



Ticks¹

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Several species of ticks attack dogs, but cats are rarely infested. Many of the dog ticks are known as wood ticks and infest dogs when they run through the woods or fields. Ticks can also annoy people but humans are not the preferred host.

Ticks are not insects, and are closely related to the spiders. Adult ticks have eight legs. All ticks are parasitic, feeding on the blood of animals.

Of the ticks found in Florida, the brown dog tick, and the American dog tick, are the most troublesome. The brown dog tick rarely bites humans, but infestations are frequently found on dogs and in the home. The American dog tick attacks a wide variety of hosts, including humans, but rarely will infest homes.

Brown Dog Tick

The brown dog tick (Figure 1) seldom attacks animals other than dogs. It is most likely found where dogs are kept in or around the house. The brown dog tick is not known to transmit diseases to humans but may transmit disease among dogs.



Figure 1. Brown dog tick (male left & female right). Credits: J. F. Butler, University of Florida

The adult female tick lays a mass of 1000-3000 eggs after engorging on a dog's blood. These eggs are often found in cracks on the roof of kennels or high on the walls or ceilings of buildings. In the house, eggs are laid around baseboards, window and door casings, curtains, furniture, and edges of rugs. The egg-laying females are often seen going up walls to lay eggs.

The eggs hatch in 19-60 days into a six-legged, small seed tick. The seed tick takes a blood meal

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from dogs when they are available. The larvae are so small they won't be noticed on the dog unless a number are together. The seed tick remains attached for 3-6 days, turns bluish in color, and then drops to the floor. After dropping from the host, the seed tick hides for 6-23 days before molting into an eight-legged, reddish-brown nymph. It is now ready for another blood meal and again seeks a dog host. The nymphs attach to dogs, drop off, and molt to the adult in 12-29 days. As a reddish-brown adult, it again seeks a blood meal, becomes engorged, and is bluish in color, reaching about 1/3 inch in length.

Unengorged larvae, nymphs, and adults may live for long periods of time without a blood meal. Adults have been known to live for as long as 200 days without a blood meal. Indoors, ticks hiding between blood meals may be found behind baseboards, window casings, window curtains, bookcases, inside upholstered furniture, and under edges of rugs. Outdoors, ticks hide near foundations of buildings, in crevices of siding, or beneath the porch.

American Dog Tick

The American dog tick (Figure 2), is also a common pest of pets and humans in Florida. The adult males and females are frequently encountered by sportsmen and people who work outdoors. Dogs are the preferred host, although the American dog tick will feed on other warmblooded animals. The nymphal stages of the American dog tick usually only attack rodents. For this reason the American dog tick is not considered a household pest.



Figure 2. American dog tick. Credits: J. F. Butler, University of Florida

The female dog tick lays 4000-6500 eggs and then dies. The eggs hatch into seed ticks in 36-57

days. The unfed larvae crawl in search of a host and can live 540 days without food. When a small rodent is found, the larvae attach and feed for approximately 5 days. The larvae then drop off the host and molt to the nymphal stage. The nymphs crawl about in search of a rodent host, attach to it, and engorge with blood in 3-11 days. Nymphs can live without food for up to 584 days.

Adults crawl about in search of dogs or large animals for a blood meal. Adults can live for up to 2 years without food. American dog tick adults and many other species can be found along roads, paths, and trails, on grass, and on other low vegetation in a "waiting position." As an animal passes by the tick will grasp it firmly and soon start feeding on its host. The males remain on the host for an indefinite period of time alternately feeding and mating. The females feed, mate, become engorged, and then drop off to lay their eggs.

The American dog tick requires from 3 months to 3 years to complete a life cycle (Figure 3). It is typically an outdoor tick and is dependent on climatic and environmental conditions for its eggs to hatch.

