

Garden Column for the Salisbury Post

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Why do we care about ticks? They are pests to animals and humans in North Carolina, they must have a blood meal at each stage of their life cycle, and they can transmit diseases to us that can have serious consequences, even death, if not treated.

A few tick facts:

- There are over 850 species of tick worldwide.
- All ticks are parasitic and require several blood meals throughout their life cycle.
- In recent years, there has been a dramatic increase in the number of cases of tick borne disease in North Carolina.

Ticks are related to mites and spiders. They have 4 stages of development: egg, larval, nymph, and adult. After hatching from the egg, the tick must take a blood meal to complete each stage in its life cycle. They take a blood meal from a different type of host at each stage. Once a tick has found a host, the tick crawls to a place on the skin where it can attach. The tick's mouthparts are barbed, making it difficult to remove. It also manufactures a glue to hold the mouthparts in place while having a blood meal. The female tick feeds for 8-10 days until it is full and may increase in weight 100 times its original weight. The male does not feed as long.

The most common ticks in North Carolina:

- The American Dog Tick The adult American Dog Tick is active in the spring, summer and fall. It prefers humans and dogs as hosts. The American Dog Tick is the vector of Rocky Mountain spotted fever. This tick is found throughout North Carolina, but mostly in the Piedmont.
- The Brown Dog Tick-This tick feeds mostly on dogs and rarely attacks humans.
- The Lone Star Tick-This tick feeds on man, deer and dogs. It transmits a form of Lyme Disease and Rocky Mountain spotted fever. The Lone Star Tick is found mostly in the coastal plains, but may be found in the Piedmont.
- The Black Legged Tick This tick is also known as the Deer Tick and attacks dogs, deer and humans. This tick is the vector of Lyme disease.

There are two main diseases transmitted by ticks in North Carolina. A bacteria-like organism, *Rickettsia richettsii*, causes Rocky Mountain spotted fever, also known as tick typhus. The tick must be attached for at least 6 hours to transmit the disease. It contracts the organism when it takes a blood meal from an infected animal.

This disease is difficult to diagnose in humans because the symptoms are common in several illnesses... fever, chills, headache, muscle pain, and nausea. Usually a rash will begin on

the wrists and ankles and cover the body. There is an incubation period of 2 to 14 days after the tick has attached. This disease can be fatal if not treated.

Lyme disease is caused by a spiral-shaped bacterium called a spirochete. Attachment time of the tick is unknown for this disease. Lyme disease was recognized in 1975 in Old Lyme, Connecticut when several children developed arthritis. It is prevalent in the northeastern United States and the vector is the blacklegged tick, or deer tick. This disease also begins with flu-like symptoms and then progresses to cardiac and neurological problems, then to arthritis. About 50% of victims have a bull's eye rash that may range from 1" to 18" in diameter.

The antibiotic of choice for both of these diseases is Doxycycline. Tetracycline is also effective. Prevention is the best way to avoid tick bites.

- Avoid tick infested areas if possible
- Wear light colored clothing, preferably long sleeves and pants when walking through wooded areas
- Tuck pants into socks or boot tops
- Apply insect repellents
- Check for ticks, including the scalp, frequently
- Remove ticks carefully

There is a correct way to remove an attached tick.

- Use tissue paper or tweezers to grasp the body firmly and pull directly away from the site.

- Do not twist or jerk as you pull.
- If mouthparts remain, remove as you would a splinter
- Wash the site with soap and water and apply antiseptic
- Record the date of the bite on a calendar in case symptoms develop later.

For more information about ticks and these diseases, refer to these websites:

<http://www.ces.ncsu.edu/depts/ent/notes/Urban/ticks.htm>

[http://www.cdc.gov/ncidod/diseases/list\\_tickborne.htm](http://www.cdc.gov/ncidod/diseases/list_tickborne.htm)

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