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# NORTHWEST WILDLIFE PRESERVATION SOCIETY

## Red Fox

*Vulpes vulpes*



Photo Credit: Joe Saladino

By Angelina Henshaw

The red fox (*Vulpes vulpes*) is a beautiful and misunderstood animal. It has earned a reputation of being a bold predator that hunts on domestic animals and livestock while it actually is quite shy. Some people might be surprised to learn that red foxes are nocturnal animals, meaning that they sleep during the day and hunt at night. This, however, does not mean that you won't see a red fox during the day.

### Characteristics

Red foxes are part of the *Canidae* family, which is the same family that dogs, coyotes and wolves belong to. They have pointed faces and pointed ears, long lithe bodies, and a long bushy tail. They also have long fur, which helps them keep warm. Even though they are called "red", these foxes can come in a variety of colours. They can be silvery-grey, brown, orange as well as red. Some foxes that are darker and have a cross-shape on their backs are nicknamed "cross foxes", while foxes that have white-tipped fur are nicknamed "silver foxes". When red foxes are born, they are a dusty grey colour and are very fuzzy. They stay that way for about a month, as their coats turn into their natural colour.

Adult red foxes are typically 3.6 to 6.8 kg (8 to 15 lbs) and range in length from 90 to 112 cm (35 to 44 inches). One-third of that length is the length of their tails. Male foxes (known as "dogs") are slightly larger than their female counterparts (known as "vixens"). Other than their size they do not vary at all – their fur colour is based on genetics, not gender.

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## Life Cycle

Red foxes sexually mature when they are ten months old but they don't usually start mating until they are at least a year old. They mate in the winter, sometime between December and mid-March. Most red foxes are monogamous, meaning that they find one mate and mate for life, but not always! There have been some documented cases of two dogs denning with a vixen and raising their young together.

After a male and female red fox breed, they search for a den together. A red fox den doesn't have to be a cave – it can be a burrow, a hollow log, or even the inside of a barn. Field knolls, hedges, the edges of a forest and stream banks are also nice locations for a fox den. Once they have decided on a suitable den, the foxes line it with dry materials (leaves, twigs, fur, straw) – this is important, as these materials will help keep the den warm and dry when the babies are born. Dens also usually have more than one entrance, as that makes it easier to escape from danger. Some foxes even go as far as building two dens that are relatively close together, so they have the ability to move their babies back and forth if they sense danger nearby – however, there have been observations of foxes doing this even when there is no danger to speak of.

A particularly interesting part of fox denning is not the den itself, but the territory surrounding it. A fox den usually has a home range territory of 4-8 km<sup>2</sup>. It is a large enough area to make sure that other foxes do not invade the territory, and that the parent foxes will have enough of an area to monitor for danger.

It takes 7-8 weeks for a baby fox (known as a kit) to be born. Most litters average around 5 kits, but there can be as little as 1 or as many as 10 in a single litter. Both parents actively care for the kits, but at different stages. When the kits are first born and have their eyes shut, the vixen carefully cares for them. The male usually isn't allowed inside the den during these two weeks, so his responsibility is to provide food for the vixen. After these two weeks have passed, the vixen is comfortable enough to allow the dog inside while she herself does the hunting.

Kits start their life drinking their mother's milk. After about a month, they are weaned off of the milk and are introduced to hunting. Their parents will bring back small game like mice and voles and allow the kits to play with them so they can acquire the taste and skill for hunting. For another two months the parents will monitor the kits in tall grass near the den as they continue working on their hunting skills. After the kits are three months old, they are allowed to leave the den alone.

Red foxes have the potential to live up to 15 years in the wild, but most do not live past 6 for a variety of reasons, including hunting and disease.

## Habitat

Red foxes live in the most diverse of areas. You can find foxes on the tundra, in the desert, in a forest, or even in an urban centre. They like to live on the edges of forests, in prairies and on farms because these places provide the most ample amount of food. They have also been seen living in bustling cities like London, England and Stockholm, Sweden. Though they live in dens when they are breeding, they live alone and sleep outside when otherwise occupied – their big, bushy tails keep them nice and warm!

As it happens, red foxes live in the largest geographical range of any member of the order *Carnivora*. Their full range spans nearly 70 million km<sup>2</sup>. They can be seen in every province of Canada, most states in the US, all over Europe and Asia, and even in North Africa and Australia – British fox hunters brought them to these last two areas in the 1800s. As far as it is known, red foxes haven't been on the decline. It is speculated that the population of red foxes is likely much larger than it was on the North

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American continent since the Europeans arrived in the 16<sup>th</sup> century. This is thought of to be true because pioneers killed a large population of wolves in North America when they first arrived, which freed up habitats for red foxes to thrive in as well as the decline of a potential predator.

## Behaviour

Red foxes have a large and diverse diet. They are excellent hunters and have a sharp sense of sight and smell. They can smell and hear their prey easily with pinpoint accuracy, even while prey is underground or unseen. This is why they make excellent hunters of small animals such as rodents like voles and mice, as well as lemmings, hares and rabbits. They have been known to hunt chickens on farms, earning them the nickname “chicken thieves”. However, they do not just eat meat – foxes are also known to eat berries, other fruits and nuts, as well as garbage and pet food when given the opportunity. Their diets will vary with the seasons and with their habitats. Even when a fox is full, it will be hunting – it always looks to store food (cache) for its next meal.

