

## JUMPING WORM ALERT!

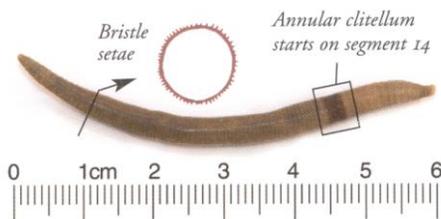
All earthworms in the Great Lakes Region are non-native species, brought over from Europe during early colonization of the United States. But there is a new invasive species causing alarm for the native environment.

Asian earthworms (genus: *Amyntas*) are becoming a threat in Minnesota. They are also known as Jumping Worms because they are very active and hyper -- very non-traditional earthworm behavior.

The *Amyntas* species has an extraordinarily high metabolism and they can live in very high densities. If they become established, their impact on our native ecosystems could be catastrophic.

*Amyntas* is a common contaminant when you buy "Red Wigglers" for vermicomposting which can lead to the introduction of this species to the wild. To identify *Amyntas*, or to report an infestation, see the Great Lakes Worm Watch website.

[www.GreatLakesWormWatch.org](http://www.GreatLakesWormWatch.org)



*Amyntas*: Asian "Jumping Worm"

## What can you do to reduce the spread of non-native earthworms?

-  **Do not** dump in woods or water. Earthworms don't drown!
-  **Do** toss unwanted bait in the trash.
-  **Do** tell others about the problems caused by invasive earthworms.
-  **Do not** transport leaves, mulch, compost, or soil from one location to another unless certain there are no earthworms or cocoons present.
-  **Do** freeze the vermicompost for at least one week before putting it in your garden or other outside environment. This kills the earthworms and egg cocoons.

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## For questions about the Great Lakes Worm Watch or research contact:

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## ABC's of Composting with Earthworms Safely



An introduction to vermicomposting and understanding earthworm use in Minnesota and the Great Lakes Region



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## VERMICOMPOSTING 101

Vermicomposting is similar to traditional microbial/bacterial composting, except that earthworms are added. Together they convert organic waste to nutrient rich compost.

Red Wigglers (*Eisenia foetida*) are the most common worms used in vermicomposting, Red Wigglers are great compost earthworms for northern climates because they do not survive cold winters and are not invasive in the Great Lakes region.

**But**, several other species are also called Red Wigglers or Red Worms such *Lumbricus rubellus* (sold for bait as Leaf Worm or Beaver tails) and increasingly, the Asian species in the genus *Amyntas*, also called Jumping Worms. These species survive cold winters and can be very detrimental to native forests. They can unintentionally contaminant uncontained vermicompost piles.

## HOW DOES VERMICOMPOSTING WORK?

Vermicomposting is done in plastic containers or wooden boxes where earthworms decompose organic material. The earthworm excrement, or cast material, is what creates nutrient-rich finished compost.



## EARTHWORM SAFETY:

### What you need to know about vermicomposting risks

 All earthworms in the Great Lakes Region are non-native. Most of the earthworms you know and love are European in origin.

 Earthworms are beneficial in artificial environments -- agriculture and gardens -- they can help water move through soil and incorporate organic material to make nutrients more available to plants. **But**, earthworms are *not* good in natural hardwood forests.

 Once they invade a native forest, earthworms mix the duff layer into the mineral soil, changing the structure, chemistry and biology of living organisms in the soil.

 Duff is the top layer of thick, spongy, decomposing material found on forest floors. It is very important for seedling growth and understory vegetation.

 Different species of earthworms have different effects on native forest ecosystems. European earthworms have negative impacts, but the newly arriving Asian species, *Amyntas*, has a particularly strong negative force on native forests and plant communities.



Forest floor: Before



Forest floor: After

## CAN I VERMICOMPOST SAFELY?

To prevent accidental introduction of new earthworm species, consider these three things when creating a vermicompost pile.

### Where does the material come from?

- How confident are you that it doesn't contain earthworms or their cocoons?
- Is it looked at or monitored as it arrives?

### How disciplined is on-site management?

- Is the compost contained or is a barrier in place to prevent earthworms from entering/exiting the material?
- Do you know what species of earthworms you have in your compost and in the area surrounding your compost site?

### How does the compost leave the site?

- Is the compost frozen, or otherwise treated, to remove or kill all earthworms and their cocoons before being introduced into an outside environment?

**Prevent earthworms, and their egg cocoons, from being introduced to a natural environment!**

