



Fighting Fleas



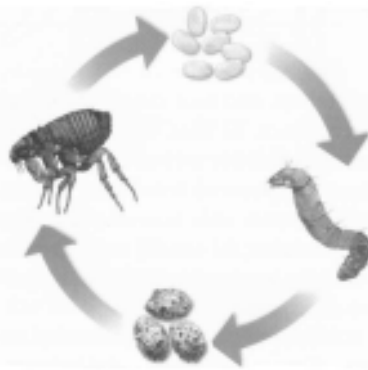
This year pet owners in the southeast have encountered a significant increase in the ongoing battle against fleas.

For many years, a drought persisted in Northeast Georgia. However, this year's early abundance of rain and hot, humid weather has been a boon to fleas.

An appreciation of the flea life cycle is helpful in understanding how best to fight this annoying parasite. Adult fleas jump onto a pet and hope to stay until the day they die - on an unprotected dog or cat this can be up to two months. The pet's body provides everything fleas needs for survival - shelter, food, and companionship! Mom and dad flea eat, drink, and make merry - a big part of which is having babies! One female flea can produce about fifty eggs every day which explains how the flea population can grow so quickly. Flea eggs are very small - a bit smaller than a grain of salt - and difficult to see. Every time our pets shake, scratch, roll over, or simply run around those eggs spill out of the hair coat into the environment (dirt, grass, pine straw, carpets, area rugs, cracks and crevices of the floor, upholstery, bedding, etc.). Wherever the pet goes there will be flea eggs! Of course, eggs do one thing very well - they hatch! Out of each of those little flea eggs emerges a tiny flea larvae. One might think of them as microscopic caterpillars. These little critters are also in the pet's environment - crawling around, gobbling up bits of organic debris. Just like a caterpillar, in time, flea larvae will spin a silken cocoon. Inside that cocoon they pupate and mature into an adult flea. At this point the flea is in the pre-emergent adult stage and can remain dormant for extended periods of time - up to months! What stimulates a mature flea to emerge from the cocoon? It is the movement of a warm blooded animal and the warmth of their body. It is important to understand that in any given home, the adult fleas on the pet only constitute 5% of the total population. 95% of the fleas are not actually bothering the pets;

rather, they are in the environment in the form of eggs, larvae, and pupa quietly thriving.

So, what is the best way to deal with these pests? The fight should have two fronts - the adult fleas on the pet and the immature fleas in the environment. Newer products for use on our pets have revolutionized flea control both in safety and efficacy. The two most popular are the monthly topical compounds - Frontline TopSpot and Advantage. Both of these products are applied to the pet's body to provide thirty days of protection against adult fleas. The manufacturers of these products have a saying, "dead fleas don't lay eggs" and argue that, if you use their product consistently, you can eventually eliminate a flea infestation from home and



The Flea Life Cycle

yard. Experience has shown that no one approach is 100% effective. We recommend those who are aware of a serious flea problem use both a topical AND the once a month flea pill, Program. Program works in a completely different manner and actually breaks the flea life cycle by preventing the maturation of the juvenile fleas in the environment. Good housekeeping can also help in the fight against fleas. Regular vacuuming can pick up flea eggs. Carpeted areas might need steam cleaning as larvae and cocoons are hard to lift out of carpet piling with a vacuum. Setting off flea bombs or using a topical area spray will help as well. These products have two ingredients - an adulticide and an IGR (Insect Growth Regulator). The IGR is the most important component as it arrests larval development. IGR's are not useful outside because they are broken down by sunlight. In previous times it was felt that spraying the

yard with Dursban or liquid Sevin had some benefit against fleas. However, these compounds are primarily adulticidal and have less efficacy on eggs, larvae, and pupae. If there is some residual adulticidal agents in the yard, emergent adult fleas might succumb from hopping around in it after they break out of their cocoons.

All the traditional methods of fighting fleas are still available - flea baths, dips, powders, sprays, collars and combs. They can provide a helpful supplement to the newer techniques mentioned above. Finally, don't give up the fight. While this has truly been the year of the flea in Athens, GA, flea populations tend to peak in the fall and can persist throughout the year in the South. The most important element in this ongoing battle is patience and persistence.

