

## Disease: Mange

Sarcoptic mange is a very common disease of mammals, being found in both wild and domestic animals. Sarcoptic mange is caused by the mite *Sarcoptes scabiei*. Mites burrow into the outer layer of the skin, forming tunnels into which they deposit several kinds of material (eggs, faeces, shed shell, digestive secretions) causing intense irritation to the skin. The mite life cycle lasts about two weeks and heavy infestations can build up rapidly.

Lightly infected individuals may suffer only short-term effects, whereas heavily infected individuals suffer from fur-loss and develop a thick crust of parasite wastage on the skin surface.

The disease is intensely irritating and animals have been known to chew their own tails off trying to relieve the itching. At advanced stages of the disease, infected individuals are often seen wandering around during the daytime, especially in cold weather; the infected animals try to maintain their body temperature seeking warm places, such as buildings. Death may arise from a wide variety of causes, including starvation and hypothermia.



Fox affected by mange; fur-loss is evident on the rump and tail. © J. Bowry

Mange is a common disease of foxes and has caused fox population crashes around the world, including Britain and Scandinavia. Mange spreads effectively through rural and urban populations. Mange is not more common in urban, as opposed to rural areas. In Bristol, populations declined by >95% just two years following the arrival of mange and long term data indicate that populations take 15-20 years to recover.

### Question & answer

#### Will my cat catch mange from foxes?

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The parasite causing sarcoptic mange in foxes, *Sarcoptes scabiei* variety *canis*, is a mite infecting mainly **foxes and domestic dogs**. Cats can be infested but the chances are very remote. The mite commonly causing mange in domestic cats is a different one (*Notoedres cati*).

To put the chances of a cat catching mange from a fox into context, between 1973 and 2006 there have been **11 documented cases of sarcoptic mange in cats worldwide**. In only two of these cases, cats had been in contact with foxes.



Cats cannot catch mange from foxes

#### Will my dog catch mange from foxes?

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Dogs can catch mange from foxes



Mange mite model; © M. Gorman

The parasite causing sarcoptic mange in foxes, *Sarcoptes scabiei*, is a mite that can infect both **foxes and domestic dogs**. The disease can be fatal in foxes but can be easily treated in dogs (contact your veterinarian for advice on this).



However, the chances for dogs to catch mange from foxes are pretty slim. In Bristol, only when fox density was very high (one the highest ever recorded in the world, i.e. 37 adults/km<sup>2</sup>) was mange transmitted from foxes to dogs. Since then, fox density has decreased but it is still higher than in rural areas and comparable to other wild animal densities in cities. At this lower, more usual, fox density the number of cases of mange in dogs has fallen to negligible levels.

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### Will I catch mange from foxes?

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Sarcoptic mange exists in a variety of **strains** which are specific to different animals. The fox strain (*Sarcoptes scabiei* var. *canis*) can be transmitted to humans but cannot persist, so people infected develop a rash that naturally dies away in a few weeks. The chances of infection increase with the degree of contact so **it is not advisable to handle mangy foxes without protection**. The mange variety that causes scabies in humans is called *Sarcoptes scabiei* var. *hominis*.

### References

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