the largest member of the fox family, which contains 21 species. They were actually introduced to America by European settlers, and have now spread across most of the continent. They were introduced to placate hunters frustrated by hunting grey fox, which have a tendency of climbing trees to escape pursuit. Red fox are clever and highly adaptable, which has allowed them to become the most widely distributed carnivore in the world.

## Physical Description and Anatomy

The red fox is highly recognizable for its red coat, which is slightly brighter in winter. Its head, shoulders, and back are reddish brown, rusty red, or even orangey yellow, which may fade to almost gray on its rump. Its legs and ears are black, while the tip of its bushy tail, as well as its chest and throat are white or gray.

Adult red foxes are about 8 – 12 lbs (3.6 – 5.4 kg), and they stand 18 – 34 inches (45.7 – 86.4 cm) tall at the head. They are 48 – 57 inches (121.9 – 144.8 cm) long, and nearly half of that length is tail.



Red fox skull.



Red fox pelt (top) and grey fox pelt (bottom).



Close up of red fox fur (top) and grey fox fur (bottom).



Red fox tracks.

Front (left): 2.25 inches long by 2 inches wide

Hind (right): 2 inches long by 1.75 inches wide

## Identifying features (tracks, scat, calls)

When observing a fox, the main identifying characteristics are color and behavior. Red foxes are mostly reddish, while grey foxes are more grizzled grey with some red. Red foxes also have a white tail tip, while grey foxes have a black tail tip. Grey foxes have the ability to climb trees, whereas red foxes will always be on the ground. Red foxes have longer legs and a longer, more pointed muzzle. Finally, the scent marks of red foxes are very potent, and smell very similar to skunk.

## Habitat

Red fox prefer habitat that is a mixture of open fields, forest edges, and farmland. They tend to avoid open landscapes because they lack cover. Mixed landscapes provide foraging opportunities, as well as cover from potential predators. Red fox are also found in suburban areas, including broken woodlands along lawns, roadside ditches, and utility rights-of-way.

## Behavior and Diet

Red fox are omnivorous, taking advantage of a wide variety of food items that they come across. They take small birds and mammals like mice and squirrels, woodchucks, and rabbits, as well as ground-nesting birds and their eggs, and nesting waterfowl, amphibians, reptiles, and invertebrates. They will scavenge carrion, as well as feeding on fruits, berries, and seeds. They have a high metabolism, and each individual adult requires 1 lb (0.5 kg) of food every day. Red fox will use food caches, storing food in times of plenty to guard against times of famine.

They are primarily nocturnal creatures, but will venture out during the day to find food for their young. When foraging and hunting, they will zig-zag in an erratic manner across open grassland,



Assorted red fox scat.

using sensitive eyes and ears to seek out prey. Once prey is targeted, they freeze, then perform their distinctive aerial pounce to capture it.

Red foxes often den in the abandoned burrows of woodchucks and other small burrowing mammals. They remodel these burrows, widening them and lining them with grasses to provide a dry refuge for pups. They may also den in the root systems of large trees, along stream banks, or beneath hollow logs and hedgerows. They often have multiple entrances to their dens, to make escape easier. They may be preyed upon by bobcats, and occasionally domestic dogs. They avoid territories occupied by coyotes, as they compete for the same resources. They will defend their territory from other red foxes, but there are rarely violent encounters. Red foxes use antagonistic displays, chasing, and harassment to scare off competing red foxes.

## Human Interactions

Red foxes are generally not a nuisance species, but they can be attracted to human habitations by pet food and unsecured garbage. They are sometimes victims of automobile collisions, and they are targeted for the fur trade.

In some countries, it is legal to keep red foxes as pets. However, their natural behavior makes them unsuited to life indoors. There is one ongoing project that has been selectively breeding red foxes for decades. Researchers discovered that, after many generations of selecting only the least aggressive individuals, the animals showed physical changes as well. They developed floppy ears like many dogs, and changes to their skull structure that resulted in them being considered more “cute”. This experiment gives clues to the evolutionary processes that created dogs out of wolves.

