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# THE FOX



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The fox, also known as the Red fox or European red fox (*Vulpes vulpes*) is a native of Europe, North Africa, Asia and North America, although there is considerable variation in size and colour within this enormous range.

The fox was introduced to Australia in 1868 for hunting with foxhounds; an introduction which turned out to be damaging to agriculture and disastrous to native animals. From its first release in Victoria the fox colonised virtually the whole of the continent in 70 years. The only parts of Western Australia which have not been invaded are the north Kimberleys, although foxes are also scarce in the deserts.

## **Significance:**

Foxes prey on free range poultry and lambs, however a study of over 4,000 lamb deaths in Western Australia showed that although over 40 per cent of carcasses were eaten by predator less than two per cent had been killed by the predator. Most of the deaths were due to mismothering, starvation and disease. Foxes are perfectly capable of chasing and killing lambs but with an abundance of carrion and afterbirth easily available in lambing paddocks, they have a ready supply of meat without going to the trouble of chasing and killing it.

## **Diet:**

Foxes are opportunist feeders; they eat whatever is most easily available to them. One study in a desert area found kangaroo, insects, rabbits, emus, frogs and sheep carrion was present in fox stomachs, while in more settled regions rabbits, carrion, rodents, birds, insects, herbage and fruit were found.

Foxes appear to prefer their meat relatively fresh; only 10 per cent of rabbits consumed were carrion, but most of the sheep were dead when eaten.

Small native marsupials and ground nesting birds are usually unimportant in fox diets, but because some of these species are rare, predation by foxes may be crucial to their survival.

Foxes have even been found scavenging waste food, raiding rubbish bins and stealing pet food in large cities.

## **Growth and Reproduction:**

Foxes breed only once a year, mating in May or June. The vixen remains on heat for only three days. During courtship the distinctive short bark of the dog and return howl of the vixen may be frequently heard.

In medieval times the vixen's howl was thought to be the cry of witches. Gestation lasts seven weeks and cubs are born during August or September, in Western Australia. They weigh only about 85 g at birth but grow rapidly to about 1.6 kg before weaning at 8 to 10 weeks.

Litters range in size from two to six with an average of about five cubs. During lactation the dog fox may assist the vixen by hunting and bringing food to the litter.

Cubs open their eyes at about ten days and begin to play outside the earth (or den) at about three weeks. They are usually silent while immature. Play is used both to establish hierarchies within the litter and as a rehearsal for adult life. Hierarchies are reinforced by a complex array of appeasement gestures and sounds. Cubs start to hunt at about three months and leave the litter to find their own territories usually between six and 10 months of age. They become sexually mature at 10 to 12 months.

Adults moult annually in the spring, losing their heavy winter coat as the weather warms up.

## **Habits:**

Foxes are usually solitary animals forming pairs only during the breeding season.

Dog foxes mark a territory of between 250 and 2,500 hectares depending on the fox population and availability of food. Vixens usually have smaller territories, a dog fox may have a number of vixens living within his territory.

Foxes live in large burrows called earths often enlarging former rabbit

warrens. Earths have a distinctive smell when occupied.

Foxes mark their territories by careful placing of scats (faeces) which can be easily distinguished from dog scats by their characteristic tail. They also mark with scent. Foxes have two scent glands on either side of the anus and one on the upper side of the tail indicated by a black spot on the brush.

## **Appearance:**

Cubs initially have a smoky brown woolly coat and a rounded face. As they grow older they acquire the reddish yellow coat, bushy tail and pointed mask of the adult. Adult foxes reach up to one metre in length including the tail. Vixen weigh from 4.5 to 7 kg and dogs from 5.5 to 8 kg. Foxes have very acute senses of hearing and smell. They have long whiskers which give them information at night by touch. Their eyesight is less well developed.

## **Longevity:**

Foxes have survived despite almost constant attempts by man to reduce numbers or eradicate the species throughout the world. One study in the UK found a first year mortality of 57 per cent of foxes. In Australia approximately 90 per cent of the population is two years old or less. They are particularly vulnerable during their first year while relatively young and inexperienced.

Fox numbers in the wild are controlled by spasmodic outbreaks of mange.

In Europe they are the major carrier of rabies, a virus disease nearly always fatal to man and animals. If rabies ever reached Australia, control of foxes would be a major problem in eradicating the disease.

*For advice on fox control contact the Agriculture Protection Board, Jarrah Road, South Perth 6151. Telephone (09) 367 0111 or any country office of the APB or the Department of Agriculture.*