

# The Bark & Mew

Updates & Information from Falconbridge Animal Hospital & Village Veterinary Hospital  
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## Flea Life Cycle

**The Egg** - At any given time about one third of the flea population in someone's home is in the egg stage. The adult female flea lays up to 50 eggs daily. The eggs are laid on the host where they fall off to hatch in the environment. Eggs incubate best in high humidity and temperatures of 65 to 80 degrees Fahrenheit. (18.3-26.6 Celsius).

**The Larvae** - At any given time about 55% of the fleas in someone's home are in the larval stage. Larvae are like little caterpillars crawling around grazing on the flea dirt that is generally in their vicinity. Flea eggs and flea dirt both fall off the host. When the eggs hatch, there is a bounty of food prepared lovingly by all the host's fleas waiting for the hatchlings. The time between hatching and pupating (i.e., the time spent in the larval stage) depends on environmental conditions. It can be as short as 9 days. Larvae are killed at 95 degrees. This means that they must live in some area (like shady outdoor areas or indoors) where they are protected from summer heat.

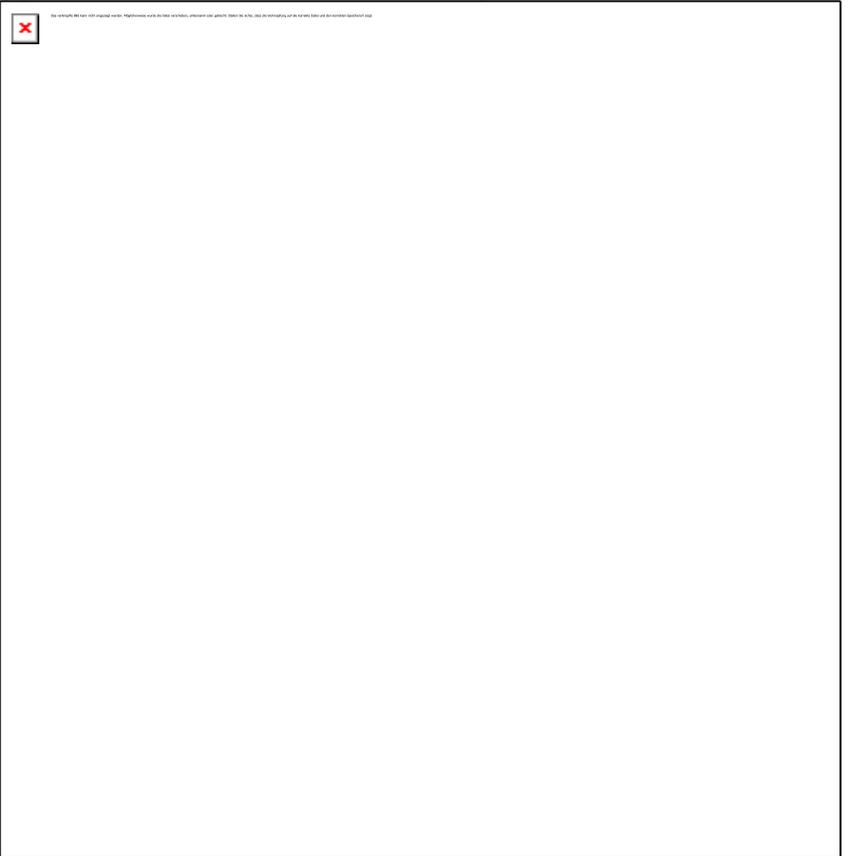
**The Pupae** - By this life stage most young fleas have been killed off by an assortment of environmental factors. Only 8% make it to the pupal stage but, once they have spun cocoons, they are nearly invincible. The cocoon is sticky and readily picks up dust and dirt. Inside the

developing cocoon, the pupa is turning into the adult flea that we are familiar with. They are especially protected under carpet, which is why carpet has developed such a reputation as a shelter for fleas. The pupa can remain dormant in its cocoon for months, maybe even up to a year as it waits for the right time to emerge.

**The Unfed Adult Flea** - After the pupa develops, it does not automatically emerge from its cocoon. Instead, it is able to remain in the cocoon until it senses a nearby host. The mature pupa is able to detect the vibrations of an approaching host, carbon dioxide gradients, and sound and light patterns. When the mature pupa feels the time is right, he emerges from the cocoon, hungry and eager to find a host. An unfed flea is able to live for months without a blood meal but during that time it is aggressively using all its powers to locate a host.

Once it finds a host, it will never purposely leave the host.

**The Fed Flea** - After the adult flea finds a host and takes its first blood meal, metabolic changes occur that alter the flea forever. The flea is now called a fed flea and, if separated from its host, will die in only a few weeks without a blood meal. The female flea begins to produce eggs within 24 to 48 hours of her first blood meal and will lay eggs continually until she dies. The average life span of the adult flea is 4 to 6 weeks, depending on the grooming abilities of the host.



