

FACT sheet

Fleas

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EXODUS PEST CONTROL

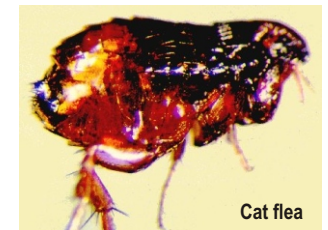
Fleas

Fleas are highly specialised bloodsucking parasites belonging to the order of insects called Siphonaptera, which means "wingless siphon". They have a formidable reputation of claiming more victims than all the wars ever fought, as a result of the "bubonic" (Black Death) plague they spread throughout the world in the 14th century causing the deaths of over 200 million people. Now, these insects are better known for their irritation and pest status worldwide.

Fleas are light brown to mahogany in colour and roughly oval shaped. Their laterally flattened appearance enables them to quickly move through the host's hair. Measuring 2-8 mm in length, the adults are entirely covered with a series of bristles and combs that assist them in clinging to the host. The small head is equipped with sawing and sucking mouthparts, and two tiny simple eyes. To aid in the detection of a host, fleas possess two short antennae on the head that are sensitive to stimuli including heat, vibration, traces of carbon dioxide and changes in air currents and shadows. The hind pair of legs, that are well developed for jumping, enable fleas to be propelled 10-30cms, either to make contact with a host or avoid a threatening situation.



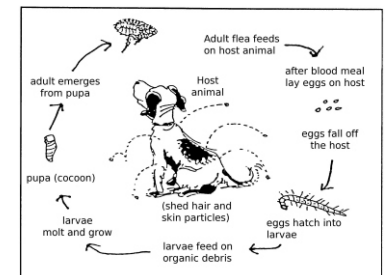
Cat flea



Cat flea

Lifecycle

Both female and male fleas rely on blood for their nutrition, but can survive for several months without it. When a flea blood feeds, it will crouch low to penetrate the host's tissue with a sawing motion of the mouthparts. A small amount of anti-coagulant is injected with the saliva, to permit easy siphoning of the blood. Fleas will bite only accessible parts of the body and clustered bites on the lower limbs are diagnostic. Blood feeding may be interrupted, and fleas will often probe several times before repletion which can increase their total body weight by 30%. Each female flea uses her blood to nourish developing eggs, and will deposit up to 4 eggs after each blood meal; most females will lay at least 100 eggs within a life cycle of several months. The eggs are oval, white to cream in colour and measure 0.5mm in length; they can hatch within 1 week, but this will be dependent on prevailing conditions as



larvae are extremely sensitive to desiccation. When the maggot-like larvae emerge, they are sparsely covered in hair and have no legs but are capable of moving rapidly in search of food, which consists mainly of skin scales or undigested blood excreted by the adults. Within a 1-3 week period, the larvae will grow and undergo 4 moults prior to pupating in a silken cocoon which they spin. The adult fleas emerge from the pupal case in 1-2 weeks but can remain dormant in their cocoons for several months depending on the availability of food and conditions. Often the emergence of adults from the pupal stage is triggered by vibrations, which occasionally happens on entering an unoccupied home of previous pet owners.



Human flea

Some fleas can attack a range of hosts, and their ability to transfer from one host to another allows for the possible transfer of pathogens including viral, bacterial and parasitic diseases. The main flea species that attack humans include the cat flea *Ctenocephalides felis*, the dog flea *C. canis*, and the human flea *Pulex irritans*. The latter two species are relatively rare. The common cat flea is found on both cats and dogs, and is the species usually identified in attacks on humans and usually responsible for flea plagues. Cat fleas are the intermediate host for the dog and cat tapeworm (*Dipylidium caninum*) which is easily transmitted to humans. The only flea-borne disease that currently occurs within Australia is murine typhus; this is transmitted from rats to humans by particular rat fleas, typically *Xenopsylla cheopis*, and although it has been widespread, it is uncommon.

The continual biting activity of fleas alone causes a great deal of irritation and distress to humans, especially during flea plagues. Reactions to the flea's saliva are often delayed, with the formation of a wheal surrounding each puncture site within 5-30 minutes of the bite, accompanied by intense itching. Within 12-24 hours each wheal may progress to a small lesion or vesicle. The onset of symptoms in sensitized individuals often develops much later, and the initial reaction may become apparent only after 12-24 hours. Fleas are the major cause of papular urticaria, particularly on the legs of children, and continual scratching may lead to secondary infections.

Treatment and Control

With the increase in carpeted homes, central heating and number of household pets, flea control is a continuing problem for pet and home owners. The prolonged periods of warm, humid weather in the summer months provide ideal conditions for fleas to flourish. Typically, concentrations of the immature stages of fleas (eggs and larvae) will be found in areas where pets feed and rest, and control measures should be targeted at any such areas, in addition to their housing, basket, blankets and the pets themselves. Regular vacuuming of floors and washing of pets and bedding with an insecticidal preparation will aid in control. Newer products with insect growth regulators are able to be applied by your EXODUS Pest Control Technician in combination with a plan to bring these pests under control. Continual re-infestation of fleas in homes may indicate the source has not been detected and may require intervention by your EXODUS Pest Control Technician.