

# Acarî – Ticks, and Mites

Where I've been able to find information, I have added it, using these [references](#).

## Ixodida (Ticks)

There are about 900 species of ticks; most of them are hard ticks and about 90 of them are in North America. All ticks are parasitic, living on blood. Although not host specific, ticks tend to have a different host for a different life cycle.

What are ticks good for? They serve as food! Ants, spiders, and birds eat them, but opossums eat the most! They can kill and eat some 5,000 ticks in a single season destroying nearly 95% of all ticks they encounter (Miller 2014).

### **Ixodidae (Hard Ticks)**

Ticks are the bane of mammals. There isn't a life cycle in this family that cannot suck blood. After each feeding they drop to the ground and molt into the next stage. The larvae of this family only have 6 legs; they gain the other 2 legs once they move to the nymph stage. In the colder area of the US, it can take up to 3 years for a tick to fully mature.

An adult female can lay an average of 2000-8000 eggs but are also known to lay up to 20,000 at one time. The tick's life cycle requires 3 different hosts. After each feeding they drop to the ground and molt into the next stage.

Tick behavior is pretty interesting. They seek out their next meal by "questing" with the Haller's organ. This is a sensory organ in their first pair of legs that detects heat, humidity, and chemicals. Questing is when they reach the plant's uppermost area and wait with their forelegs extended. When their meal brushes past them they grab hold. I visualize them

seeking a big ol' hug!

Once hard ticks attach to their meal, they produce a "cement" that glues the hypostome in place. The hypostome is harpoon-like and is lined with teeth to anchor the tick.

### ***Dermacentor variabilis* – American Dog Tick**

AKA Eastern Wood Tick

This is the largest eastern wood tick. This tick does not spread Lyme Disease but can carry the Rocky Mountain spotted fever virus. The larvae prefer mice while the adults prefer the larger mammals. Amazingly, adult ticks can survive a year without any sustenance.

### ***Ixodes scapularis* – Deer Tick**

AKA Black-legged Tick

This tick received its common name because it has generally relied on deer to move it from place to place. These ticks are found mainly in wooded areas and have a 2 year life cycle. It's the adult females that are parasitic as the males do not feed.

## **Parasitiformes (superorder of mites)**

### **Parasitidae**

*Poecilochirus* sp

Mites found on Roundneck Sexton Beetle –

*Nicrophorus orbicollis*



A close up of a phoretic *Poecilochirus* mite species



*Nicrophorus orbicollis* with a *Poecilochirus* species of mite

The mites (*Poecilochirus* sp) on this carrion beetle are phoretic, meaning they use the beetle for travelling from place to place. When the beetle stops to feed on carrion, these mites scramble off and dive in for a snack, too.

Amazingly, they seem to know when the beetle is done feeding and are back in “their seats” and ready for takeoff.

### **Uropodina Mite**

The closest to an ID for this mite is a suborder of the superorder Parasitiformes.



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The underneath of an Uropodina sp



*Nicrophorus orbicollis* with a *Poecilochirus* species of mite



A close up of a phoretic *Poecilochirus* mite species



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Uropodina species are smaller than .5 mm



© Marci Hess

The underneath of an Uropodina sp

## Acariformes (superorder of mites)

### Thrombidiidae (Velvet Mite)

These are not taxonomically well known mites. Larvae parasitize insects and arachnids of all major orders. Adults eat insect eggs.



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A side view of a *Trombidium* sp. Once placed in alcohol for preserving, it loses that brilliant red color.



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A tiny speck of brilliant red is a *Trombidium* species