## Reproduction

In New York, red foxes breed from December to April, with a peak in January and February. They are generally monogamous, maintaining lifelong breeding companions, and both males and females are involved in providing food for pups. Sometimes, a female sibling or daughter will also help care for pups. After a gestation period of about 52 days, the female will give birth to a litter of 3 – 6 pups, though they can have as many as 12. The young are born blind and helpless, but they open their eyes by day 9. By week 12, they are weaned and the adults begin teaching them to hunt for themselves. As temperatures increase in summer months, parents will move the pups to a new den sight every few weeks to minimize exposure to parasites like fleas. They disperse between September and January, and may travel over 100 miles in search of unclaimed territory. Pups are ready to breed in their first autumn, but they may not produce offspring until their second year. The lifespan of the red fox is typically 4 – 6 years, mortality often resulting from predation, disease, or injury. They are also susceptible to mange, which causes hair loss that can result in hypothermia and death in winter. However, if an individual escapes these dangers, it is fully capable of living up to 15 years.

## Fun Facts

Red foxes can run 26 mph (42 kph).

A female fox is known as a vixen.

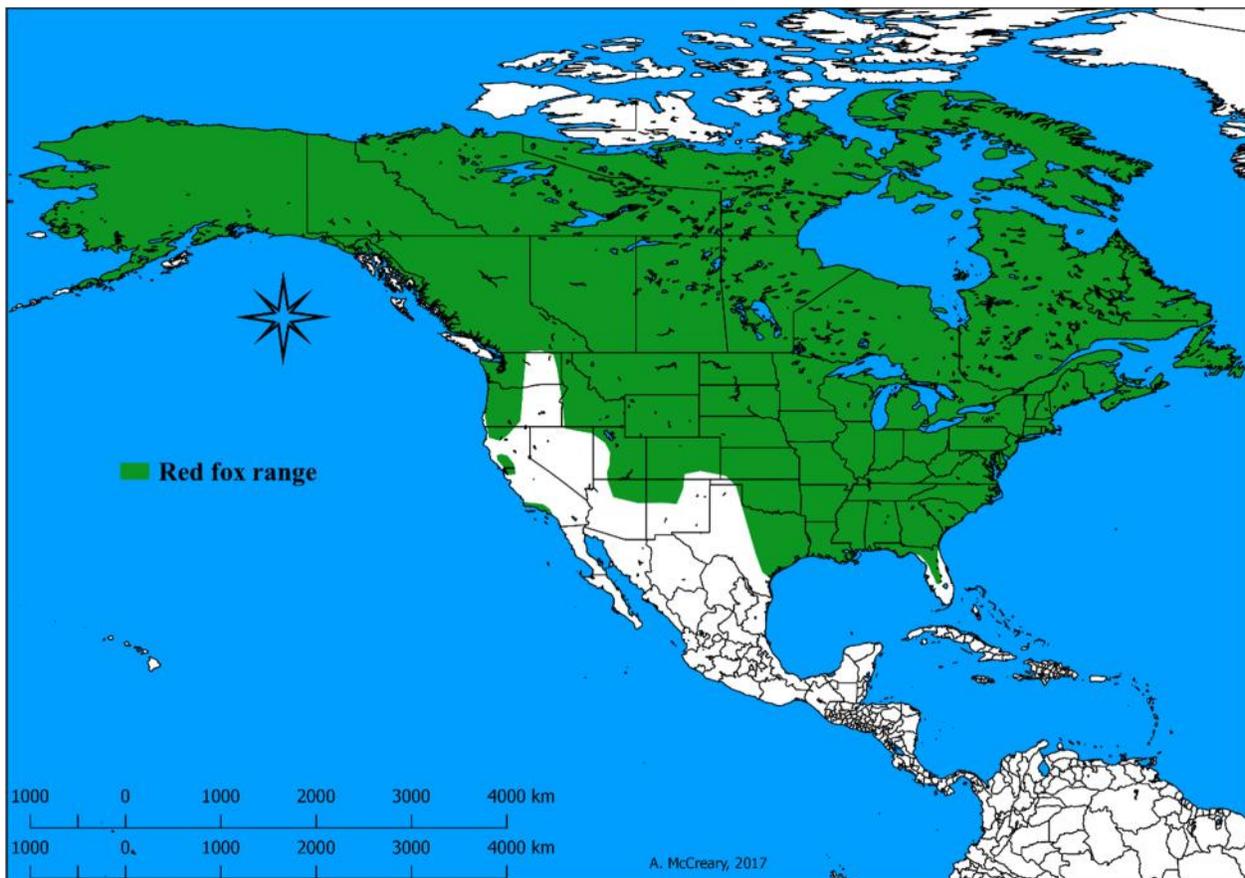
A group of foxes is called a “skulk” or a “leash”.

