BUG BIZ
Pest Management and Insect Identification Series
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Ctenocephalides felis, Cat Flea (Siphonaptera: Pulicidae)

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Description

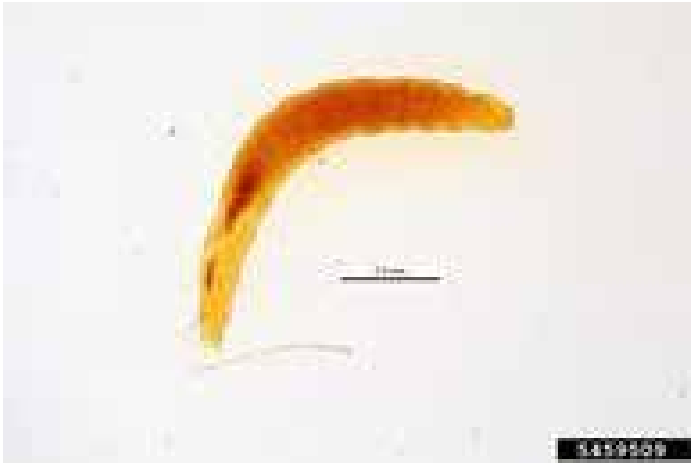
Ctenocephalides felis is a parasitic pest commonly known as the cat flea. It is the dominant flea species on both cats and dogs in the U.S., but adults will feed on many other mammals, including humans. Cat flea adults are between 1/25 to 1/12 of an inch (1 to 2 mm) and are reddish-brown to black in color, wingless and have laterally compressed bodies. The legs are also compressed and are enlarged and specialized for jumping. Adult fleas possess piercing sucking mouthparts extending from beneath the head and short antennae that are tucked into a furrow and generally are not visible. A prominent feature on either side of the head is a row of coarse bristles (genal ctenidium) that varies among species and is important in identification.

Flea eggs are 1/50 of an inch (0.5 mm) in length, smooth, oval and cream colored. Larvae are slender, legless, pale and wormlike, up to one-fifth of an inch (5 mm) in length and bear a few long hairs on the body. They possess chewing mouthparts.

Life Cycle

Adult cat fleas begin feeding immediately after encountering a compatible host and typically remain on the host for the duration of their adult life. After mating on the host, the resulting eggs fall from the host and scatter around the host's environment. They hatch in about two to 10 days, depending on temperature. The larvae feed on a variety of debris, including pet dander, dried adult flea feces and a wide variety of other organic matter. Warm temperatures increase the rate of development. Larvae transition to pupae within silk cocoons, where they can remain for many months, although the entire life cycle can be completed in less than three weeks under optimal conditions. Adult emergence may be triggered by physical disturbances, especially following periods of quiet when hosts are not in the vicinity. Adults orient in the direction of hosts using chemical and physical cues, jumping in the general direction of the host until successfully landing on it. Fleas remain active on the host year-round, but warm temperatures lead to faster development of rapid buildup of populations.

Adult Cat Flea (Joseph Berger, Bugwood.org).



Cat Flea Larva (Pest and Diseases Image Library, Bugwood.org).

Ecological Significance and Pest Status

Flea bites are similar to many other arthropod bites, and positive diagnosis requires specimens and correct identification of the causal organism. Bites are characterized by small red welts, often concentrated on the feet and legs and accompanied by intense, persistent itching that varies according to individual reactions. Bites occasionally result in systemic allergic reactions in pets and humans and can result in hair loss with skin inflammation in pets.

Cat fleas are capable of transmitting cat flea rickettsiosis to humans. The symptoms are similar to murine typhus but less severe and include headaches, chills, fever, vomiting and rash. This illness is rarely severe but requires medical intervention for diagnosis and treatment. Fleas can also serve as intermediate hosts of tapeworms. Cats or dogs can acquire these intestinal parasites during grooming if they ingest adult fleas that contain tapeworm cysts.

Management

Home infestations can be a nuisance to many homeowners and can be challenging to manage in some instances. Mass emergence of dormant adult fleas can be an unpleasant surprise after returning from a vacation. Several steps can be taken to control fleas in homes. Repeated cleaning and vacuuming of the home, including exposed fabrics, is usually the first step. Vacuum cleaner bags should be disposed of to prevent fleas from exiting back in to the house. This will help get rid of many eggs and larva. If dormant adults are present, this will trigger them to emerge, so protective clothing should be worn and then washed. All floors and surfaces should be wiped down and cleaned thoroughly. Chemical methods are available to help control the flea populations. Aerosol treatment, including methoprene or pyriproxyfen, are conventional. While effective on adults and larvae, they do not kill pupae. Movement and heat will trigger an emergence and possible re-infestation if hosts are present.

Any potential host can re-infest a household. Interaction with stray animals or areas where stray animals congregate can infest an untreated pet and could bring fleas into or around your home. If your house is raised, stray animals taking refuge underneath can also infest a home. Covering vent openings to the crawlspace will help prevent stray animals from sheltering under your home.

Controlling fleas on both indoor and outdoor pets is a standard and straight-forward process thanks to veterinary science. Spot formulations, collars, shampoos and dips are all methods that kill fleas on pets and prevent infesting your home. Fleas treatments must follow the instructions on the package and treatments to pets should be done in consultation with a veterinarian. Severe infestation may require the services of a qualified pest control operator.

References

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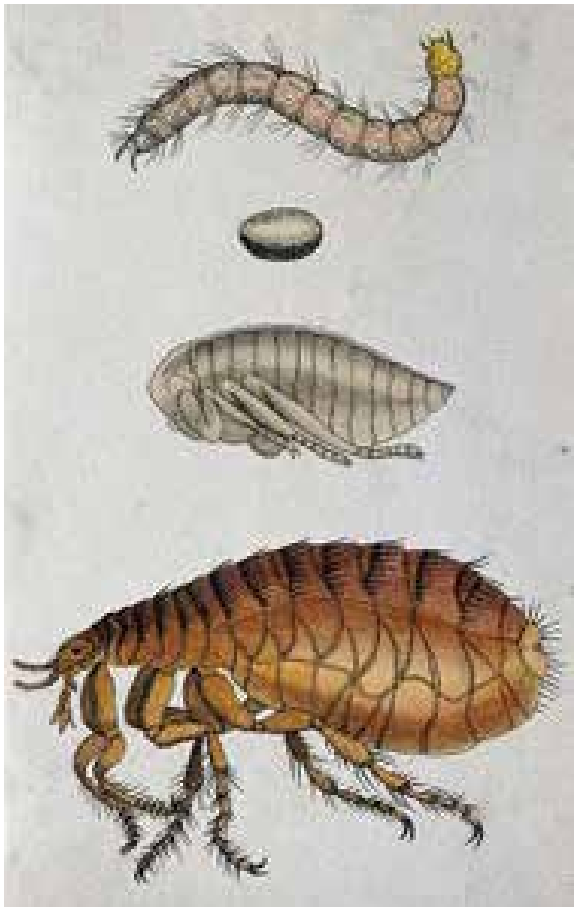

Life stages of fleas (Wellcome Collection Gallery (2018-03-21) Creative Commons 4.0).

Contact Us

For advice about arthropod identification or diagnosis, contact the LSU AgCenter Department of Entomology. Reach the department through the Contact Us webpage:

https://bit.ly/36c4awm

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