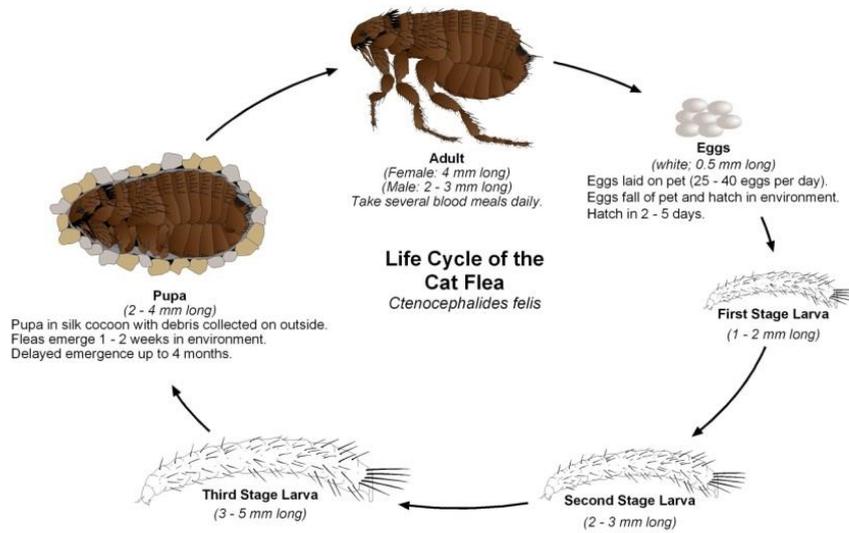


# Fleas



## Cat Flea

(*Ctenocephalides felis*).



### Appearance

The cat flea adult is about 2.5mm long and the body is laterally flattened and wingless. The colour is brownish black to black, but reddish black when full of blood. The female's head is twice as long as high. The cat flea has both genal and pronotal combs, each comprising of 16 spines. The larvae are about twice the adult length 3-5.2mm whitish in colour, slender, eyeless and legless.

### Biology

Females lay 4-8 eggs after each blood meal, laying 400-500 eggs during her lifetime. The eggs are smooth and are deposited between hairs or bedding material, hence eggs laid on animals normally fall off or are shaken off and are found in cracks and crevices where animals sleep or where they rest. Eggs usually hatch within 2-12 days.

Flea larvae move around and have chewing mouthparts and feed on organic debris but almost always require dried faecal blood in order to complete development. They do not bite but feed on adult flea faecal blood. Larvae require relative high humidity and go through roughly three instars. The last instar then spins a cocoon. The pupal stage lasts between 4-14 days or up to one year in unfavourable conditions.

Adults emerge when the cocoons are damaged or when there is an increase in temperature or when there are vibrations. Adults need a blood meal on the second day after they have emerged but they can live on their body fats for several months. Adults normally live only for a few days but can survive up to a year.

### Dangers

Cat fleas can transmit plague.

### Habits

Fleas can jump up to 15cm high and can easily be transported in clothes, shoes and animals. Fleas can attack people coming back from holiday because of the vibrations caused by walking.

### Location

Fleas are typically found in areas where animals rest and sleep and along areas where they run and walk because these are the areas where eggs and adult faecal blood accumulate. Larvae will be found in the same areas but specifically in moist areas which is needed for survival. Cat fleas are often found on other hosts including rodents.

### Control

Wild animals must be stopped from entering the premises. If the pets have fleas they must be treated or dipped first and this must be done by a vet or the homeowner and not the pest control operator.

### Indoor control

All carpets must be vacuumed before treatment to pick up eggs, larvae and adults as the mechanical action will remove most of the infestation. No vacuuming after treatment as this will remove your pesticide.

Treat the complete inside of the structure and the whole outside area with a complete blanket spray concentrating on the sleeping areas like kennels and the areas where the animals rest during the day.

Always remember that fleas hitch-hike between inside and outside areas so the total area must be treated otherwise you will get re-infestation.

## Dog Flea

(*Ctenocephalides canis*)



Dog flea derives their name from the fact that they live on dogs and sometimes rabbits as well.

### Appearance

Adult dog fleas are 2.5mm and the body is laterally flattened and wingless. Colour is brownish black to black and reddish black when a blood meal has been taken. Mature larvae are 3-5.2mm long and are whitish, slender, eyeless and legless with a well-developed head.

### Biology

Females lay 4-8 eggs after each blood meal. The eggs are smooth and are deposited between hairs or bedding material, hence eggs laid on animals normally fall off or are shaken off and are found in cracks and crevices where animals sleep or where they rest. Eggs usually hatch within 2-12 days. Flea larvae move around and have chewing mouthparts and feed on organic debris but almost always require dried faecal blood in order to complete development.

