

CAT FLEA



Common Name: Cat flea
Scientific Name: *Ctenocephalides felis*

Introduction. Fleas are one of the more important groups of insect pests because they not only cause discomfort by biting, but they can transmit several diseases such as plague and murine typhus. Cat fleas are found throughout the United States and the rest of the world.

Recognition. Adult fleas are 1/8 inch long. The bodies are laterally flattened (side to side) and are wingless. Fleas are colored brownish-black to black, but reddish-black when full of blood. Fleas have piercing-sucking mouthparts and they readily jump when attempting to reach a host animal. The larvae are whitish, slender, eyeless, legless, and measure about 1/4 inch long when mature.

Similar Fleas. The dog flea (*Ctenocephalides canis*), rabbit flea (*Cediopsylla simplex*) and various rodent fleas (are very similar to the cat flea, but are much less commonly found on dogs and cats or within the living spaces of structures.

Biology. Female cat fleas lay 4 to 8 eggs after each blood meal, laying some 400 to 500 eggs during their lifetime. The eggs are not glued to the hairs or body but are deposited on or between hairs, or in the nest or bedding material. Hence, eggs deposited on the animal either fall or are shaken off, and are frequently found in cracks and crevices where pets sleep or frequent. Eggs are oval, whitish, and about 1/64 inch long. They usually hatch in 1 to 12 days.

Flea larvae move only short distances, have chewing mouthparts and feed on some organic debris but mainly on dried fecal blood of the adult fleas in order to complete development. Larvae require high relative humidity (45-95% RH) and 1 to 2 weeks to several months to undergo 3 instars (growth stages). Last instar larvae then spin a cocoon and incorporate surrounding debris on its surface, which provides camouflage. Under favorable conditions, the pupal stage may last 4 to 14 days or up to a year under harsh conditions. The pre-emerged adult remains in the cocoon for up to 20 weeks, where it is protected from adverse conditions, including pesticides.

Adults are stimulated to emerge from the cocoon by mechanical depression of the cocoon, an increase in temperature, carbon dioxide and possibly vibrations. Larvae and pupae are typically found where the animal sleeps or frequents.

Adults usually begin to seek a blood meal on the second day after emergence, but can live for several months on stored body fat. Once on a host, they tend to spend all of their time on the host, feeding, mating, and laying eggs, unless dislodged. Although they have a preferred host, they will readily bite and can survive using other species as hosts (see below). Depending on conditions, adults usually live only several days because normal cat grooming removes up to 50% of the fleas; otherwise, they can survive about a year.

Cat fleas may transmit plague. There is very strong circumstantial evidence that they may transmit murine typhus. Cat fleas serve as intermediate hosts of the dog tapeworm (*Dipylidium caninum*) and the rodent tapeworm (*Hymenolepis diminuta*). These tapeworms occasionally infest humans, especially very young children. The dog tapeworm commonly infests cats that spend time outdoors.

Habits. It is not necessary to have pets in the building in order to have fleas present. Since fleas can jump about 6 inches vertically, they can easily hitch a ride on shoes, socks and trousers. Cat fleas may also be introduced to dwellings via nuisance wildlife harboring in crawlspaces, attics or fireplaces: Cat fleas can be found on (and distributed by) other hosts such as raccoons, opossums, foxes, coyotes, ferrets and occasionally groundhogs, squirrels and rats.

Many vacationers, who may have been unaware of the few adult fleas present, are often greeted and severely attacked by fleas upon their return. This can occur even if buildings have been vacant of animals and people for as long as 6 months or so. This situation can occur because of the potentially long pupal period, adults can live for months without food, and because fleas have not been removed via normal vacuuming. Also, fleas are normally removed from the interior environment by taking up residence on the pet(s).

Fleas are typically found where animals sleep or frequent, including along their usual avenue of travel, because this is where eggs and adult fecal blood accumulate. Most larvae will be found in similar places but especially in areas with high moisture, which is necessary for their survival. Pupae will be found in the same situations as larvae. Such places include both indoor and outdoor situations. Outdoors, fleas do not breed on sunny, exposed areas of ground or lawn, only in shaded areas beneath vegetation, decks and similar covered settings; nor do eggs, larvae and pupae survive Ohio winters.

Cultural Control & Precautionary Measures.

1. Wild animals such as raccoons, rodents, opossums, etc., which are nesting in or frequently visiting the structure must be prevented from entering the structure and controlled by trapping, baiting and exclusion. Likewise, cats should be prevented from entering crawlspaces.

2. If the pet has fleas at the time of treatment, the pet owner must arrange for the pet to be treated. Treatment may be done by a veterinarian, grooming parlor, or by the pet owner, but must be done on the day of treatment and either before or while the premises are being treated.
3. Indoors, the homeowner or occupant must do the following just before the flea treatment: ▶ Remove all items such as toys and pillows off the floor or carpet; remove all articles from under beds, on closet floors, and from under furniture. ▶ Vacuum all upholstered furniture, floors, and carpeting, paying particular attention to the foot of the furniture on which the pet rests, under furniture, and wall-floor junctions. The vacuum bag must be immediately removed and put into a plastic garbage bag, the top sealed, and then placed in an outside garbage receptacle or burned. ▶ Thoroughly clean all areas frequented by cats, e.g. table tops, refrigerator tops, windowsills, counters, etc. ▶ Cover aquariums and turn off the pumps prior to the treatment. Be sure to remove all pets, including birds.

Professional Control. Following a preparatory indoor vacuum-cleaning of the premises by the occupants, a Rottler technician will apply thoroughly an appropriately labeled residual insecticide and insect growth regulator (IGR) on carpeting, non-staining floors and upholstered furniture. Following carpet and floor treatment, humans and pets must not go back into the house until the treatment has completely dried. This will prevent pesticide pickup and possible staining from dirt being brought in contact with the damp carpet. Occupants should ventilate the house upon re-entry. Since vacuuming has little effect on residual deposits, the customer also should vacuum several times during the first 7 to 10 days after treatment. This will help reduce the emerging fleas and callbacks.

Dogs and cats should be professionally treated (shampooed or “dipped”) for fleas by a veterinarian or pet groom on the same day as the residence is treated.

Outside, spot treatment should be performed, if deemed useful by the technician. This consists of treating with an appropriately labeled residual insecticide all places dogs and/or cats rest or sleep, which are typically shaded areas such as next to the building’s foundation, porch or beneath decks, trees and shrubs. In addition, band treatment is often helpful. Band treatment is done with an appropriately labeled pesticide, which is applied in a 6 to 10 foot band around the perimeter of the building. If dogs are confined to a fenced-in yard, the 3 to 4 feet adjacent to the inner perimeter of the fence should be treated.



flea larva



flea pupa and cocoon



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