W1405

Backyard Tick Management

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Ticks are invertebrates closely related to spiders that feed on blood from animals, including humans, as a necessary part of their life cycle. During the feeding process, early life stages called larvae (newly hatched) and nymphs (second life stage), can acquire pathogens (e.g. viruses, bacteria, parasites) that can be transmitted to humans or companion animals when later tick life stages, either nymphs and/or adults, feed again. Tick populations are increasing, and the home ranges of many tick species are expanding. Because of this, ticks are encountered more frequently, including in residential backyards. While people may be more likely to encounter a tick in rural areas, such as woods and pastures, it is important to be cautious of ticks even in urban or suburban settings, including your backyard.

Tick Habitat

To effectively manage tick populations, a brief understanding of general tick habitat is necessary. A habitat is an area where all requirements for an organism to successfully live and reproduce are met. Hence, an area must include the necessary microenvironment, food, water, cover, and reproductive requirements to be considered habitat for any living thing. Below are a few key habitat requirements for ticks that you may encounter around your home.

- Ticks need a humid **microenvironment** to avoid death by dehydration and absorb **moisture (water)** through their exoskeleton; they find this microenvironment in densely vegetated, shaded areas. Ticks do not survive well in open, sunny areas where they will lose moisture and dry out.
- Ticks are extremely reliant on hosts. Hosts are used to obtain their **food** source (blood), for dispersal into and out of habitats, and as a site for mating **(reproduction)**. The protein obtained from the blood meal is used for growth, development, and reproduction. Because of their reliance on hosts, backyards with conditions conducive to wildlife will also have more ticks and tick encounters.
- As a tick feeds, it will become engorged. Once full, the tick will drop from its host and into the environment around the home. That recently fed tick will then seek **cover** in leaf litter or under woody debris while it slowly molts to the next life stage. Your pet is also a good food source for ticks and can be an unexpected entry point into your home, although most tick species will not survive indoors very long.

Ticks have very specific habitat requirements and are sensitive to less than perfect conditions, so removing just one or two of these habitat requirements near your home can greatly reduce tick encounters. These habitat requirements may also occur indoors (windowsills, pet sleeping areas, crevices, etc.). This is especially important for brown dog ticks, which are known to successfully live and reproduce inside the house. Discuss treatments to prevent ticks on your dogs and other companion animals with your veterinarian. Check animals that frequent the outdoors for ticks daily to prevent ticks from getting into your home.

Quick tick habitat management wins:

- Mow your lawn and rake leaves
- Fence areas to exclude large animals, like deer, which are important hosts for adult ticks.
- Remove woody debris (sticks, logs, branches, etc.), which may serve as homes to small mammals like rodents
- Talk to a veterinarian about treating pets with tick prevention treatments

Tick-Free Zones

Tick populations vary greatly between properties. For example, larger properties may have a higher number of ticks because they are more likely to have areas that are forested and/or have dense vegetation, whereas a smaller grass plot in the city will likely have fewer ticks. However, knowing that some wildlife can fly and others can climb, ticks may still find their way into yards, so it is good practice to learn how to mitigate the likelihood of encountering one.

Table 1: The why, how and solution, for select actions you can take to create a tick free zone around your home.

Action	Why	How/ Solution
Decrease Shaded Areas	Shaded areas have more humid microenvironments that ticks need to survive. These include shrubs, tall grass, and other plants with shade and a small open area underneath them.	Exposing an area to direct sunlight will make it hotter, drier, and less suitable for ticks to survive. To achieve this, remove unnecessary permanent shade plants and trees and consider regularly trimming trees and shrubs.
Rake Leaves and Remove Wood Debris	Engorged, fed, ticks will reside under leaf litter to molt, overwinter, live, and/or lay eggs. These areas are likely preferred habitats to their hosts and are often along trails and near nests. Certain species, such as the Blacklegged tick, a primary vector for Lyme disease, feed on small animals that often use wood piles for cover. Removing small animal cover reduces the number of areas where ticks can successfully live on your property.	Routinely, at least weekly, rake leaves in areas that are frequented and used by people and/or companion animals. Areas that are not frequented by people and/ or companion animals can be raked less frequently, such as monthly or bimonthly. Keep wood piles outside of the tick buffer zone (see below).
Create Tick Buffer Zone	While ticks can rely on wildlife, companion animals, or humans for long-distance dispersal, they will also travel by ground. Some tick species, such as lone star ticks, are especially quick walkers and can disperse long distances quickly. This allows ticks to move from areas further away from your home, like a forest edge, to places closer to your home, such as patio furniture.	Create a tick buffer zone by lining forest edges with a 3-foot-wide gravel path. Also, create tick buffer zones between forest edges and areas frequented, such as permanent play structures, gardens, patios, grilling areas, pools, and other permanent activity areas.