They do not bite but feed on adult flea faecal blood. Larvae require relative high humidity and go through roughly three instars. The last instar then spins a cocoon. The pupal stage lasts between 4-14 days or up to one year in unfavourable conditions.

Adults emerge when the cocoons are damaged or when there is an increase in temperature or when there are vibrations. Adults need a blood meal on the second day after they have emerged but they can live on their body fats for several months. Adults normally live only for a few days but can survive up to one year.

### Dangers

Dog fleas are known to be vectors of disease organisms causing plague and murine typhus.

### Habits

It is not necessary to have pets as these fleas can hitch-hike because they can jump up to 15cm high. Fleas can attack people coming back from holiday because of the vibrations caused by walking.

### Location

Fleas are typically found in areas where animals rest and sleep and along areas where they run and walk because these are the areas where eggs and adult faecal blood accumulate.

Larvae will be found in the same areas but specifically in moist areas which is needed for survival. Dog fleas prefer humid areas and are normally found indoors.

### Control

Wild animals must be stopped from entering the premises. If the pets have fleas they must be treated or dipped first and this must be done by a vet or the homeowner and not the pest control operator.

### Indoor Control

All carpets must be vacuumed before treatment to pick up eggs, larvae and adults, as the mechanical action will remove most of the infestation. No vacuuming after treatment as this will remove your pesticide.

Treat the complete inside of the structure and the whole outside area with a complete blanket spray concentrating on the sleeping areas like kennels and the areas where the animals rest during the day.

# Human Flea

(*Pulex irritans*)



## Appearance

Adults are 2.5-3mm long. Body is laterally flattened. The head is rounded in the front with ocular bristle inserted below the eye and does not have general combs. Human flea has piercing-sucking mouthparts and is reddish brown in colour. Mature larvae are 4.6-6mm long with a well-developed head.

## Biology

Females lay 4-8 eggs after each blood meal. The eggs are smooth and are deposited between hairs or bedding material, hence eggs laid on animals normally fall off or are shaken off and are found in cracks and crevices where animals sleep or where they rest.

Eggs usually hatch within 2-12 days. Larvae usually feed on organic matter such as droppings from adult fleas and faces of animals but can easily feed on crushed rodent droppings. Adults may live more than two years

## Location

The human flea is normally found amongst humans where there are poor sanitary conditions but may also infest pets and domestic animals. They can also serve as intermediate host of the dog tapeworm. Human fleas are only found in warmer parts of the world.

## Habits

Besides humans the human flea may infest cats, dogs and other animals specifically pigs. Most problems with the human flea are found in rural areas where infestation starts with farm animals and is then brought into human dwellings. Bites of human fleas are normally over the whole body where dog and cat fleas normally bite the lower leg areas. Human fleas are often responsible for dermatitis.

## Control

Wild animals must be stopped from entering the premises. If the pets have fleas they must be treated or dipped first and this must be done by a vet or the homeowner and not the pest control operator.

## Indoor Control

All carpets must be vacuumed before treatment to pick up eggs, larvae and adults as the mechanical action will remove most of the infestation. No vacuuming after treatment as this will remove your pesticide.

Treat the complete inside of the structure and the whole outside area with a complete blanket spray concentrating on the sleeping areas like kennels and the areas where the animals rest during the day.

## Rat Flea

(*Xenopsyllacheopsis*)



This flea derives its name from the fact that it is commonly found on the Norway rat

### Biology

Females lay up to 8 eggs after each blood meal. Eggs are sticky but usually fall off the host or are deposited in the nest. Larvae usually feed on organic matter including droppings from adult fleas but cannot develop solely on a blood diet. They can also develop successfully on grain stored in bags. They need moisture for development.

### Habits

Unfed adults are attracted to light but fed adults shun light. Adults can identify a suitable host from as far as 30cm. Adults can jump as high as 24cm horizontally.

### Dangers

The flea's greatest importance is that it is a principal vector of bubonic plague and murine typhus from rats to humans

### Control

Wild animals must be stopped from entering the premises. If the pets have fleas they must be treated or dipped first and this must be done by a vet or the homeowner and not the pest control operator.

### Indoor Control

All carpets must be vacuumed before treatment to pick up eggs, larvae and adults as the mechanical action will remove most of the infestation. No vacuuming after treatment as this will remove your pesticide.

Treat the complete inside of the structure and the whole outside area with a complete blanket spray concentrating on the sleeping areas like kennels and the areas where the animals rest during the day.