

By Jim Liebherr

Insect Diagnostic Laboratory

IF DOGS, CATS OR RODENTS have been in your home recently, and you now are plagued with tiny, dark, jumping insects that bite, there is a good chance that your problem is fleas.

The dog flea (*Ctenocephalides canis*) and the cat flea (*Ctenocephalides felis*) are the two most common species of fleas found in the home in Michigan. The two species look very similar. The adults are dark brown, strongly flattened from side to side, with many spines on their legs and body. Their very large legs enable them to jump quite far, and allow them to get onto a host.

The eggs of fleas are deposited either on the host, or on floors or bedding. Usually, eggs laid on the hair fall free and find their way to the ground or floor. Upon hatching, the wormlike larva feeds on lint, dust, flea excreta and any other organic material available. Depending upon temperature, the larva may feed from one to five weeks. When full grown, the larva forms a cocoon which becomes coated with dust and dirt, making it indistinguishable from other dust on the floor. Only after the adult emerges from the cocoon does the flea require a blood meal.

Most often if you have a dog or cat in the house, the fleas will feed on the animal. Most infestations are discovered after the animal has been absent from the premises for a period of time. With the pet gone, the fleas switch over to the only available host, humans. Occasionally, the lag between the pet leaving the dwelling and the first flea bites may be quite long. In this instance, the adult fleas probably left with the pet, leaving behind the larval and pupal stages to mature on their own.

Control Measures

Most bites occur on the legs, as the fleas jump off the floor to feed. The bites are irritating, and local discomfort may remain for several days.

Flea control is somewhat complex, and all sources of adult fleas and their larvae must be eliminated. Each of the following treatments should be done concurrently if deemed necessary.

1. Treat the pet, if still present, with a flea powder containing rotenone, malathion, pyrethrum or carbaryl (Sevin)¹. Dust the animal, beginning at the top

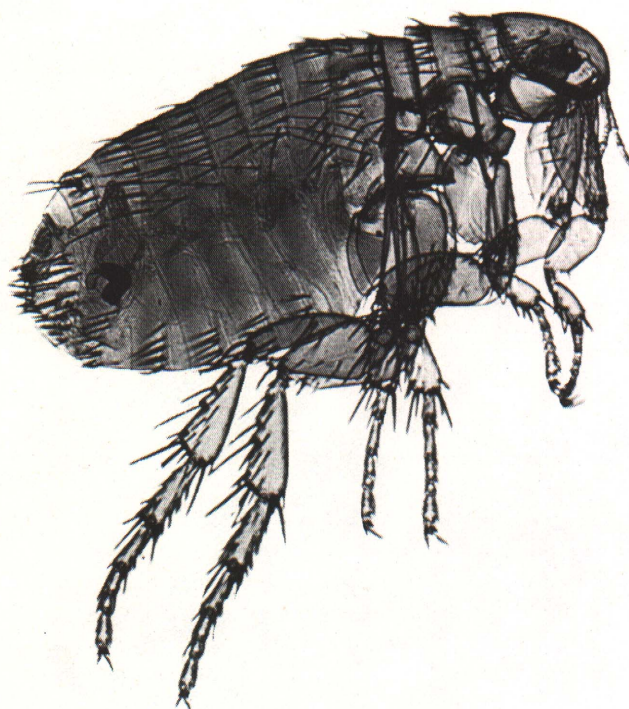


Figure 1. Lateral view of adult flea.

of the head, down the back and to the undersides and legs. Be sure to rub the material into the hair to insure complete treatment of the hair and skin. Bedding should also be dusted, washed in hot water or replaced.

Flea collars containing dichlorvas (DDVP) may be substituted for the flea powder.

2. Be certain that rodents in wall spaces or attics are not the source of the fleas. Inspect eaves, foundations and other outside areas of the home, and caulk or repair any possible entranceways.

3. Clean the house thoroughly, eliminating all concentrations of dust, lint and pet hair. Vacuum the floors and floor registers, as well as over-stuffed furniture.

4. Only after the clean-up should chemical controls be applied. In the home, apply a light spray of

¹Don't use Sevin on kittens or puppies under four weeks old.

malathion, ronnel, or methoxychlor with piperonyl butoxide plus pyrethrum. Apply a very light spray to furniture, floor coverings and floors. Heavier sprays can be applied to limited areas such as baseboards. The insecticide may stain paint or fabrics, so use caution. Remember, only a small amount of insecticide is needed to kill the insect, so limit the applications to a light spray.

5. During warm weather, flea infested outdoor areas can be treated with carbaryl (Sevin) dust or spray, Diazinon spray, or malathion spray.

When mixing an insecticide, be certain to follow label instructions exactly. Improper concentrations are detrimental both to the success of the control measures, as well as to the health of yourself and your pet.