

## Tick Tubes

Everyone should understand that ticks carry diseases and specific ticks carry specific diseases. Lyme disease is the most common tick-borne illness in Virginia.

### Ticks and disease

Blacklegged ticks carry the bacteria that cause Lyme disease (*Borrelia burgdorferi*), Human Granulocytic Ehrlichiosis (HGE) or anaplasmosis (*Anaplasmosis phagocytophila*), and babesiosis (*Babesia microti*).

Lone star ticks carry Human Monocytic Ehrlichiosis (HME) (*Ehrlichia Chaffeensis* & *Ehrlichia ewingii*), Southern Tick-Associated Rash Illness (STARI) (*Borrelia lonestari*), and Tularemia (*Francisella tularensis*).

Dog Ticks carry Rocky Mountain Spotted Fever (*Rickettsia rickettsii*) and Tularemia

It is possible for one tick to carry and transmit multiple diseases with a single bite, sometimes complicating identification and treatment.

And it is getting worse as new tick-borne diseases emerge and spread (e.g., Powassan virus, Bourbon virus).

So ticks, found in the woods, in the fields, and in our yards, are not good.

### An environmentally friendly solution

A biologist in a recent International Bowhunter Education Program (IBEP) class told me about tick tubes. Cotton balls are treated with permethrin and stuffed into a piece of one-inch PVC. Permethrin, often thought of as an insect repellent, is a neurotoxin. Mice, which are hosts for all these ticks, will pull the cotton from the tube and carry it back to their nests. The mice, unaffected by the permethrin, attract and carry the tick larvae and nymphs home to nest where the permethrin kills them.

This targeted solution is an environment-friendly alternative to spraying the lawn with a chemical insecticide which will wash into the Chesapeake watershed.

As noted above, permethrin is a neurotoxin. It is sprayed on the clothes, not the skin. Do not spray it on your skin. I use it as my insect repellent because it does not just repel ticks; it kills them. It is available as a spray which binds to the fabric and is effective for six weeks or six washings after it dries. Camouflage hunting clothing is available which is impregnated with permethrin and military Battle Dress Uniforms (BDUs) are also impregnated. At one time, there was concern that the oil in other insect repellents (e.g., DEET) or sweat would leach the permethrin from the clothing and it would be absorbed into the skin but this has proven false. Diluted permethrin is sold in sporting goods stores (brand name Sawyer) and one container will treat two complete outfits.

People have told me they sometimes buy and dilute the permethrin themselves but this is a false economy as it lacks the binders to retain it in the fabric and washes out with the first wash.

If you have a cat, it is highly toxic until it dries. After it dries, it is safe.

### **Do It Yourself**

Practical Primitive Web Site – Tick Tubes

<http://www.practicalprimitive.com/skillofthemoth/ticktubes>

### **Commercial Products**

Researching this, I found that there are at least two commercial products:

Thermacell Tick Control Tubes (available in various quantities (e.g., 6, 24, 120, 288))

<https://www.thermacell.com/products/tick-control-tubes?variant=7520408764452>

Damminix Tick Tubes (available in various quantities (e.g., 6, 24, 96))

[http://www.ticktubes.com/?gclid=Cj0KCQjw6J7YBRC4ARIsAJMXXsekpaQioO7pcxBoQDmw\\_b4O6bUzbHTzjbL8LqOVrFox-QPffFxxfuclaAknhEALw\\_wcB](http://www.ticktubes.com/?gclid=Cj0KCQjw6J7YBRC4ARIsAJMXXsekpaQioO7pcxBoQDmw_b4O6bUzbHTzjbL8LqOVrFox-QPffFxxfuclaAknhEALw_wcB)