

Jumping Worms

Amyntas spp. and *Metaphire sp.*

Also known as crazy worm, Alabama jumper, Asian worm, snake worm
Cornell Department of Natural Resources



Mature jumping worm, with characteristic milky white clitellum (band near the head of the worm). Photo credits Susan Day/ UW- Madison Arboretum

What's jumping worm?

- A damaging invasive earthworm native to East Asia
- Has been in eastern US for decades. Has spread across the southeastern US, the Midwest, and even hit the west coast state of Oregon in 2016.

What to look for:

Worm is smooth, glossy gray or brown; 1.5 to 8 inches long

- **The Clitellum** (the narrow band around their body) is cloudy white to gray colored and smooth (even) to the body, unlike other species which have a raised and pink colored clitellum
- **Crazy behavior!** They jump and thrash wildly when handled, moving more like a threatened snake (hence their nickname). It can even shed its tail in defense
- **Poop!** Jumping worms leave distinctive grainy soil full of worm castings. The soil becomes granular and looks like dried coffee grounds.
- Best time to find them is in late June and early July



Worms leave soil looking like dry coffee grounds. PC Bernadette Williams, courtesy Wisconsin DNR

Not one problem, but THREE!

Jumping worms all look very similar, but there are actually at least three species: *Amyntas agrestis* (which is most often cited as the culprit) *Amyntas tokioensis*, and *Metaphire hilgendorfi*. We know that species co-occur, but we need more information on the distribution of each species and their respective impacts.

Where to find them?

On the soil surface and amongst the leaf litter, making them easy to find. They can live anywhere from urban parks and suburban backyards, to rural forest. Jumping worm is common and usually associated with human modified environments. You are very likely to find them in compost piles and along the roads. They invade forests, but typically don't occur far from forest edges or in large undisturbed locations.

Jumping worms are listed as a PROHIBITED species by the New York State Dept. of Environmental Conservation. It is illegal to possess, transport, transfer or introduce jumping worms in New York.

What's the problem?

Jumping worms threaten our forest by dramatically altering soil structure and chemistry. In the absence of earthworms, fallen leaves are slowly decomposed by fungi, microbes and soil invertebrates, creating a spongy, nutritious layer of organic matter. This “duff” layer is a natural substrate for native woodland wildflowers, tree seedlings, fungi, microbes and animals. However, when invading earthworms consume all of this leaf litter, they convert this good soil into a single compact layer of grainy, dry worm castings that cannot support our forest understory plants.

Native forest plants, soil invertebrates, fungi, birds, salamanders and other animals disappear because the understory community can no longer support them. Invasive worms also appear to help spread invasive plant species. In residential and urban areas, they can harm ornamental plantings and turf. Jumping worms are especially invasive because they don't need to mate to reproduce (they're parthen-ogenetic). A single worm can start a whole population. They reproduce more quickly, mature twice as fast, and are more aggressive than introduced European species. Populations can also handle those harsh New York winters. Adults die, but their young survive in tiny, resilient cocoons. Cocoons are less than a tenth of an inch in diameter and are similar in color to dirt, so they are nearly impossible to spot with your own eyes. Cocoons can be spread easily in plants, landscaping equipment, tire treads and even hiking boots.

Cocoons of Jumping worm species can vary, depending on species.



Photo: Marie Johnston, courtesy UW–Madison Arboretum)

Stop the SPREAD!

No viable earthworm control methods exist currently, but we CAN prevent their spread. Here's what YOU can do:

- Do NOT buy or use jumping worms for bait, vermicomposting or gardening
- Only sell, purchase or trade compost that was heated to appropriate temperatures and duration following protocols that reduce pathogens
- Dispose of all live worms in the trash
- Be careful when sharing and moving plants and gardening materials and always check for jumping worms and know where your plantings come from. Because cocoons are hard to see, err on the side of caution and buy bare root stock when possible.
- Check your property for earthworms (a mustard pour is an easy way to sample for worms - mix a gallon of water with one third cup of ground yellow mustard seed, and pour slowly into soil. It won't hurt your plants, but will bring worms to the surface, allowing you to check for jumping worms). www.nrri.umn.edu/worms/research/methods_worms.html

What if I see one?

If you see jumping worms, please log your sightings in

iMapInvasives.org

This is an online mapping software that takes information on invasives across the state.

If you have any questions, please contact:

