THE UNIVERSITY OF MAINE Cooperative Extension
Pest Management
Insect and Plant Disease Diagnostic LAB
FACT SHEET

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Fleas

Bulletin #5020

Description & Biology

Although fleas are capable of transmitting diseases, this is rare in Maine. The fleas most commonly encountered in Maine are dog and cat fleas.

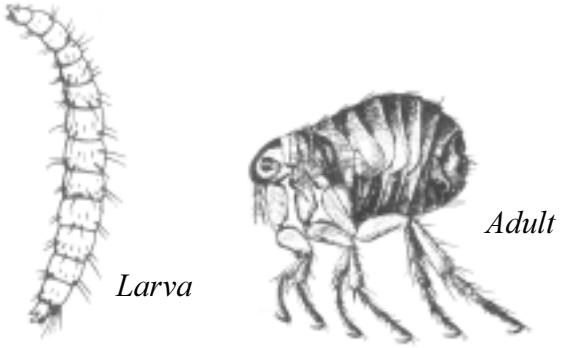
Fleas pass through a complete life cycle: egg, larva, pupa, and adult. The clear-to-white eggs can be seen without magnification. Eggs are laid on pets or other warm blooded hosts but may be found wherever they fall off a flea infested pet. It takes from one to 12 days for the eggs to hatch.

The emerging eyeless, legless, whitish, maggot-like larvae seek protected areas in floor cracks, carpets, or in pets' beds, where they feed on organic material such as food, animal waste and adult flea fecal material. The larvae molt three times and mature in seven to 15 days. Unfavorable conditions such as dryness may extend the larval stage to over six months. The larvae often hide in moist sand and pet runways.

The mature larvae enter the pupal stage after spinning silken cocoons from their saliva mixed with other debris. In about seven days, the adult fleas are ready to emerge from their cocoons. Sometimes they rest in the cocoons until a noise or vibration indicates the presence of an animal or human. This is why severe flea problems are often noted after returning from several weeks of vacation, when the fleas are primed for their first blood meal.

The female fleas (1/8") are a bit larger than the males. Their narrow bodies, with bristles pointed backwards and long, spiny legs, can move forward quickly through fur, hair, feathers, and some loosely woven fabrics. Their hind legs are adapted for jumping. Sucking mouthparts are used to obtain blood from the host, which could be a cat, dog, bird, human, or other warm blooded animal.

It takes 27 to 40 days for the cat flea to complete one life cycle, one generation. A female flea must



Larva *Adult*

have a blood meal before she lays eggs, even though she has mated. A hot, dry summer reduces the number of fleas, whereas humid, rainy weather favors their increase. Environmental conditions greatly affect the length of flea's life. too. Under hot and dry conditions, an adult flea may live from two to five days without a blood meal. Under more favorable conditions and with adequate blood meals, it may survive from one month to a year. The average life of an adult flea without a blood meal is two months. In Maine, all fleas probably overwinter outside in the larval stage. Fleas on animals, in homes, or in favorable temperatures can therefore be a continuous problem.

Pets and other animals are usually blamed for carrying fleas, and perhaps correctly so. But rats and mice can also be sources of fleas or causes of continuing infestation. However, fleas can survive in homes where there are only humans. It is a fact that some humans are resistant to or immune to flea bites. That is, they can live with the fleas and not be aware that pests are present. But most people are very sensitive to flea bites. Flea bites are most likely to be found on the legs of people in flea infested areas. The bites have a red halo around a small red spot, and they may swell. Several over-the-counter medications may give some relief for flea bites.

Management

Recently, there have been comments about fleas becoming resistant to some of the insecticides used to control them. This may be true to some extent, but in heavy infestations, it is more likely that something is being omitted in their control. It could be that an insecticide is not being used correctly, the life cycle is not being considered, or another source has escaped notice. When an infestation seems uncontrollable in the summer, there is usually sandy soil or a gravel driveway around the home.

Sand and gravel are most suitable environments for larvae, and this is why fleas are sometimes erroneously called "sand fleas". Spraying the lawn or driveway 20 feet beyond the area frequented by people or pets is necessary. One application of carbaryl (Sevin), sprayed as if applied to garden plants, will prevent fleas from being carried into the home. Other insecticides registered for controlling fleas outside are malathion and rotenone.

Pets must be treated with an insecticide from the pet shop or a veterinarian. Use and repeat these treatments as directed. Whatever product your local pet supply store or vet has should work. However, carbaryl (Sevin dust), resmethrin, malathion, pyrethrins, rotenone, and flea collars are typically used. When selecting an insecticide, remember that a cat is likely to lick itself. *Follow directions.*

In the home, you may use your vacuum cleaner to help remove fleas. But, after vacuuming, to avoid spreading the pests, seal the vacuum cleaner bag in a plastic bag before disposing. For light flea infestations mist areas where fleas are likely to be found. Pyrethrins can be used, but they will primarily kill only the fleas that are actually sprayed. They have little residual effect. Preferred insecticides are pyrethroids such as: resmethrin, allethrin, tetramethrin, etc., as well as malathion (Cythion), propoxur (Baygon), dichlorvos (Vapona-DDVP), and rotenone. All of these have some residual effect. Less toxic options include methoprene, insecticidal soap, d-limonene and silica gel plus pyrethrins.

For heavy flea infestations, use a vacuum to remove lint or dust from cracks or folds where the fleas could hide. Cushions from stuffed chairs should be removed. Scatter rugs must be taken up off the floor. Be sure the pet's bed is thoroughly exposed to the fumes or spray. Spacing clothes in the closets may also help. You are now ready to use any of the available one-time-release aerosol bombs. The insecticide will give good penetration and control. Do not enter a treated home for at least four hours to give the insecticide a chance to work. Follow directions. This treatment will also kill many other insects in the home such as carpet beetles, clothes moths, bed bugs. etc.

This treatment may not kill insects in the egg or pupal stage, nor inside deep cracks where the insecticide mist cannot reach. One of the insecticides listed above (such as resmethrin) available in aerosol spray should be used as a followup to control fleas missed by the one-time-release bomb. An additional treatment 10 to 12 days after the first treatment should kill new larvae and prevent newly emerged females from laying eggs.

By using any of the commercial repellents one can avoid being bitten and carrying fleas home from infested areas.

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When Using Pesticides
ALWAYS FOLLOW
LABEL DIRECTIONS!

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