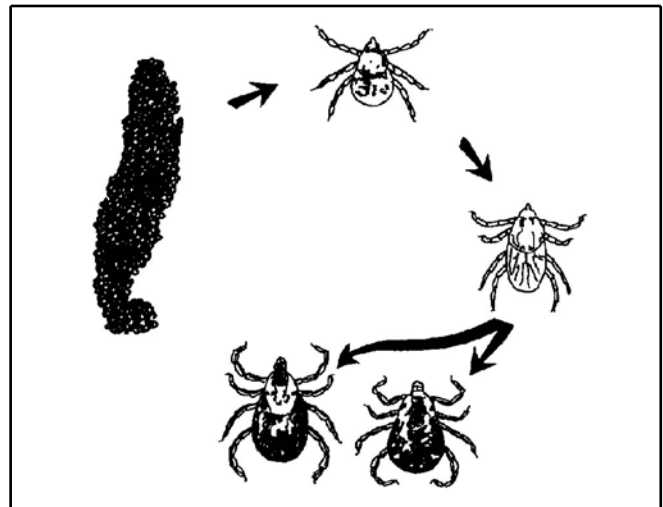


Figure 3. Tick life cycle. Credits:

Importance of Ticks

When feeding, ticks make a small hole in the skin, attach themselves with a modification of one of the mouthparts which has teeth that curve backwards, and insert barbed piercing mouthparts to remove blood.

The presence of ticks is annoying to dogs and humans. Heavy continuous infestations on dogs cause irritation and loss of vitality. Pulling ticks off the host may leave a running wound which may become infected because of their type of attachment.

The brown dog tick is not a vector of human disease, but it is capable of transmitting canine piroplasmiasis among dogs.

The American dog tick may carry Rocky Mountain spotted fever, tularemia, and other diseases from animals to people. Dogs are not affected by these diseases, but people have become infected by picking ticks from dogs. People living in areas where these wood ticks occur should inspect themselves several times a day. Early removal is important since disease organisms are not transferred until the tick has fed for several hours.

The American dog tick is also known to cause paralysis in dogs and children where ticks attach at the base of the skull or along the spinal column. Paralysis is caused by a toxic secretion produced by the feeding tick. When the tick is removed, recovery is rapid, usually within 8 hours. Sensitized animals may become paralyzed by tick attachment anywhere on the body.

Lyme disease is transmitted by ticks, but few cases have been reported in Florida. Most transmission occurs in the New England states, and the primary vector is the deer tick. The deer tick is not prevalent in Florida, but species that are close relatives and are capable of transmitting Lyme disease are common throughout the state. The American dog tick and the brown dog tick are not considered important vectors of Lyme disease. In cases of tick bites where Lyme disease is suspected, a physician should be contacted so that appropriate blood tests can be done for the patient.

Control

Ticks should be removed from pets and humans as soon as they are noticed. Ticks should be removed carefully and slowly. If the attached tick is broken, the mouthparts left in the skin may transmit disease or cause secondary infection. Ticks should be grasped with tweezers at the point where their

mouthparts enter the skin and pulled straight out with firm pressure. A small amount of flesh should be seen attached to the mouthparts after the tick is removed.

People entering tick infested areas should keep clothing buttoned, shirts inside trousers, and trousers inside boots. Do not sit on the ground or on logs in bushy areas. Keep brush cleared or burned along frequently traveled areas. Repellents will protect exposed skin or clothing (Table 1). However, ticks will sometimes crawl over treated skin to untreated parts of the body.

Pesticidal control of ticks may require both pet treatment and treatment of the infested area. If a heavy tick infestation occurs it is necessary to treat pets, home, and yard at the same time. Established brown dog tick infestations of homes and yards are frequently difficult to control.

Pets should be treated by using dusts, dip or sprays. Rub dusts into the fur to the skin being careful not to allow chemicals to get into the eyes, nose, or mouth. Heavy infestations of ticks on the animal should be controlled by spraying or dipping. See your veterinarian for products and recommendations for direct pet treatment.

Premise sprays are registered for tick control. Read the label thoroughly to be certain that the site and type of application (lawn, house, crawl space, kennels, etc.) is on the label.

Insecticides should be applied inside the house carefully as light, spot treatments to areas where ticks are known to be hiding. These can be applied indoors as crack and crevice or surface treatments (see Table 2). For heavy infestations indoors, or when egg masses of ticks hatch, space sprays can be applied to give quick knockdown (Table 3). Outdoors, infested areas should be treated by applying a broadcast treatment of insecticide to the landscape (Table 4). Special effort should be given in treating areas frequented by pets. Applications at 2-4 week intervals may be necessary to eliminate the ticks. Pets should be kept off treated surfaces until dry. Apply products according to label directions. Do not apply these products directly to pets.

