

## **LOS ANGELES UNIFIED SCHOOL DISTRICT PEST OF THE MONTH PROGRAM NO. 11**

### **FLEAS**

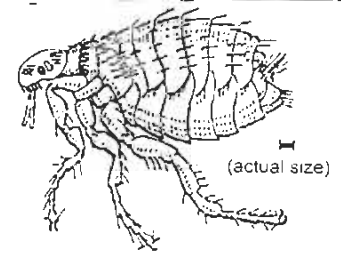


Figure 1. Adult flea.

### **INTRODUCTION**

In southern California, the cat flea is the most common flea pest of cats, dogs, opossum, skunks, raccoons, wild cats, and some other warm-blooded animals. The dog flea is rare in California and it has been found on canines such as coyotes. Fleas found on either cats or dogs in California are most likely cat fleas.

### **IDENTIFICATION**

Adult fleas (Fig. 1) are small reddish-brown to black wingless insects that are compressed from side to side which makes it easy for them to move about between animal hairs. They have piercing-sucking mouthparts through which they obtain blood meals from their hosts. Adult fleas have large hind legs that allow them to jump onto hosts fairly easily.

### **LIFE CYCLE**

Female cat fleas usually remain on their host most of the time. Eggs are laid by the adult fleas on infested animals but they fall off the animals and land on surfaces below such as bedding, in animal nests, and in carpeting in the animal's environment. The eggs hatch into whitish wormlike larvae (Fig. 2) which feed on pet dander and dried blood that is excreted by the adults. Larval development is generally restricted to protected places where there is at least 75% relative humidity. Larvae are usually found where the host animal spends a lot of time such as pet bedding and animal nests. The larval period lasts from 5 to 15 days at 70° to 90° F. They will then construct a small silken cocoon in which to pupate. The cocoon is sticky and it will pick up debris from the environment. Fleas in the pupal stage are difficult to kill with chemicals because they are protected by the cocoon and the debris that adhere to them. Pupae will eventually molt to become adults. Adult fleas are known to remain in the cocoon for some time until warm temperatures and mechanical pressure, caused by walking on carpets, vacuuming etc., stimulate the fleas to emerge. At room temperature, the entire life cycle can be completed in about 18 days. An adult cat flea generally lives about 20 to 30 days on the host and it is the only stage that feeds on blood. Fleas may be found on animals throughout the year, but their numbers tend to greatly increase in spring and summer.

### **PROBLEMS ASSOCIATED WITH FLEAS**

The cat flea is suspected of transmitting murine typhus to humans, however, it's primary importance is in its annoyance to people and pets. Flea bites are the major nuisance. Bites tend to be concentrated on the lower legs but can occur anywhere on the body. The bite

typically consists of a small, central red spot surrounded by a red halo, usually without excessive swelling. Flea bites usually cause minor itching but may become increasingly irritating to people who are sensitive. Some people and pets suffer from flea bite allergic dermatitis, characterized by intense itching, hair loss, reddening of the skin, and secondary infection. Just one bite may initiate an allergic reaction, and itching may persist up to 5 days after the bite. Cat fleas may also serve as intermediate hosts of dog tapeworm. Cats or dogs may acquire this intestinal parasite while grooming themselves by ingesting adult fleas that contain a cyst of tapeworm.

## **FLEA MANAGEMENT**

### **SANITATION**

Thoroughly and regularly clean areas where adult fleas, flea larvae, and flea eggs are found. Vacuum floors, rugs, carpets, upholstered furniture, and crevices around baseboards and cabinets daily or every other day to remove flea eggs, larvae, pupae, adults, and food sources. Vacuuming is very effective in picking up adults and stimulating preemerged adults to leave their cocoons. Flea eggs can survive and develop inside vacuum bags and adults can escape from there, so seal the bags in plastic trash bags and place them in a covered trash container outdoors.

### **INDOORS AT SCHOOLS**

The statement that you cannot have a flea problem without having a host animal problem is essentially true. However, LAUSD pest management personnel have often encountered flea problems inside district buildings where the fleas were transported in on people walking through flea infested areas on their way to school or bringing fleas on their clothes to school from their infested residences. Humans are not preferred hosts of the cat flea but fleas desperate for a blood meal will readily jump on people and be carried long distances on people's clothing. In southern California, it is not uncommon to find fleas in cars that never had pets in them.

If you suspect that you may have a flea problem indoors, a simple way to check for adult fleas is to wear long white socks pulled up to the knees and walking slowly through an infested area. If fleas are present, they will jump onto the socks where they will be easily seen.

### **FLEA PROBLEMS ON SCHOOL PROPERTY**

The overwhelming majority of flea problems encountered on school property are caused by domestic and feral cats. Dogs, and other wild animals such as skunks, raccoons, and opossums, occasionally contribute to this problem. These animals can affect human health and safety in the following ways:

**ZOONOSSES** are diseases of animals that may be transmitted to humans through direct contact with infected animals or their excrement (feces, urine, saliva, hairs, etc.) and in some circumstances by arthropod vectors that live on animals. These diseases can be caused by viruses, bacteria, fungi, and various animal parasites. Some examples are:

- Skin infections caused by various bacterial organisms
- Ringworm
- Gastrointestinal infections such as Salmonella and Campylobacter
- Intestinal parasites such as tapeworm, roundworm and giardia
- Toxoplasmosis
- Cat scratch fever
- Plague – uncommon but cases have been recorded in southern California
- Rabies – uncommon but possible

**Associated serious problems are:**

- Bites and scratches which can result in serious injury and in zoonoses
- Fleas, ticks, mites, which can bite and cause diseases
- Excrement, urine, fur/hairs, can be laden with parasites and bacteria resulting in zoonoses.
- Flies are attracted to animal feces further complicating the situation
- Allergies to animals and their dander

**Wild animals, including feral cats, have a multitude of problems on their own. Some of these are:**

- Uncontrolled breeding resulting in over population
- Malnutrition
- Injuries, sores, wounds, etc.
- Animal diseases which are not spread to humans
- Ectoparasites such as fleas, mites, ticks
- Being hit by vehicles

**Problems existing in wild animals can be transmitted to domestic pets where these animals interface.**

**Wild animals, including feral cats and dogs, pose serious health and safety threats to students, administrators, school employees, and volunteers, etc. on school property.**

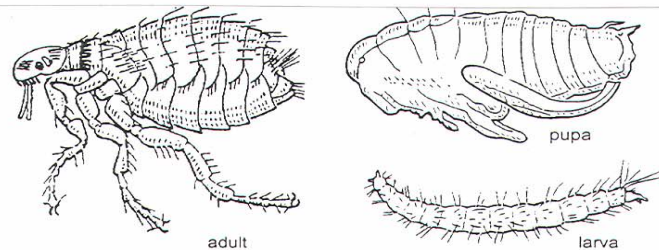


Figure 2. Life stages of the flea (egg not shown).

**In view of the information presented in this paper, it is extremely important that we do not encourage domestic and feral cats, dogs, and any other wild animals on school property by providing them with food, water, and shelter.**

No one understands and sympathizes with the plight of these animals more than I do. We have to continue to try to find ways to deal with these animals in the most humane manner possible. However, the health and safety threat posed by these animals and their accompanying ectoparasites to large numbers of students and employees on LAUSD school grounds far outweigh deep sympathies we may have for them. Again, please do not facilitate and accommodate these animals on school property. Thank you for your cooperation on this important matter.

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