Invasive Jumping Worms
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At the 2020 Wisconsin Gardening and Landscape Expo in Madison, ecologist Brad Herrick gave a lecture about invasive jumping worms. I had heard of them before, but didn't know anything about them. Since that time, I've been studying and reading about them. They are very strange creatures, indeed!

There are no worms that are native to Wisconsin. Those not destroyed by the glaciers were edged out by other worms moving into the area. So, even our friendly earthworms aren't from here. There are only two types of worms native to North America-- night crawlers and red worms. More than twenty different worm species (including those two) have been introduced to our state. The latest invasive is an aggressive worm from the genus *Amynthus*.

Ecologically, earthworms are divided into three categories. The anecic group are soil dwelling, and like to burrow deeply into that soil. They are a larger worm and an example would be a night crawler. Endogeic worms live in the soil, but also visit the litter on top of the soil. They are lighter in color, and smaller in size than the deep dwellers. These are the worms that "come up" when there's a lot of rain. Epigeic worms live in the top most part of the soil, and in the litter above the soil. They are smaller than even the endogeic worms. However, epigeic worms have pigment in their skin. Red worms (used for composting) are epigeic.

Jumping worms are epigeic. They live just below the leaf litter, and sometimes on the top of the soil. They came from East Asia and first appeared in Wisconsin in 2013. The actual worm looks like a glossy earthworm… except it is smooth and either gray or brown. Jumping worms are not pink. They grow from 1½ inches to 8 inches in length and are aggressive. The band around the worm, the clitellum, is a lot lighter than the body, usually a milky white. Another difference between earthworms and jumping worms is that the clitellum goes all the way around the worm's body. An earthworm's clitellum looks like a saddle and does not go all the way around.

Jumping worms move by thrashing their bodies from side to side like a snake. The violent motion can actually take them off the ground. Thus, the "jump." They do make good fishing worms. Jumping worms can survive for more than twenty minutes under water. However, because they are so invasive, they cannot be sold or bought (for any reason) in Wisconsin. "Escaped" worms can threaten or damage our fisheries, lakes, and streams.

Jumping worms can "migrate" up to 36½ meters a year! Another strange behavior of the jumping worm is that when threatened, they can shed their tails. The tail just drops off and keeps wiggling. This allows the rest of the worm to "get away" from whatever is threatening it. They have other really creepy survival tactics as well.

Jumping worms reproduce asexually, so they only need themselves to reproduce. Before winter kills the adult worms, they produce small, round cocoons which do not die, but can withstand winter temperatures to forty degrees below zero. The cocoons can also withstand drought. These hatch in June. Cocoons can produce between 1 and 5 worms. Jumping worms only have a 60-day life cycle, so one worm can multiply very, very quickly. Another

thought-- Jumping worm cocoons are very small; smaller than a pencil eraser and easily transported from one area to another by mowing, foot traffic, animals, birds, etc. If you live in an infested area, make sure to clean your tools and shoes before moving to a new area.

As stated before, *Amynthus* members are epigeic. They live just below the surface dirt. They don't really burrow anywhere. They stay on the surface and eat tremendous amounts of leaf litter and organic matter quickly. They can eat more vegetation than any other types of worm. They will even eat plant roots just below the soil surface. This takes the nutrients out of the deeper soil that plants need to survive. This impacts the overall soil quality as to damage our fields and forests. When jumping worms have been in an area, the soil takes on an even, granular texture. The surface nutrients can be easily washed away with rain. These little pellet-like soil pieces are hard and look like big coffee grounds. They become compacted easily. This is one of the signs that an area has been infested.

Getting rid of and managing jumping worms can be frustrating. Hand picking them is one way. Seal your finds in a bag, or put them in a jar with rubbing alcohol in it, then throw them away. Just like an invasive water species, make sure the equipment you use is clean. Check your equipment, check your shoes and clothing if you are going to or from an infested area. Do not purchase potting soil, compost, or plants from infested areas. This includes landscape and gardening materials. ASK questions. Visually inspect what you are purchasing or using. Only purchase mulch and compost that have been heated to the proper temperatures to kill jumping worms and their cocoons. Do not move infested mulch or plants to a non-infested area.

Do not feed jumping worms to your chickens. *Amynthus* worms accumulate store up to 80% of the heavy metals in the air around them. They store the heavy metals in their bodies. If chickens eat the worms, the heavy metals can be passed to humans in the eggs and meat.

There are soil additives and treatments such as Biochar, Early Bird fertilizer, and the fungus *Bavaria bassiana* that will kill jumping worms. However, they will also kill beneficial insects and worms, or other wildlife. Use outside applications or additives very carefully. Check your garden and yard for this invasive worm often. If you should find jumping worms on your property, please notify your county extension agent to report your find, as soon as possible. Again, if you find and hand pick jumping worms, do not return them to the soil, or compost them.