Table 1. Repellents labeled for tick management.*

Common Name	Homeowner Product*
Deet	Cutter (28.5%) Muskol (25%) Off (14.25%) Off (Deep Woods) (28.5%) Ultrathon Lotion (31.0%)
Permethrin	Repel (Permanone Insect Repellent) (0.5%) (clothes only)
*Read label carefully to insure pest, site, and commodity are listed prior to applying product. Some product labels are very restrictive.	

Table 2. Tick management products labeled for indoor surface or crack and crevice treatment.*

Common Name	Homeowner Products	Commercial Products
Beta-Cyfluthrin	Bayer Power Force Carpenter Ant & Termite Killer Plus	
Bifenthrin	Ortho Home Defense Perimeter & Indoor Insect Killer	Talstar F Insecticide/Miticide Talstar Termiticide/Insecticide
Cyfluthrin		PT Cy-Kick Crack & Crevice Pressurized Residual PT Cy-Kick CS Controlled Release Cyfluthrin PT Cy-Kick CS Crack & Crevice Pressurized Residual
Cypermethrin		Cynoff EC Cynoff Power Spray Insecticide Cynoff WP Cynoff WSB Prevail FT Termiticide
Deltamethrin		Suspend SC Insecticide
Lambda Cyhalothrin		PT 221L
Permethrin	Ortho Bug-B-Gon Multipurpose Garden Dust	Dragnet SFR Termiticide/Insecticide
Pyrethrins		Kicker PT Tri-Die Silica & Pyrethrum Dust PT ULD BP-300
Pyrethrins and Others		PT Microcare CS Controlled Release Pyrethrum PT Microcare Pressurized Pyrethrum Capsule Suspension PT Pro-Control PT Pro-Control Plus PT Tri-Die Pressurized Silica & Pyrethrin Dust PT ULD BP-100 Tri-Die Silica & Pyrethrum Dust

Table 2. Tick management products labeled for indoor surface or crack and crevice treatment.*

Common Name	Homeowner Products	Commercial Products
Pyrethrins, MGK-264, Permethrin	Ortho Ant-B-Gon	
Pyrethrins, PBO		PT P.I. Contact Insecticide PT ULD BP-50 Pyrenone 50 Synerol Insecticide
Pyrethrins, PBO, Silica Gel		Drione
Tau-Fluvalinate		Yardex Supplemental Labeling
Tetramethrin, Phenothrin	Ortho Flying Insect Killer 1	
Tralomethrin		Saga WP Insecticide
* Read label carefully to insure pest, site, and commodity are listed prior to applying product. Some product labels are very restrictive.		

Table 3. Tick management products labeled for indoor space treatment.*

Common Name	Homeowner Products	Commercial Products
Pyrethrins		PT ULD BP-300
Pyrethrins and Others		PT Pro-Control PT Pro-Control Plus PT ULD BP-100
Pyrethrins, PBO		PT ULD BP-50
Pyrethrins, Permethrin	Ortho Indoor Insect Fogger	
* Read label carefully to insure pest, site, and commodity are listed prior to applying product. Some product labels are very restrictive.		

Table 4. Tick management products labeled for outdoor treatment.*

Common Name	Homeowner Trade Name	Commercial Trade Name
Beta-Cyfluthrin	Bayer Power Force Carpenter Ant & Termite Killer Plus	
Bifenthrin	Ortho Lawn Insect Killer Granules	Talstar CA Granular Insecticide Talstar EZ Granular Insecticide Talstar F Insecticide/Miticide Talstar GC Granular Insecticide Talstar PL Granular Insecticide Talstar Termiticide/Insecticide

Table 4. Tick management products labeled for outdoor treatment.*

Common Name	Homeowner Trade Name	Commercial Trade Name
Cyfluthrin	Bayer Advanced Home, Home Pest Control Indoor & Outdoor Insect Killer Bayer Advanced Lawn & Garden Multi-Insect Killer Bayer Power Force Ant Killer Ready-to-Use Granules Bayer Power Force Multi-Insect Killer Ready-to-Spread Granules	Tempo 20 WP Tempo SC Ultra
Deltamethrin		DeltaGard G Suspend SC Insecticide
Esfenvalerate	Ortho Bug-B-Gon Multipurpose Insect Killer	
Permethrin		Astro Insecticide Dragnet SFR Termiticide/Insecticide
Pyrethrins		Kicker
Tralomethrin		Saga WP Insecticide
<p>* Read label carefully to insure pest, site, and commodity are listed prior to applying product. Some product labels are very restrictive.</p>		