

A recent inquiry by a SITF reader prompted me to explain the ins and outs of canine skin parasites. When we find our dogs infested with one of these we may feel anything from irritation to concern. Consider the facts as you deal with any of these pests. Ectoparasites (those that live on the outside of the host) are fairly common in dogs in various parts of North America. Different areas are more or less plagued by fleas, depending on the suitability of their climate to its reproductive cycle. Other parasites such as lice and mites are more ubiquitous but also less frequently troublesome. Some unfortunate canines can host more than one type of skin parasite simultaneously, making diagnosis and treatment more complicated. I'd like to briefly explain the major parasites, their symptoms, life cycles and some treatments.

Mange is a dreaded and often misunderstood entity. In general it refers to the presence of mites on the dogs skin. Mites are microscopic therefore invisible to the naked eye. They actually live in the layers of skin rather than on the skin. There are two common types of mange mites in dogs which differ radically in life cycle and treatment. The mange that most people think of is Sarcoptic mange, caused by the mite Sarcoptes scabiei. The mite completes its life cycle in 17-21 days in tunnels within the upper skin layer. It is this tunneling and allergic reaction to the waste products of the mites deposited in the tunnels that cause the intense itching. The incubation period (time from exposure until symptoms appear) varies from two to eight weeks, so the source of infection may be very difficult to trace. The adult mite lives about four weeks but is susceptible to drying and can live only a few days off the host.

Sarcoptic mange is easily spread between dogs by direct contact but can also be transmitted by use of common grooming tools, collars or kennels. In addition, although the mite is fairly species specific, people can develop transient infections from handling infected pets. This

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## Of Mites And Men



Robin Stronk with her springer "Babe"

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will usually manifest as a very fine, extremely itchy rash along the edges of clothing (sleeves, waistbands,) that disappears within several days without treatment as the human is not a natural host. Dogs with sarcoptic mange are almost obsessively itchy. In the examination room they can appear like a wind-up toy with constant repetitive scratching motion. The act of parting the hair to examine the skin will often set them off into wild gyrations of scratching. They usually smell bad as the irritated skin tends to respond by oversecretion of the oil glands leading to rancid, "doggy odor." The haircoat becomes patchy with the armpits and backs of the hindlegs being most affected. In advanced

cases the tips of the ears are bald and develop a thick crusty edge.

Diagnosis of sarcoptic mange may often be based more on history and clinical impression than on laboratory diagnostics. If we are suspicious of mange, we do multiple skin scrapings, scraping off some of the top layer of skin and examining the debris for mites or their eggs under a microscope. Although their presence can be devastating to the canine pelt, they can be infuriatingly difficult to find. We all have our personal favorite places to look and superstitions about finding them on the dog (three scrapings are the magic number in my opinion). The identification of one mite is absolute positive confirmation of infestation and usually leads to an outburst and strut at the microscope that would do any scoring quarterback proud. However, finding no mites does not rule out the diagnosis and if history and physical exam strongly indicate Sarcoptes, we will often treat it. Positive response to treatment confirms the diagnosis.

Treatment options include dips or the use of Ivermectin (not approved by MSD Agvet but widely used and highly effective). All dogs that are in direct contact should be treated as well as grooming tools, kennels, collars, leashes and permanent bedding. Foxes may also be infected and are a possible source of recontamination.

The other mange is Demodectic mange, caused by the Demodex canis mite. These look like cigars with legs under a microscope. Their form is an adaptation to their habitation which is in the hair follicle. The entire life cycle occurs on the host in 20-35 days. Transmission occurs between dam and pups in the first few days of life. All normal dogs have a few of these mites on their skin and manifestation of symptoms due to an overgrowth is felt to be a dysfunction of that particular dog rather than an actual infection. Therefore, demodectic mange is not considered to be contagious.

Demodectic mange is generally seen in dogs under one year of age.

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The lesions are most often seen on the head and extremities. The affected areas lose hair and may appear scaly. They are generally confined to discrete areas, sometimes circular leading owners to worry about ringworm. Demodectic mange alone is generally not itchy but if the affected skin develops a secondary bacterial infection, itching may become a factor. Localized demodectic mange in young dogs is usually self-limiting and with good nutritional support and the development of a more mature immune system, the lesions will disappear. Much more serious is generalized demodectic mange in an adult dog. The entire body becomes involved in these lesions, almost always with secondary bacterial infection that may even cause enlargement of the lymph nodes. Treatment of generalized Demodex is extensive, involving antibiotics, specialized dips, possible clipping of all body hair and prolonged vigilance for possible recurrence.

Diagnosis of Demodex is very straightforward as these mites are plentiful on skin scrapings of afflicted dogs. Your veterinarian will discuss his or her personal protocol for therapy and prognosis based on their findings and experience.

The next category of skin parasites are easily visible to the naked eye. Although we don't see them frequently, lice raise their lousy heads on occasion in my practice. They come in a biting or sucking variety but both cause great discomfort to the dog and lay their eggs or "nits" on the hairshafts. These appear as pale, translucent tear drop shapes along the hairs that are tightly adherent. The adult louse does not jump like a flea but scurries rapidly through the fur. They prefer dark hair to light hair so if you are suspicious that you have a lousy spaniel, check in the liver

or black spots rather than in the white portions. Along the neck and backbone are excellent hunting areas. The bite of the louse causes intense itching. The dog produces a lot of secondary trauma to its skin with the resulting scratching and chewing. The entire haircoat appears unthrifty, dry and rough. Sucking lice may actually cause anemia in very young or debilitated animals. The life cycle of the louse takes three to four weeks but may vary with species and climatic conditions.

Treatment of lice is very similar to treating flea infestation. Dips, shampoos, sprays and powders are usually effective but the kennel should also be treated. The louse is not supposed to live off the host but it is my experience that reinfestation is common if the quarters are not also treated. I also think that wildlife such as fox may be responsible for infesting an area and should be considered when you are treating an infestation.

Last on the list in our minds as the weather warms up should be fleas and ticks. I have addressed the flea & tick issue previously (see "PLEASE DON'T SAY THE F\_\_\_ WORD" and "DON'T LOSE BY A NOSE"). The latest information on the flea front is the recent release of a product called Sentinel by Novartis. It combines monthly heartworm prevention along with flea control in a monthly pill. Protection is also provided against the three most common intestinal parasites. Check with your veterinarian on this new product. In closing I'd like to pass on this wisdom relevant to fleas from An Atlas of the Fleas of the Eastern U.S.;

"Now here's the happy bounding flea.

You cannot tell the he from she.

The sexes look alike, you see,

But she can tell, and so can he."

R. Young