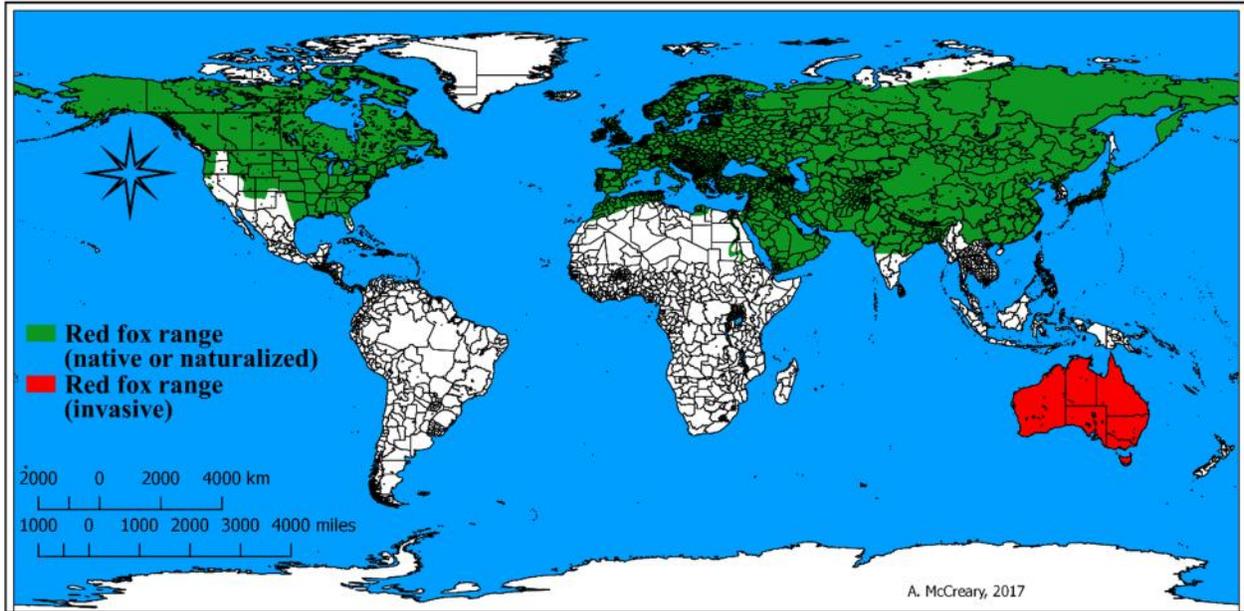
Foxes have vertically slit pupils, like felines, rather than round pupils, like wolves, another member of the canid family.

Red fox are invasive in Australia.

## Range and Status

The red fox is extremely widespread, adapting to many different habitats and environments. It is found throughout most of the northern hemisphere. The red fox originated in Eurasia, followed human expansion to the Americas, and has since become naturalized. Expanding red fox populations have caused native grey fox populations to shrink. The red fox has also been introduced to Australia by human settlers, where it is considered invasive, and causes considerable damage to native wildlife. Expanding coyote populations in North America limit the red fox range, possibly pushing them into residential areas.





## Management and Research in New York

Hunting and trapping of red fox is allowed in New York, along with other small furbearers. Very little active management is performed in regards to red fox, aside from the removal of the occasional nuisance individual.

## Pictures

The following pictures were all taken around the Center or by our trail cameras.





2015-03-29 8:05:56 AM M 3/3 10°F



HC500 HYPERFIRE

RECONYA

2015-05-08 6:20:48 AM M 1/3 61°F



HC500 HYPERFIRE

RECONYA

2015-05-09 9:47:00 AM M 1/3 83°F



HC500 HYPERFIRE

RECONYX

2015-05-09 6:16:40 AM M 1/3 55°F



HC500 HYPERFIRE

RECONYX



This picture was taken by a seasonal worker as the fox walked right by the Center.

## At Dyken Pond

The red fox is a regular visitor to trails around Dyken Pond. Keep your eyes peeled for tracks and scat. The scent of their musk is similar to that of skunks, so whatever you do, don't let your dog roll in it.

## Sources

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