

A Comprehensive Explanation in dealing with fleas
Particularly the Cat Flea, *Ctenocephalides felis* (Bouche)

Brought to you by StopTrax, & KittyMaid, The Cats Meow in Pet Accessories.

*Dedicated to my good Friend Alex Selenow,
who will surpass our current trials and tribulations!
That, and the fact that he told me about Flea combs!*

THE DISCLAIMER

The content contained herein is based on personal experience, and research collected from the internet. It is solely the opinion of the author and presented by KittyMaid / StopTrax.

It is not for resale,

It is not provided as medical advice, that of a Veterinarian or that of a medical researcher.

There is no agenda here other than to share the knowledge that was borne of personal experience with the hope that it may prove useful to other folks experiencing the same difficulties with fleas.

Hobbes will tell you:

I am glad if you find it useful.

If there is some error in content feel free to contact the site.

If you don't like it because I am not selling your brand of flea remedy:

Well... too bad.

Personally, I have always taken the position with regard to drugs and chemicals that
"Short of having Anthrax and needing Cipro, I much prefer to avoid the entire situation"

I am not a big fan of drugs or chemicals.

They have a tendency to have adverse after effects.

The point being, "If you can do without, so much the better!"

That being said, a good flea shampoo, which has insecticides, is an integral part of the program of flea abatement. (I have used Sergeants)



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Observations

For anyone who has seen the movie *Aliens* directed by Ridley Scott, you begin to get the sense of just how pernicious and difficult a flea infestation can be. As stated in the reference material:

"Just 10 female fleas under the right conditions can multiply to over a quarter of a million different life stages in less than 30 days".

Fortunately, if you have found this guideline, unlike the *Aliens*, there is a procedure for readily abating a flea infestation, and keeping any future infestation in check.

As in all things, prevention is the best cure.

KNOW THY ENEMY

Fleas are known to have contributed to the bubonic plague in Europe. The rat flea helped transmit the plague wiping out large populations of people in Europe.

If this helps motivate you to start with the difficult task of managing and abating a flea infestation, I am glad to provide that daunting little fact.

The fact is, in and of itself, one flea is not that big of a deal, what happens after there is one flea is an entirely different matter.

Affects of fleas on your cat lead to worms, dermatitis, and a host of other bad things that we can all live without.

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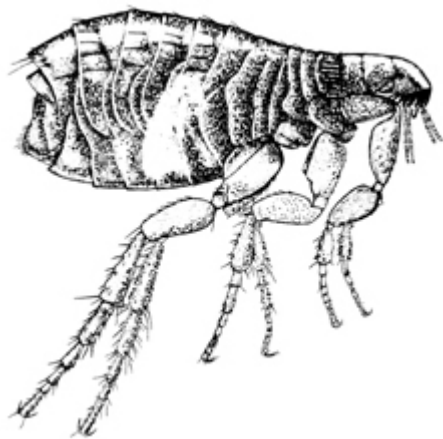
Ohio State University Extension Fact Sheet

Entomology

1991 Kenny Road, Columbus, Ohio 43210-1000

Identification

Adult fleas are about 1/16 to 1/8-inch long, dark reddish-brown, wingless, hard-bodied (difficult to crush between fingers), have three pairs of legs (hind legs enlarged enabling jumping) and are flattened vertically or side to side (bluegill or sunfish-like) allowing easy movement between the hair, fur or feathers of the host. Fleas are excellent jumpers, leaping vertically up to seven inches and horizontally thirteen inches. (An equivalent hop for a human would be 250 feet vertically and 450 feet horizontally.) They have piercing-sucking mouthparts and spines on the body projecting backward. Also, there is a row of spines on the face known as a genal comb. Spine I (first outer spine) is shorter than Spine II (next inner spine) in dog fleas. Both spines are about the same length in the cat flea. The rabbit flea has a vertical genal comb with blunt spines. The genal comb is absent in both rat fleas. Eggs are smooth, oval and white. Larvae are 1/4-inch long, slender, straw-colored, brown headed, wormlike, bristly-haired creatures (13 body segments), that are legless, have chewing mouthparts, are active, and avoid light. Pupae are enclosed in silken cocoons covered with particles of debris.