Foxes are capable of a few vocalizations. Most of the time, foxes will make a sharp barking noise that is commonly mistaken for an owl hooting. This bark is used as an identification system to differentiate between foxes. They also make a scream-like variation of a howl that has been dubbed a “Vixen’s Scream”, though males also make this noise. This vixen’s scream can be heard commonly during mating season as it is thought to be used to lure mates. Red foxes have an alarm call that is a mix of a sharp bark and a cough, which is used to warn others of nearby danger.

While most communication between foxes is soft and quiet, they also use a form of communication called “gekkering”, which sounds like a guttural chattering combined with yelps and howls. It is heard mostly during territorial standoffs between adult foxes but can also be heard among play-fighting kits.

As red foxes are solitary animals, they do not live in packs. In order to mark their territory, they make scent posts on trees or rocks (through urination) to announce their presence. They also use their tails to signal and communicate with other foxes. There are some situations where a couple of foxes will habituate in the same general area (or with overlapping territories) and a social hierarchy must be established. Foxes that are determined to be submissive will greet the dominant fox with a high-pitched whining that can elevate to a shriek.

Red foxes do not emit a strong odor but they do have musk glands at the bases of their tails (similar to dogs) that aid in individual recognition. While this is a dog-like trait, red foxes also possess some traits that are similar to cats – for example, they use their long, bushy tails for balance and they slink around and run and pounce like a cat.

## Threats

Red foxes are deemed to be a species of “Least Concern” according to the IUCN Red List of Threatened Species. They do have some natural predators such as coyote, wolves and cougar. Some foxes, especially young can be captured by raptors such as great horned owls and golden eagles.

Red foxes are particularly susceptible to diseases like rabies, canine distemper, and sarcoptic mange – another term for canine scabies, a skin condition.

Humans can pose a great threat to red foxes. It is well known that fox hunting was a sport in human history and to this day is it still upheld in some areas. Legislation has closed the fox hunting sport in North America and parts of Europe. Fox culling is another threat posed by humans. “Culling”, in this case, means the indiscriminate killing of red foxes. It happens in many areas but it is not significant enough to affect the red fox population, as red foxes are highly adaptable. There have been many discussions about the relationship between the killing of foxes and the destruction of livestock/crops. Some think that it is

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okay for farmers to kill a fox if it has done enough damage to crops and/or livestock, while others claim that it is of little concern and that people do it purely for sport.

Fox fur is also popular and as such a threat for red foxes – and in particular silver foxes. Fox farms have popped up, breeding foxes for the sole use of harvesting them for fur. This is a cruel and unmanaged practice that needs to be ceased.

## What We Can Do To Help

There are several things that you can do to help red foxes:

- Do not approach a fox if you find one. They are wild animals, and though much of the rabies population has been cured/eliminated, there is always a chance that a fox could be carrying the disease.
- If you find an injured fox, do not approach it. You could injure yourself, or further injure the fox. Keep pets, other people, and vehicles away from it and contact a wildlife preservation/conservation organization to come care for the fox.
- If you find a kit (a baby fox) leave it be. It's mother is likely nearby and left it momentarily for hunting, and she will not like it if you approach her young.
- Join a wildlife organization (like NWPS) and help out and learn about animals like the red fox
- Do not buy fox fur products and do not condone the farming of foxes for their fur.
- Be a mindful observer. Keep your distance and educate yourself about these animals. Contact law enforcement if you suspect something illegal is taking place.

## Other interesting facts

Red foxes have pin-sharp hearing and can detect the minute sounds of their prey under snow. They then pounce on their prey sometimes burying their snout deep within the snow.

Red foxes are cunning and extremely intelligent mammals.

## Where & When to view red foxes

Seeing as red foxes are nocturnal, they do most of their hunting and moving around at night. If you hear an owl's hoot in the middle of the night, don't always assume that it *is* an owl... you could very well have a red fox as your neighbour!

## Bibliography

### Web Resources:

National Geographic – informational website with a detailed range photo and a sound-bite of the red fox.

<http://animals.nationalgeographic.com/animals/mammals/red-fox/>

Hinterland Who's Who – excellent detailed information with lots of information on conservation.

<http://www.hww.ca/en/species/mammals/red-fox.html>

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Canadian Wildlife Federation – informational, with a large photo gallery and a short video on the red fox.

<http://cwf-fcf.org/en/discover-wildlife/flora-fauna/fauna/mammals/red-fox.html>

The Fox Forest – an in-depth analysis of the red fox. An excellent website that features tons of information as well as a helpful list of resources and organizations that support the red fox.

<http://www.redfoxes.org/>

Popular Science – an in-depth article on the sounds red foxes make.

<http://www.popsci.com/science/article/2013-09/what-sound-does-fox-make>

The IUCN Red List of Threatened Species – website listing the endangered level of the red fox. Also lists some informative conservation actions.

<http://www.iucnredlist.org/details/23062/0>

Adirondack Ecological Center – informative website.

[http://www.esf.edu/aec/adks/mammals/red\\_fox.htm](http://www.esf.edu/aec/adks/mammals/red_fox.htm)

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