On average, the time period from egg to adult flea is about 3 weeks.

**Treating flea infestations:**

Fleas can be a rather hardy and pesky parasite to deal with. That is why preventing fleas is much easier than treating them. However, if your pet has become infested, the best way to win the war against fleas is to direct treatment at more than one of the life stages of the flea. Because there are four life stages of the flea, it is important to know how to break this life cycle in more than one place. This two-step approach provides the most rapid control and the least resistance to flea control agents in future flea generations. Realize also that you will be finding fleas for 1-2 months and this does not indicate product failure!

Products Carried/Recommended by Falconbridge & Village Vets								Many pet medications are guaranteed by the companies that manufacture them when they are purchased through a veterinarian and administered properly.
Product	Cat	Dog	Kills Adult	Growth Regulator	Kills Eggs	Kills Larvae	Kills Ticks	
Frontline Plus	✓	✓	✓	✓	✓	✓	✓	
Revolution	✓		✓	✓				
Comfortis		✓	✓	✓				
Capstar	✓	✓	✓					

*The Host* - Adult fleas are only the tip of the iceberg during an infestation, however, using products to sterilize and kill this stage of the flea can help reduce the numbers dramatically. Products like Frontline Plus use a drug that is an adulticide (kills the adults) and an insect growth regulator which sterilizes the female fleas so that their eggs should not hatch. The product also helps to kill the larval stage. These products should be utilized monthly to help as the larvae and pupae emerge into adult fleas later. If the infestation is bad, then an additional product to help control the adult fleas may be needed particularly if you have a flea allergic pet. Products such as Comfortis or Capstar are fast-acting adulticide treatments. They are pills that start killing the adults fleas within 30 minutes of ingestion. This does not give the female flea time to lay eggs and therefore reduces the flea burden significantly.

*The Environment* - If there is a significant infestation, then treating the environment will be needed. The yard can be treated with spray or by an exterminator. These can be used every 2-4 weeks as needed. Be sure to keep your pets out of the yard until the product has had ample time to dry (at least several hours). Fleas are active year round and can thrive inside warm houses over the colder winter months. The adults flea and microscopic larvae and eggs can be treated with sprays, flea bombs, and mechanical removal. Frequent vacuuming of carpets, floors and furniture helps to reduce the populations of these pests. Dispose of the vacuum bag after a thorough cleaning as the larvae and eggs can continue to thrive within the bag. Frequent washing of pet bedding, toys and other cloth items in regular contact with the pet is suggested. All pets within the house must be treated regardless of their indoor/outdoor status. Repeated treatments may be and are often necessary.

**The Truth About Ticks**

Ticks are commonly referred to as “bugs,” but they are actually eight-legged arachnids like spiders. There are both soft and hard ticks. The soft bodies of soft ticks swell as they feed, while hard ticks are, well, hard, and their bodies do not expand.

The Tick Life Cycle

Most types of ticks require three hosts during a two-year lifespan. Each tick stage requires a blood meal before it can reach the next stage. Hard ticks have four life stages: egg, larva, nymph, and adult. Larvae and nymphs must feed before they detach and molt. Adult female ticks can engorge, increasing their weight by more than 100 fold. After detaching, an adult female tick can lay approximately 3,000 eggs. During the egg-laying stage, ticks lay eggs in secluded areas with dense vegetation. The eggs hatch within two weeks. Some species of ticks lay 100 eggs at a time, others lay 3,000 to 6,000 per batch. Once the eggs hatch, the ticks are in the larval stage, during which time the larvae move into grass and search for their first blood meal. At this stage, they will attach themselves for several days to their first host, usually a bird or

rodent, and then fall onto the ground. The nymph stage begins after the first blood meal is completed. Nymphs remain inactive during winter and start moving again in spring. Nymphs find a host, usually a rodent, pet, or human. Nymphs are generally about the size of a freckle. After this blood meal, ticks fall off the host and move into the adult stage. Throughout the autumn, male and female adults find a host, which is again usually a rodent, pet, or human. The adult female feeds for 8 to 12 days. The female mates while still attached to her host. Both ticks fall off, and the males die. The female remains inactive through the winter and in the spring lays her eggs in a secluded place. If adults cannot find a host animal in the fall, they can survive in leaf litter until the spring.

Tickborne Diseases

Lyme Disease, Tick paralysis, Ehrlichiosis, Anaplasma, Rocky Mountain Spotted Fever  
Protect yourself and your pet by using appropriate preventatives and always check for ticks when you return home from a walk. Ticks especially love pets' ears, armpits, and between their toes. Many tickborne diseases take more

than 12 hours to transmit from tick to host, so by doing regular tick checks you dramatically reduce the chance of infection!