Adult Cat Flea



Larva and Egg

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Life Cycle and Habits

Fleas pass through a complete life cycle consisting of egg, larva, pupa and adult. A typical flea population consists of 50 percent eggs, 35 percent larvae, 10 percent pupae and 5 percent adults. Completion of the life cycle from egg to adult varies from two weeks to eight months depending on the temperature, humidity, food, and species. **Normally after a blood meal, the female flea lays about 15 to 20 eggs per day up to 600 in a lifetime usually on the host (dogs, cats, rats, rabbits, mice, squirrels, chipmunks, raccoons, opossums, foxes, chickens, humans, etc.). Eggs loosely laid in the hair coat, drop out most anywhere especially where the host rests, sleeps or nests (rugs, carpets, upholstered furniture, cat or dog boxes, kennels, sand boxes, etc.). Eggs hatch in two days to two weeks into larvae found indoors in floor cracks & crevices, along baseboards, under rug edges and in furniture or beds. Outdoor development occurs in sandy gravel soils (moist sand boxes, dirt crawlspace under the house, under shrubs, etc.) where the pet may rest or sleep. Sand and gravel are very suitable for larval development which is the reason fleas are erroneously called "sand fleas."**

Larvae are blind, avoid light, pass through three larval instars and take a week to several months to develop. Their food consists of digested blood from adult flea feces, dead skin, hair, feathers, and other organic debris. (Larvae do not suck blood.) Pupa mature to adulthood within a silken cocoon woven by the larva to which pet hair, carpet fiber, dust, grass cuttings and other debris adheres. In about five to fourteen days, adult fleas emerge or may remain resting in the cocoon until the detection of vibration (pet and people movement), pressure (host animal lying down on them), heat, noise, or carbon dioxide (meaning a potential blood source is near). Most fleas over winter in the larval or pupal stage with survival and growth best during warm, moist winters and spring.

Adult fleas cannot survive or lay eggs without a blood meal, but may live from two months to one year without feeding. There is often a desperate need for flea control after a family has returned from a long vacation. The house has been empty with no cat or dog around for fleas to feed on. When the family and pets are gone, flea eggs hatch and larvae pupate. The adult fleas fully developed inside the pupal cocoon remains in a kind of "limbo" for a long time until a blood source is near. The family returning from vacation is immediately attacked by waiting hungry hordes of fleas. (In just 30 days, 10 female fleas under ideal conditions can multiply to over a quarter million different life stages.)

Newly emerged adult fleas live only about one week if a blood meal is not obtained. However, completely developed adult fleas can live for several months without eating, so long as they do not emerge from their puparia. Optimum temperatures for the flea's life cycle are 70°F to 85°F and optimum humidity is 70 percent. The cat flea is the most common flea in Ohio which feeds on a wide range of hosts.

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ABATEMENT

Now that we know who we are dealing with, its easy to see that we can break the flea life cycle with a bit of persistence and a lot of cleaning

FLEA FIGHTING EQUIPMENT CHECKLIST

1. A good flea comb, for about 5 dollars can be had at the supermarket, pet store, Wal-Mart or any other place that has a pet section.
2. A 1 quart container to place the combed fleas (fill $\frac{1}{4}$ of the way with water and bleach based product.
3. Clorox clean up, or some other kind of bleach based cleaner
4. Lotsa of new vacuum bags
5. A good vacuum cleaner to put the bags in

FLEAS DO NOT DO WELL IN WATER!!!

6. Shampoo, I use Sergeants but, as in all commercial products, anything that will
Get rid of the flea dirt; reduce the fleas, larvae and eggs. Any shampoo will do to slow things to a crawl, so Head and Shoulders will do in a pinch. Dish soap, like Dawn is less of a good choice as it strips the cat's skin of essential oils, and can leave the cat with dry skin

7. If you have carpets, flea killer carpet powder is a good idea. I seem to be having success with **Enforcer** which I picked up at Wal-mart.



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PROCEDURE FOR FLEA ABATEMENT

1. CLEAN THE CAT!

Before you give the cat a bath, you should seriously consider using the flea comb

1a. FLEA COMBING PROCEDURE

Get the Flea comb (see pix right), and the Quart container.

Fill the quart container a quarter of the way with a 50-50 mixture of water and Clorox cleanup.

Note: Clorox bleach or Dish soap will do in a pinch, but the bleach based products really do a nice job of flea termination, Fleas don't do well in water, but they can swim. If you just use water, the surface tension of the water is enough that the flea can swim to the edge of your container, climb out and leap to its freedom, the cat, or your carpet.



If you add some soap to the mixture, the surface tension is far less and the fleas tend to sink as they break the surface tension while doing their best to swim or jump for freedom. You may hear faint yelling from the container, as the fleas are drowning. Don't feel bad, this is a good thing.

Start using the flea comb on the cat. If there are fleas, on the comb, **instantly get them into the container with the mixture**, as the fleas will flee the comb, back to the cat. Don't get the flea comb wet.

This procedure gets easier with practice, and practice you will have. Repeat the process, until you can not get any more fleas on the comb or the cat has had enough. I recommend doing this several times a day.

