

# Trumpet Vine

A Bi-monthly Publication for the Master Gardeners of Cuyahoga County



## A New Menace: Asian jumping worms threaten gardens and forests

Martha Swiss

**EDITOR'S NOTE:** I hate to gross you out, but this is a real threat. They are in Michigan and Pennsylvania, but the Internet didn't mention Ohio -- yet. *SW*

Taken from *State-by-State Gardening*, February, 2019. **If you see them, report them.**

**Inside this issue:**

Asian Jumping Worms Martha Swiss	1-3
Grafting in the Garden Anne Evans, MGV 2016	4-7
Hello Emeritus Master Gardeners 8 Sandy Welches, MGV 2005	
Iris Photos Pat Koch, MGV 2008	8
Hort Tips Sandy Welches, MGV 2005	9-10

As I dug into my garden's soft soil on a fine spring day a couple years ago, I was repulsed when dozens of earthworms shot out from under my soil knife, thrashing wildly. I didn't know what to make of this strange earthworm behavior, but chalked it up to all the rain we'd had. Several months later, a friend mentioned "all these gross wiggling worms" in her garden. We agreed that earthworms were behaving rather oddly.

I have since learned that my garden is now home to Asian earthworms (*Amyntas spp.* and *Metaphire spp.*), commonly known as jumping worms, crazy worms, snake worms and Alabama jumping worms. And that's not good. Like many invasive organisms, jumping worms threaten to upset the fragile ecological balance in our gardens as well as our natural forest communities. To combat this pest, it's first important to understand how they got here, how to identify them and a bit about their physiology.

### HOW DID THEY GET HERE?

It is believed that jumping worms made their way to the U.S. from the Korean Peninsula and Japan in the 1940s with imported plants or soil. *Today they are found from Maine to South Carolina and west to Wisconsin.*

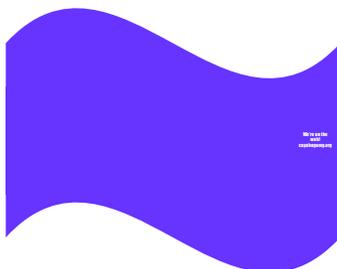
These are not the first earthworms to invade our soils. Native earthworms were wiped out during the last ice age in parts of the U.S., where glaciers advanced and scraped soil from the bedrock. The earthworms we've known in these areas since then were introduced from Europe in the mid-1800s. However, unlike European earthworms that tunnel into the soils, aerating and enriching it with their castings (or poop), *jumping worms live in the top few centimeters of the soil, voraciously eating organic matter and altering the soil texture and chemistry so it is less beneficial to plants and other organisms.*





### OHIO STATE UNIVERSITY EXTENSION

12200 Fairhill Road, E Bldg.  
Cleveland, OH 44120  
Phone: 216-429-8200



## Trumpet Vine

#### Editor

Sandy Welches  
sandygorbywelches  
@gmail.com

#### Graphic Design Editor

Pat Koch  
patriciaakoch75  
@gmail.com

#### Copy Editor

Sandy Jones  
sandyowrisjones  
@hotmail.com

#### Deadlines for articles:

February 13, April 13,  
June 13, August 13  
October 13,  
December 13

Submit articles  
electronically in  
Word format and  
photos in JPG format.

### IDENTIFICATION

Jumping worms are smooth and glossy, gray or brown, and reach 1½ to 8 inches long. The best way to identify them is to look at the clitellum, the band of different-colored tissue that surrounds the worm near the head. The jumping worm's clitellum is close to the head, milky white and smooth; and it completely encircles -- and is flush with -- the body. The European earthworm's clitellum is pink and located farther down the body; it's slightly raised, and does not completely encircle the body. As mentioned, the jumping worm thrashes wildly when disturbed or handled, and, as an added twist of creepiness, may detach a piece of its tail as a defense mechanism.