Vector Borne Diseases

Most are aware of the immediate discomfort caused by flea, mosquito and tick bites. They can all cause pain and itching at the site of the bite and, in severe cases, can lead to anemia. However, they can also serve as a more insidious cause of disease. Fleas, mosquitoes and ticks can be one stage in the complex life cycles of other parasites and bacteria. When they bite your dog and cat they can transmit these organisms to your pet. The flea or tick in this case is acting as a vector, bringing disease from one organism to another; thus, this class of disease is called vector borne diseases. These diseases can be deadly and prevention can best be accomplished by protecting your pet from the vector. Sometimes it is possible to prevent the transmitted diseases as well. One vector-borne disease many people are familiar with is heartworm disease. In this case a mosquito is the vector which transmits heartworm disease from one dog to another dog or cat. There are highly effective prophylactics to prevent heartworm disease available for your pet. Animals infected with heartworms are at risk for respiratory disease, heart failure, and sudden death. Ticks are also a major source of disease. Many people have heard of Lyme disease which can also affect humans. Clinical signs can be subtle such as shifting leg lameness, chronic fatigue, and decreased appetite. Lyme disease is on the rise in Georgia.

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Diagnosis can be challenging at times since many more dogs are exposed than have clinical disease. Prevention consists of tick control and vaccination for dogs at high risk. Treatment consists of antibiotics and supportive care.

Ehrlichiosis and Rocky Mountain Spotted



Fever are two other tick borne diseases in dogs. Ehrlichia is found in white blood cells, but through secondary changes will also affect red blood cells and platelets. Affected dogs will often have high fevers, enlarged spleens and low platelet counts. As platelets are critical in blood clot formation, severely affected dogs can experience fatal hemorrhage. Dogs with Rocky Mountain Spotted Fever will often initially show similar clinical signs to Ehrlichiosis. This organism affects the cells that line the blood vessels leading to multiple organ failure. Humans can

contract this disease from ticks as well.

Cats have their own vector borne diseases.

Hemobartonella felis is a blood parasite that is transmitted from cat to cat via the flea. This parasite lives on red blood cell membranes. The body, in trying to clear the parasite, will destroy both normal and infected red blood cells, leading to anemia. This anemia can be life-threatening and treatment consists of medication to kill the parasite and other supportive care. Prevention consists of flea control.

A particularly deadly vector borne disease in cats is cytauxzoonosis. This organism is transmitted from wild cats to house cats via a tick. This disease will cause a high fever and loss of both red and white blood cells, and is almost always acutely fatal. A small number of cats will respond to treatment. Prevention consists of tick control.

As with all diseases, an ounce of prevention is worth a pound of cure. Flea, tick, and mosquito control not only stops the annoyance of painful bites, but decreases the risk of your pet contracting a severe, potentially fatal infection.

Staff News

Welcome!

Shoal Creek's new Office Manager, **Leanne Finnigan**, recently moved from Charlotte, NC. Outside of work, Leanne loves to knit, watch films, and explore Athens. She and her

husband have four cats - Tripolina, Salvador, Ruby, and Scooter. Four new veterinary assistants joined our staff this year. A native of Savannah, **Rebecca Gay** now resides in Athens as she applies to the UGA vet school. She spends her free time riding her horse Curzon and missing the salt water of home. **Ashley Golovan** is in her third year of the pre-nursing program at the University of Georgia and plans to attend the Medical College of Georgia to finish her nursing degree. She enjoys reading and cycling.

Whitney Traylor was born and raised in Athens, Ga. She went to Oconee County High School where she played fastpitch softball. She graduated from UGA with an Animal Science degree and plans to attend veterinary school next year. Outside of work she likes to ride horses, camp and hike.

Lauren Beck is a junior at UGA pursuing a degree in Microbiology. She spends her free time running and hiking, and hopes to go into either veterinary medicine or public health.

Farewell...

Congratulations to **Allison Williges**, **Caterine Wendt**, and **Andrea Leach**. All three left their positions as veterinary assistants at Shoal Creek to begin their studies at the UGA College of Veterinary Medicine. We also bid a fond farewell to **Keith Tillman** who began his third year of study at the Veterinary College.



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Season's Greetings



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