

INVASIVE WORMS IN NORTH AMERICA FACT SHEET

All worms currently found in the majority of North America are introduced species, either from Europe in the early 1600's, or from Asia in the early 1900's with the increased popularity of Asian plants for gardens and arboretums. (There are very small populations of native worms in parts of the south). Worms are good for gardens, bad for forests! European introduced earthworms, from what we know, are beneficial in the garden. Research is still being done on Asian earthworms, but early findings has shown these worms voraciously eat the top layer of leaf litter and seedlings, reducing or destroying a forests understory environment. They may exacerbate drought conditions by reducing the moisture holding capabilities of soils. Jury is still out!

The current species gaining attention: *Amyntas agrestis*

There are ten other species of *Amyntas* present in the United States; identification is very difficult between species. There are six other species of introduced worms that are not in the genus *Amyntas*. Common names for *A. agrestis* include Crazy worm, Asian Jumping worm, Snake worms, and various other combinations. Likely introduced in the early 1900's and further moved around via soils, composts, mulches, plants. Popular for bait fishing, and still widely sold due to high reproductive rates; may also be sold with vermiculture kits. Not generally a state regulated pest, and there are no clear guidelines in place from governing bodies. *It is not illegal to have this worm, but they are regulated in New York and Wisconsin.* Native enemies may include centipedes, ants, and salamanders on land. More research is needed on this topic. Adults are unlikely to survive winter in New England, but these worms do create cocoons that surround embryos and facilitate the ability to overwinter. Cocoons are very small and round, about 2 mm across. More research is needed on this topic.

Positive identification of *Amyntas agrestis* requires an adult worm, which in the northeast usually mature around June or July.

- Adults are four to five inches in length
- Smooth white band near the head FULLY ENCIRCLES the body
- Found in topmost layers of soil
- Brown or grayish in color
- Most noticeable in late summer to early fall
- May wiggle more than other worms, but this is subjective

Overall, the biology and ecology of this worm is just now being diligently studied, with two papers on identification published mid-2021. Gaps in knowledge, research, and recommendations for control still exist but hopefully narrow in the next few years. The exact current range is unknown, and the more people who identify this pest with local extension services, the more we will be able to understand the scope of this threat and how to respond. At this moment, this worm has been confirmed in 38 states and the provinces of Ontario and New Brunswick, Canada.

What consumers can do:

- Purchase reputable soils and mulches, heat treated if possible.
- Avoid municipal mulches or composts without inspection.
- Solarize bagged goods, even from reputable companies.
- Avoid composting directly into wooded areas to reduce the spread

There are no known pesticides to control worms, so physically killing them is the only known method of eradication. Think you may have this worm? *Don't freak out!* Take good pictures and send them to your state extension office; check with them for a preferred method of submission for identification. Inspect plants from other gardeners and plant sales. If possible, rinse off any incoming garden soils from outside sources, like plant swaps. Sterilize soil, if possible, by solarization. Don't let them worm-shame you!

What Van Berkum Nursery is doing:

We plan on positively identifying and cataloging worms that we commonly see at the nursery in the summer of 2022. Nursery medium typically used to grow plants (available to trade only) contains no compost or soils and is typically made to order and stored away from areas where these worms would live/survive, on a concrete pad. Our grow beds are black mat with several inches of stone beneath. We clean off any organic material where worms may hide. We maintain hardpack roads around all grow beds and greenhouses. We care greatly about the potential this worm could have on the forests around us. Although this is not a regulated pest, we are prepared to do anything we can to help limit its spread.

If searching for more information online, use the full name *Amyntas agrestis* for best results.

Helpful links:

Invasive Species Compendium: <https://www.cabi.org/isc/datasheet/121715#toPictures>

Great lakes Worm Watch: <https://wormwatch.d.umn.edu/>

UNH Extension Flyer: https://extension.unh.edu/sites/default/files/migrated_unmanaged_files/Resource008080_Rep11786.pdf

UNH NH Bugs website (also has submission forms): <https://www.nhbugs.org/damaging-insects-diseases/jumping-worms>

Scientific publications on Asian Worms:

https://www.srs.fs.usda.gov/pubs/ja/2021/ja_2021_callaham_002.pdf

https://www.uvm.edu/~entlab/Forest%20IPM/Worms/Chang_et_al_2016_Zootaxa.pdf

On solarization: <http://ipm.ucanr.edu/PMG/PESTNOTES/pn74145.html>