

Invasive Asian Jumping Worms (referenced)

You may think that earthworms are good for the soil, but did you know there is an invasive earthworm that has been causing trouble in our soils in various areas of the country, including here in New Canaan?

The Asian Jumping Worm (*Amyntas agrestis*, *Amyntas tokioensis*, and others) has recently gained notoriety as its presence has become more prevalent and troublesome in the United States. [3]

Why is the Asian Jumping Worm (AJW) so troublesome? Unlike our European earthworms which aerate our soil and enrich it with their excrement, AJWs change soil structure and chemistry, leaving soil that is hard, dry, and lacking nutrition. This can cause a variety of problems in the nursery trade, home gardens, and our forests. [2] [3]

How do you know if you have them?

AJWs look quite different from their European cousins and the simple task of weeding your home garden can reveal them as they hang out in the top mulch layer of a garden. The soil in a densely infested area has a signature coffee ground like appearance. [5]

The clitellum of the AJW differs from the European worms. It is closer to the head of the worm, reddish and harder to see when young, but a lighter/whitish color when mature. The clitellum is not raised and completely encircles the earthworm's body. In contrast, the clitellum of the European earthworm appears as a raised saddle on the worm, and does not completely encircle the worm's body. [3] [5] [7]

As its common name describes, the AJW moves differently than others. Instead of slithering slowly, these worms are quick moving, snake-like, and will thrash wildly when disturbed. [3] Try to pick one up and they will often break off a piece of their body in the attempt to escape. [7]

Although the worms die with our first frost, their 2-mm cocoons survive our winter and hatch when temperatures reach 50 degrees for a consistent period. [2] [5] A new invasion of AJWs can be eradicated if acted upon quickly, before the worms start producing cocoons in late summer. [2]

How do you stop the spread?

There are currently no viable jumping earthworm control methods, although research is continuing and we can prevent their spread. The following recommendations on preventing spread are from Cornell Cooperative Extension service:

- Do not buy or use jumping worms for bait, vermicomposting, or gardening.
- When purchasing bulk mulch or compost, use a reputable producer that has heat-treated the material to a temperature of 130°F for at least three days to destroy the cocoons or purchase bagged mulch.
- Check your property for jumping earthworms using a mustard pour (it won't harm your plants!). Mix a gallon of water with 1/3 cup of ground yellow mustard seed and pour slowly into the soil. This will drive any worms to the surface where you can easily remove them.

- Cocoons are sensitive to heat and can be destroyed with clear plastic solarization; in late spring or summer, cover moistened soil with a sheet of transparent polyethylene for two/three weeks or until the soil temperature exceeds 104°F for at least three days.
- Be careful when sharing and moving plants; always check for worms and know where your plantings come from; buy bare root stock when possible.
- If you have a small population of jumping worms, handpick and destroy them by bagging them and throwing them in the trash, or place them in a bag and leave out in the sun for at least 10 minutes; then throw the bag away.
- Research is currently being conducted on invasive worms at the University of Wisconsin and several practices do show some promise of control. Abrasive materials such as biochar (ground up charcoal) and diatomaceous earth (fossilized diatoms) may show some promise in killing adult jumping worms. Incorporate one of these products into the infested soil to a depth where the worms are located; worms that come in contact with the materials will be adversely affected.
- If you have jumping worms, avoid moving plants or soil from your yard. [5]

Google the term “Asian Jumping Worms” and you’ll find an enormous amount of information. Below are links you may find as a helpful place to start:

References

History of earthworms in North America and well written article on one reporter’s in-person interviews about AJWs with scientists from the Bronx and beyond:

1. <https://www.theatlantic.com/science/archive/2020/01/jumping-worms-are-taking-over-north-american-forests/605257/>

Podcast with expert Brad Herrick which includes some of the efforts being tested to combat the worms:

2. <https://joegardener.com/podcast/invasive-jumping-worms/>

Short summary of AJWs from Nebraska:

3. <https://neinvasives.com/species/insects/asian-jumping-worm>

A healthy-living blog that lists some solutions that have been tried at the end of the post:

4. <https://www.healthygreensavvy.com/asian-jumping-worms-vs-earthworms/>

Informative summary from Cornell Cooperative Extension service:

5. <http://warren.cce.cornell.edu/gardening-landscape/warren-county-master-gardener-articles/invasive-asian-jumping-earthworms>

Margaret Roach has done (2) interviews with Brad Herrick and her latest can be found here:

6. <https://awaytogarden.com/invasive-asian-jumping-worms-a-2019-research-update-with-brad-herrick-of-uw-madison/>

7. personal experience

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