

A Tiny Naturalist Hunter

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One of the joys of being a naturalist is viewing first-hand nature's networks and appreciating how they operate in tandem. In some circumstances, these connections develop as a predator-prey relationship—and sometimes, we seem to be the latter. During my time at the Nature Center, I have come to realize that my admiration for arachnids is not one-sided. The taxa Acari (ticks and mites) in this family also have a fondness for me—more than other coworkers—as their next meal.

The end of summer marks the end of my stint as an involuntary meal. The banquet scars from chiggers remain for weeks, reminding me that I need to improve my concealment as prey for next summer's hunt. My struggles do not go unnoticed by hikers, who also describe their encounters with these small, undetected red mites.

To avoid becoming easy prey, we must learn about our predator. The term "chigger" is used to identify the types of mites in the family *Trombiculidae*, which are parasitic during their larval stage. Several species of chiggers occur in Texas, but two tend to be content with humans as a host: *Eutrombicula alfreddugesi* and *Eutrombicula splendens*. Chiggers are not present everywhere; some areas may be infested while nearly absent nearby. To a naturalist or hiker, it becomes hard to detect where these tiny marauders might latch on to shoes or clothes and explore the host before choosing a place to feed. The most common places for them to bite are where clothing is tight or the skin is thinnest: ankles, waist, back of the knee, or under the armpit.

Contrary to popular belief, chiggers do not burrow into the skin but pierce the surface with their mouthparts and inject digestive enzymes that break down the tissue for them to consume. It is basically like having a human protein shake. The aftereffects are more noticeable than the bite. This parasitic digestion makes our skin intensely itchy within hours, and bright red welts begin to appear. Itching may peak 24 to 48 hours after a chigger bite, but it may persist for a week or more for some people.

Appreciating the value that I play in this food chain is challenging. I have to remember that I am not the first choice of a repast during the chigger's full life cycle. After feeding, the larvae will molt to their next life stages as nymphs and then as adults, where they will help maintain the natural balance between other small insects and insect eggs found in the soil. If I want to evade chigger encounters, I must rely on a couple of adaptations before heading outdoors. Wearing protective clothing such as long pants and closed-toed shoes and tucking pant legs inside boots is one way of minimizing exposure. Using certain insect repellents before a hike may also reduce the chances of becoming a chigger's next easy prey.



An adult velvet mite belonging to the family *Trombiculidae* visible on moss.
FWNC&R Staff Photo.