

Poisonous or Venomous? What's the Difference?

AGRI-VIEWS

by Chuck Otte, Geary County Extension Agent

The natural world is not all sunshine and daisies. There are things out there that will kill you. There's things out there that can make you sick and there are things that can make you uncomfortable. It's the way it's always been, and it's the way it always will be. Threats of the past may fade away with new medications and knowledge and new threats may emerge for any of several reasons. Unfortunately, when discussing threats to our health and well being, people often confuse the terms poisonous and venomous and while it may not make a difference to you, it is helpful to know the difference.

Venomous creatures have a venom, or toxin, that they will inject into you if they bite you OR sting you. Rattlesnakes, wasps, and some spiders are all creatures that would be considered venomous. The venom, or toxin, can be mild or life threatening. It can be mildly painful or excruciatingly painful. While there may be similarities in how people react, there is often a range of reactions and at least a small segment of the population can be expected to have a life threatening reaction to some venoms. Honeybees are a classic example of being uncomfortably annoying to many people, yet a threat to the life of some others.

Poisonous refers to an adverse reaction to something you ingest. The weed hemlock, rhubarb leaves and certain mushrooms are all examples of items that are poisonous. Again, depending on the poison AND the amount ingested, an individual may be mildly uncomfortable or it can become a life threatening situation. Rattlesnakes are not poisonous as they won't be a threat to your life if you eat them (and I have!) But if they bite you they will inject venom and you will experience pain.

Which now brings up the question of whether a plant can be venomous. There are numerous plants around the world, and at least one in Kansas, that have "stinging hairs". If you brush up against these, the sharp hairs can penetrate your skin, break off and then inject a toxin that can cause annoying to intense pain. Stinging nettles are routinely encountered in wooded areas of Kansas. While normally an annoyance, there are plants in Australia and New Zealand that produce extreme pain if encountered with both animal, and at least one, human fatality from an encounter.

Now to the big one; poison ivy. Poison ivy isn't really poisonous. It contains a compound in the sap that is a skin irritant. It acts more like an allergic reaction as not everyone is affected by it. The reaction can be severe, at times life threatening, but it is always treated as an allergic reaction.

As I said earlier, stinging insects, and scorpions, are venomous as they inject a toxin in you. Other biting critters, like flies, mosquitoes and ticks, are not truly venomous. They are an annoyance and they may inject compounds into your system via their saliva that make you itch, but they aren't usually life threatening by themselves. However, with that saliva, they can also inject parasites or viruses or other microbes that can cause secondary infections which can kill you or make you very sick. But the mosquito or tick itself is not venomous.

Ultimately it comes down to knowing how different things can affect you and learning to recognize the various threats regardless of if they are poisonous or venomous. But remember, the two terms are very different and how you need to be treated, depends on which it is!