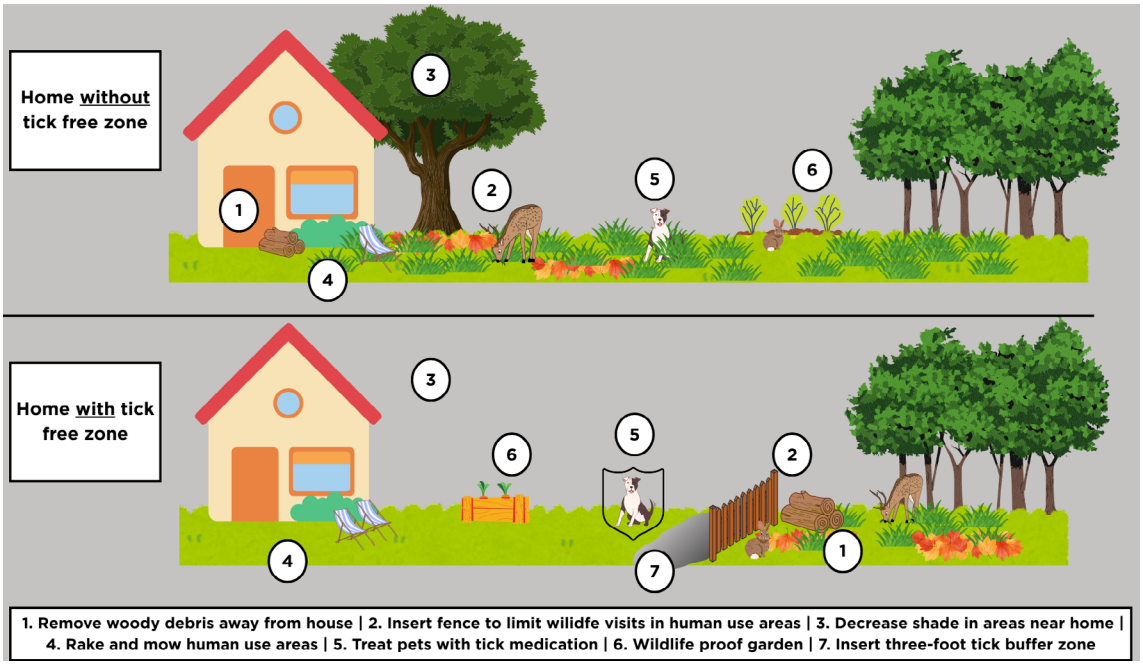

Figure 1: Illustrated overview of a home without a tick-free zone vs one with a tick-free zone. Graphic Credit: S. G. Pickhardt developed in Canva.

A good step to take when trying to reduce tick encounters at home is constructing dedicated "tick-free zones" (Figure 1). A tick-free zone is an area around your house that is purposely manipulated to reduce tick abundance in areas that are frequently used by people and companion animals. Table 1 details the steps for creating a tick-free zone.

Preventing Tick Bites

The first step to preventing tick-borne disease is to limit the chance of encountering a tick and then being bitten by it. UT Extension W1403 has information about prevention and graphics for where to inspect for ticks. Even with our best prevention at times you may find a tick attached to you, a relative, or a companion animal. UT Extension W1404 has graphics on how to remove and next steps.

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