*If you're unsure whether your garden has jumping worms, you can try doing a soil drench.* Mix 1 gallon of water with ½ cup ground yellow mustard seed. Let the mixture sit for 15 minutes and then pour it slowly into the soil. The mustard will irritate the worm's skin and drive them out of the soil, but it won't harm your plants or the soil.

Jumping worms also leave behind a telltale surface soil signature -- their castings -- often at the edges of your garden beds. The castings look like loose little balls or coarse coffee grounds, and underneath is a hard, less fertile soil.

### LIFE CYCLE

Jumping worms hatch from dark, hard cocoons or eggs in early spring and continue to grow through summer. They are parthenogenic, meaning they can reproduce without mating, and lay eggs in late summer and early fall. The adults die with the first hard frost, but their tiny cocoons (2mm in diameter) are resilient and survive winter's cold.

### WHY THEY ARE A PROBLEM

Jumping worms pose a great threat to our soils, and as any gardener knows, good soil is the basis of a good garden. *These invasive worms have a high metabolism and a voracious appetite that drives them to consume organic matter rapidly, depleting much of the soil fertility.* Their castings do not enrich the soil the way European earthworms do. In fact, their castings chemically alter the composition of the soil and make it less favorable to plant growth.

Rather than enriching the soil, their large, loose castings on the soil surface are easily washed away by rain and overhead watering, leaving the soil less able to anchor plant roots.

Jumping worms can survive in greater population densities than European earthworms and tend to out-compete them. They also seem to have a negative effect on populations of beneficial invertebrates in the soil that provide food for birds and other animals.

Perhaps the greatest threat of the jumping worm is to forests and natural areas. They quickly consume the top duff layer made up of leaves that have fallen and decayed slowly over many years. This thick, fertile, spongy layer is home to a host of invertebrates and fungi, and supports fragile roots of young tree seedlings as well as those of the herbaceous layer of the forest. Without the duff layer, the forest floor becomes devoid of woodland perennials and young trees, and is more susceptible to invasive plants like buckthorn and garlic mustard.

**RESEARCH IS UNDERWAY**

Research on jumping worms and its effects on soils is underway at several institutions to better understand the life cycle of these organisms, their cocoons, and potential control methods. **Until more is known, here are some ways you can help control of jumping worms:**

*Don't buy Asian worms to use in your compost pile, vermicomposting, or for fishing bait*

Don't share plants, compost, or soil if you have jumping worms

Buy compost or mulch that has already been heated, which may kill adults and cocoons.

If you positively identify jumping worms, you can collect them in a bag, seal it, and throw it in the trash.

*If you find jumping worms, report it to Ohio's Department of Natural Resources*

**FOR MORE INFORMATION**

The following websites offer factsheets and other information for the public: University of Wisconsin Extension: [www.hort.uwex.edu/jumping-worms](http://www.hort.uwex.edu/jumping-worms)

Cornell University Cooperative Extension: [www.ccetompkins.org/resources/jumping-worm-fact-sheet](http://www.ccetompkins.org/resources/jumping-worm-fact-sheet)

Wisconsin Department of Natural Resources: [www.dnr.wi.gov/topic/invasives/fact/jumpingworm/index.html](http://www.dnr.wi.gov/topic/invasives/fact/jumpingworm/index.html)

Great Lakes Worm Watch: [www.greatlakeswormwatch.org](http://www.greatlakeswormwatch.org) Offers the opportunity for citizens to get involved in the research.

Swiss, Martha (2019, February) A New Menace. *State-by-State-Gardening*, Vol.9, (Issue1), pp.44-47



[burlingtonfreepress.com](http://burlingtonfreepress.com)

*Special suggestion from Pat Koch—*

*While driving around your city, especially near places where you can fish, and you see a sign that reads Worms for Sale (usually at gas stations), take some time to speak to the owner about this Asian jumping worm and the serious damage it is already doing to our properties and forests. Take a copy of this article with you to share with the owner. Master Gardener Volunteers educate. That is our mission! Let's educate as many people as we can.*