

Itching and Scratching

By John Whitaker BVMS, MRCVS

This is a subject that I have been asked to tackle and it is a problem which is very commonly encountered by vets and by dog owners. It is estimated that about 20% of all the cases seen in small animal vet's surgeries are skin problems of one sort or another. The term used to describe itching and scratching is pruritus, and that is the word that I shall use from hereon.

Why do we see so many skin problems in dogs? Well, part of the answer to that problem is because of the microscopic nature of the dog's skin which is composed of large flat cells butted up against each other, rather like the tiles on your bathroom wall. The problem for dogs is that the grouting between the tiles is of rather poorer quality than in most other species and this allows organisms to enter the skin structure between the cells and then cause disruption to the structures beneath.

For example, all mammals (excluding kangaroos and killer whales) carry a mite on their skin called Demodex. This is a normal skin inhabitant and you have them living on your skin as you sit and read this article. If you scrape the skin fold underneath your eye just above your cheekbone and look at it under a low power microscope you will almost certainly find demodectic mange

mites. These mites live in complete symbiotic harmony with the skin. However in the dog (and also the Guinea Pig - but let's not get distracted), in certain circumstances, when the skin's defences are reduced, for example by other disease processes, these mites will proliferate in abnormally high numbers and enter and damage the skin causing skin disease and it is thought that it is particular characteristics of the structure of the dog's skin which makes this unpleasant disease almost restricted to the dog.

The word mange is used to describe any skin disease which is caused by parasitic skin mites, which are invisible to the naked eye, invading and damaging the skin. It comes from the French word "manger" which means to eat. This is because mange is very irritating and if left untreated, dogs which have it will literally eat themselves and the word originates, of course, from times when there were no effective treatments for mange and so most dogs which got mange had to be destroyed and this is why the condition still to this day is surrounded by much horror and dread.

Fortunately nowadays, Demodectic mange is fairly rare, but there is another form of mange which we are seeing far more commonly than we used to, and this is Sarcoptic mange, caused by a different mite called *Sarcoptes Scabei*. This mite

is not a normal skin inhabitant, so if it is seen in the skin of a pruritic animal its presence is definitely significant. This form of mange is often called Fox Mange and the reason we see more of it nowadays is because of the rise in, and the urbanisation of, the fox population. It is transmitted directly from animal to animal including humans where the disease is known as Scabies. Animals with Sarcoptic Mange are very pruritic and owners of such dogs usually come in saying "for goodness sake stop my dog scratching as he is driving me mad scratching all his fur out all over my carpets!" The reason for this is because each mange mite can cause a lot of damage to the skin so it takes very few mites to cause a lot of irritation, hence when you scrape the skin of an animal with suspected fox mange there may not be any mites in that particular scraping, so scrapings from at least half a dozen sites may need to be taken sometimes before a mite is found to confirm the diagnosis.

Fortunately nowadays we have good treatments for this form of mange and most animals which get it will recover and develop an immunity to it so they don't get it again.

There is another form of mange which dogs can catch called Cheyletiella mange. This can be caught from rabbits so is usually called Rabbit Mange. The Cheyletiella mite likes to rummage around in the top horny layers of the skin of the

dog, causing a lot of damage resulting in a lot of dandruff, and that is usually why the dog is presented at the surgery. However, it does not penetrate down to the deeper sensitive layers where the nerve endings are, so does not cause irritation to the dog, so strictly speaking does not fall within the remit of this article. However, Rabbit Mange is also transmissible to humans and as our skin is much thinner than dogs it does penetrate to the lower sensitive layers, so can cause itching and scratching, hence my reason for including it. It often presents as a pruritic rash around the midriff where the mange mites crawl on to the skin in the gap between the waistband of trousers or skirt and bottom of a jumper or shirt after your infected dog, cat or rabbit has been sitting on your knee. Nice thought, eh!

So much for the invisible parasites, now for the visible ones, which are lice and fleas.

Lice infection, or Pediculosis to give it its proper title, is much less commonly seen than mange, but when a dog does get lice it will be extremely itchy and the offending parasites can be easily seen with a magnifying glass, and even the naked eye, sticking to the animal's hair and looking like tiny, white shiny pearls.

This brings us to by far the most commonly seen skin parasite of all, the humble flea, again, easily seen with the naked eye especially when moving

across the skin, although not always so easily spotted on a dark coated dog such as the Affenpinscher. So prolific and ubiquitous and successful at surviving is the flea, that by parasitic standards it should be called the mighty flea. The flea is implicated somewhere in the majority of pruritic skin problems that we see, and so significant is it in the annals of canine dermatology that I think it deserves an article all to itself and that is what I intend to start with in the next issue of this series of article.

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