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The object of this exercise is to keep the fleas to a minimum, and keep the fleas from having a blood meal, and laying eggs. Fleas are very difficult to crush and incredibly quick, don't be surprise if a few escape, this is going to be an ongoing effort. Persistence pays.

Fleas do not have opposing thumbs so as a species Humans seem to have the advantage.

RECOMMENDED PREPARATION AND PROCEDURE FOR CAT BATH

Giving a cat a bath at anytime is challenging at best. There are some cats that have adapted to getting a bath. If you don't overdo it, the cat is better off for regular baths and your house will be cleaner and healthier for the ordeal. It should be noted that most cats don't mind the bath. **In my experience, any domestic feline will object loudly to getting wet and getting dry.** I personally believe it has something to do with the indignity of the situation, but I strongly recommend the following procedure. I urge you to follow it closely:

1. Trim the cats claws, this will save much bleeding and a few shower curtains
2. Install a shower head that has the hose so you can hold the cat in one hand and the shower head in the other, this way you can power wash the cat. (see pix)
3. A wet soapy cat has a handle at the nape of the neck, this sounds mean but you should know that is how kittens are carried by their mothers. The grip actually releases endorphins in the cat causing it to calm down and relax, the cat will still be plotting to get you later, but it will be much mellower about it.
4. If you don't have an enclosed shower stall, you may want to make this a two person operation.

Have ready everything you will need, for the operation.
Shampoo, towels, a good shower brush, (see pictures)
which will help get the soap out of the cat's fur.

5. Make sure the litter box is closed off; otherwise you will need to repeat the operation.
6. If you like your shower curtain, get it out of harms way! If not have a new shower curtain ready.
7. If you have sensitive hearing, get ear plugs, the cat can get very loud!
8. Plan on getting wet, you may want to put on a bathing suit.



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9. Understand the cat knows what you are planning. Once you get the cat in the bathroom, be sure the door locks.
10. Once you are fully prepared, and the cat's claws are trimmed its time to do the deed.
11. Make sure the water is not too hot or too cold. If the water temp is not comfy, this process gets far more difficult, a cold or scalding cat bath, will have spectacularly bad results. Just think about how you would feel in a cold shower!!
12. With the right water temperature get the cat very wet.
13. Apply the shampoo, and scrub vigorously. At this point the cat will enjoy the scrubbing and attention regardless of the indignity of being wet.
14. Rinse; make sure at all time not to get water in the cats face, as they just don't care for it. If you can avoid the water stream from the shower in the cats face, you will have much better results.
15. If you are using a flea shampoo read the label and follow the instructions, the shampoo has insecticides and should be treated with caution.
16. Once the cat is thoroughly rinsed, it is now time for the drying operation.
17. With your hands or the shower brush (pictured above) get as much water off the cat as possible; this will save important paperwork from being ruined as the wet cat will find anything important to rest on while it is drying itself.
18. Once the cat is out of the tub. Place the towel over the top of the cat, and pick the cat and the towel up, like you would a baby. Dry the cat as best you can. You may need two towels for a better dry cycle, the first towel will be pretty wet.
19. important note: Check the towel for fleas, make sure they going into the container or the toilet, I have seen fleas climb up out of the sink drain, so make sure you do your best to get any fleas you can find gone or just take the towel and put it in a plastic bag until it gets into the laundry.
20. Handling fleas in your fingers should not pose a real problem, assuming you can get a hold of the litter monsters.
21. Are you sure the litter box is closed off??? Better go check before the cat gets there.
22. After the cat gets done being offended, he will realize that he is better off for the process and not plot so hard to get even.

ONTO EVERYTHING ELSE IN YOUR HOUSE.

Change the cat litter regularly; fleas love sand and loose aggregate and cat litter is a major place for cat fleas to breed like mad.

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I strongly suggest making layers in the cat box

For that you will want to get a number of cat litter box liners for the box and make layers of cat litter.

(See pix) Don't leave a layer for more than two days, (which is the minimum amount of time for flea eggs to hatch).

Vacuum the floor regularly

Flea power the carpets

Change vacuum bags regularly as the bag will breed fleas

Bleach and treat the baseboard

Wash all your clothes, make sure you put the washer on the heavy cycle with full load setting, fleas don't do well in water and soap and after about 5 minutes they, the eggs and larvae are done.

Anything like pet bedding, just dump in the garbage in plastic bags
Some things are just not worth salvaging

Clean everything as well as possible

CLEAN THE CARPET AND THE HOUSE

CLEAN ANYTHING ELSE THAT HAS BEEN AROUND THE CAT

See links to articles I found on the internet

