Jumpers versus nightcrawlers: How to tell which worm is in your garden

Leimone Waite, Master Gardener - May 21, 2021

Q: I discovered a worm while weeding the other day. It caught my eye because it moved very fast like a snake and when I picked it up it leaped out of my hand and I had to chase it down to catch it. I recently heard on the news that jumping worms are invading the Midwest. Could this be a jumping worm?

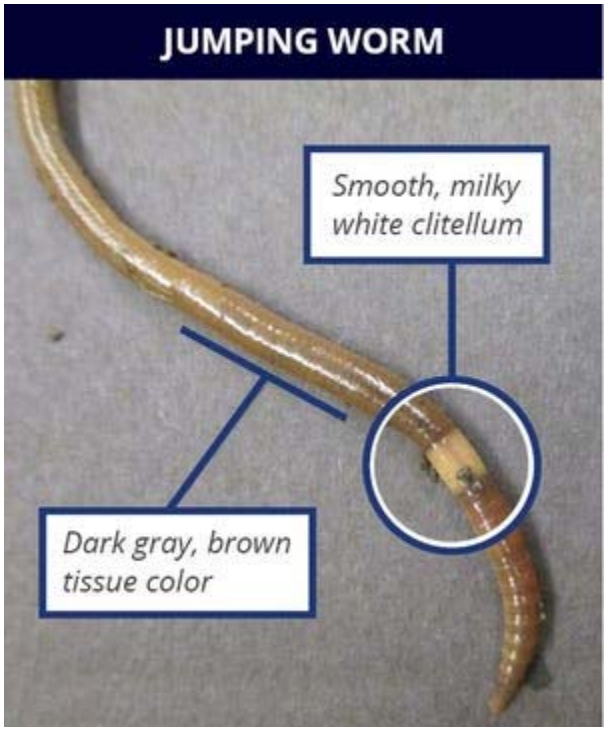
A: It's possible, as jumping worms are fairly prevalent on the coasts, unlike the North and Midwest United States.

Jumping worms include several species of invasive worms that are part of the Amynthas genus. They get their name from the fact that they move like a snake and appear to be jumping, especially when disturbed.

An invasive Asian jumping worm is seen at bottom next to a common nightcrawler. (Wisconsin Department of Natural Resources / Courtesy photo)

Jumping worms look similar to nightcrawlers (Lumbricus terrestris) but have a light-colored, nearly white, ring that extends completely around the body and is more obvious than on other earthworms. To positively identify your worm as a jumping worm, look for the following things:

- Does the soil near where you found the worm have a similar appearance to coffee grounds? Jumping worms live in the organic layer found on top of soils and as they eat and excrete waste. The soil gets a unique texture that looks like coffee grounds. Red wiggler worms (Eisenia fetida) also live in the leaf litter, but these worms are red in color.
- Does the worm move like a snake? Jumping worms writhe like snakes and move fast. They may also secrete yellow mucus when agitated.
- Does the tail break off when you try to hold on to the worm? In some cases, when the jumping worm is disturbed, its tail will break off and keep flailing.
- A characteristic smooth milky, white band called the clitellum completely encircles the worm's body, unlike other earthworms with a pink, raised band.
- On jumping worms, the ring (clitellum) on adult worms is closer to the end than on nightcrawlers. Milky pink to milky gray in color, the ring encircles the whole body evenly, and is barely raised above the skin — unlike the nightcrawlers where it's raised. Jumping worms can look similar to nightcrawlers, so it is important to confirm these differences.
- On the jumping worm, the setae — tiny hairs the worm uses to move through the soil — are evenly spaced around the entirety of each segment, not in pairs or concentrated on the bottom or sides of the body. You may need a hand lens to see the hairs as they are small.



Because jumping worms are voracious eaters of the leaf litter layer in forest soils, and they can reproduce asexually (without a mate), these worms can take nutrients away from native plants and leave soils bare, causing erosion and damage to forest soils.

According to an article written by Megan Sever in Science News last September, “They displace other earthworms, centipedes, salamanders and ground-nesting birds, and disrupt forest food chains. They can invade more than five hectares in a single year, changing soil chemistry and microbial communities as they go, new research shows.”

Because of how successful these worms reproduce, several Midwestern states have generated invasive species warnings to try and reduce their spread.

Jumping worms are not listed as a concern in California, most likely because a large portion of the state has very dry forest conditions during the summers. This likely slows the reproduction of the jumping worms, as they need moist conditions in the forest litter layer to flourish. However, they could cause some damage to soils and seedlings in irrigated soils.

The Shasta Master Gardeners Program can be reached by phone at 242-2219 or email mastergardener@shastacollege.edu. The gardener office is staffed by volunteers trained by the University of California to answer gardeners' questions using information based on scientific research.