Conservation Corner #20 (Appeared in the Ferry County View Extra, May 2017)

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An embedded tick is best removed by grabbing it as close to the skin as possible with narrow tweezers and lifting straight up until it comes loose.

The weather has warmed and the snow is long-gone except on the highest peaks. It's the season to work in the yard, walk on the property, take the kids on a hike or a bike ride. Unfortunately, we humans are not the only ones becoming more active as spring progresses. The ticks are out, too, and boy, are they hungry!

The tick is a small arachnid, more closely related to a spider than an insect. This tiny animal is found all over the world, Ferry County being no exception. For sustenance, it depends on the blood of other animals, such as birds and mammals, including humans and our household pets.

Ticks will fast for months (including through the winter) but must eventually latch onto a host for feeding. They lie in wait, attached to a leaf or blade of grass, until they sense a potential host by its smell, its body heat or by its movement. Since ticks can neither jump nor fly, they reach out and climb onto a passing host. Once the tick finds itself on a suitable host, it latches on, bores its barbed mouthparts through the skin and begins to suck blood. In a marvel of adaptation, this creature uses a cocktail of biochemicals in its saliva to make this process more efficient. One substance works like cement, helping to hold the feeding tube in the skin. More chemicals cause a numbing effect, preventing the host from feeling the discomfort and itching of the bite. The tick secretes yet another substance into its host to prevent clotting so that the blood flows freely.

Most ticks will stay attached to the host for 5-7 days and then fall off. A lucky host will never be aware of the tick's presence and will suffer no ill effects. However, many ticks will transfer one of a multitude of pathogens into the bloodstream of its host.

Lyme Disease is the bacteria-caused malady most commonly associated with ticks. This potentially debilitating condition can cause flu-like symptoms, joint pain, severe fatigue, and other problems. Unfortunately, Lyme Disease often goes undiagnosed or is misdiagnosed. One celebrated case is that of singer/songwriter Kris Kristofferson, who for years was thought to have Alzheimer's Disease. He was eventually tested for Lyme, found to be positive, and treated for it. His accelerating dementia, which had made him unable to write or perform, has now reversed itself, resulting in a nearly complete recovery.

Lyme disease is a very serious concern in Northeastern and North Central US. However, according to the Washington State Department of Health, very few cases are reported in the state annually and almost all of them resulted from tick bites out-of-state (one reported in Ferry County, according to the CDC.)

While the threat of exposure to Lyme disease in Ferry County is minimal at present, four other tickborne conditions have been reported in Eastern Washington and could be a concern locally.

Tularemia is a disease carried by some dog ticks and lone star ticks. (It may also be contracted from deer fly bites or from contact with infected animal carcasses.) This bacterium may cause flu-like symptoms (there will almost always be a high fever) or an ulcer near the bite site.

Rocky Mountain spotted fever may initially cause mild to severe flu-like symptoms, followed by a rash a few days later. Though reported instances are relatively rare in Washington, the American dog tick and the Rocky Mountain wood tick, both of which carry the spotted fever bacteria, are found throughout the state.

Tick paralysis presents initially with muscle weakness and numbness, may progress to an inability to stand, and could lead to respiratory difficulty and eventual death. Because this condition is caused by a neurotoxin in a (black-legged or American dog) tick's saliva, symptoms start to abate as soon as the tick is removed. (In 1995, a 2-year-old girl in Asotin County was nearing complete paralysis, when a nurse discovered a tick on her hairline and removed it. Within 24 hours the girl completely recovered.) Livestock and pets (llamas and alpacas are at the top of the list) are also at risk of infection from this neurotoxin.

An average of six cases of tick-borne relapsing fever (TBRF) are reported each year in Washington. Symptoms include a fever which lasts several days, goes away and recurs several days later. Unlike other tick-borne diseases, TBRF results from a bacterium carried by a "soft" tick found in rodents' nests rather than in grassy or brushy areas where most other ticks lurk. People sleeping in rustic cabins (with resident rodents) are most likely to be infected. Because the tick attaches for only 20-30 minutes, the bite could occur during sleep, unbeknownst to the victim.

Don't let concerns about ticks keep you from getting out and enjoying the warm spring and summer weather. Though the consequences of a tick-borne disease could be severe, the chances of infection are actually fairly low. If you follow the precautions described in the box below, your odds will be further reduced. And if symptoms do occur from a tick bite, make sure to get checked out by a doctor.

The Washington State Department of Health

(http://www.doh.wa.gov/CommunityandEnvironment/Pests/Ticks) and the Centers for Disease Control (https://www.cdc.gov/ticks/index.html) offer much more info on their websites.

Avoiding and Removing Ticks

- If possible, avoid grassy or brushy areas (remember, the little buggers don't jump or fly). The Rail Trail would be a very safe place for a tick-free outing.
- Wear long sleeves and long pants, tucking your pants under your socks (looks dorky, but beats tick bites.) Light colored clothing makes it easier to see ticks. An insect repellant with DEET may be helpful.
- Upon returning from an outing, check for ticks in hair, around ears, back of knees, in the crotch, under arms. Help your kids with this. Shower as soon as possible (within two hours, if you can) to wash off ticks before they latch on.
- Check your dogs for ticks. They can get sick, too!
- Avoid sleeping in old cabins where there might be rodents present. Keep the grass mowed in your yard.
- A tick embedded in the skin should be removed very carefully. Forget all the old folk remedies (e.g. twist the tick, cover it in oil, use a hot match). The best way to remove it is to grab it as close to the skin as you can with fine tweezers and pull steadily and evenly. Remove any remaining mouthparts with the tweezers. Disinfect the site and wash your hands. Dispose of the tick by flushing it (don't squeeze it) or save it in an empty pill bottle (capped tightly) for later ID. Make note of the day and time and watch for a rash or the occurrence of flu-like symptoms. You may ship the tick to the Washington State Department of Health for ID

(http://www.doh.wa.gov/CommunityandEnvironment/Pests/Ticks) or take it with you to your medical appointment .