



**WHAT
ABOUT
THOSE
Crazy 
JUMPING
WORMS?**





The invasion of European earthworms into North America has long been recognized and studied in the United States though the newer, secondary invasions of Asian species have been little realized, detected or studied until recently and currently are not at all well understood.

Jumping worms in the genus *Amyntas* are currently invading areas around the globe, including North America, Central America, Europe and now WISCONSIN.



Amyntas spp.

Jumping worm, Crazy Worm, Snake Worm, Alabama Jumper

- They are presently a **PROHIBITED** species in Wisconsin under Invasive Species Rule NR 40. We have recommended they be reclassified to a **RESTRICTED** species.

<http://dnr.wi.gov/topic/invasives/classification.html>

- The first population was identified in 2013.



Amyntas spp.

Jumping Worm, Crazy Worm, Snake Worm, Alabama Jumper

Characteristics

- **Darker in color – appearing almost gray**
- **Glossy smooth skin**
- **Light milky white clitellum smooth to the body**
- **Very active, thrashing and jumping**
- **Moves like a snake**
- **Sheds its tail when handled**
- **Parthenogenic – asexual reproduction so it only takes one worm to start a family.**





WHY IT'S GOING TO BE A PROBLEM?

Biology & Ecology

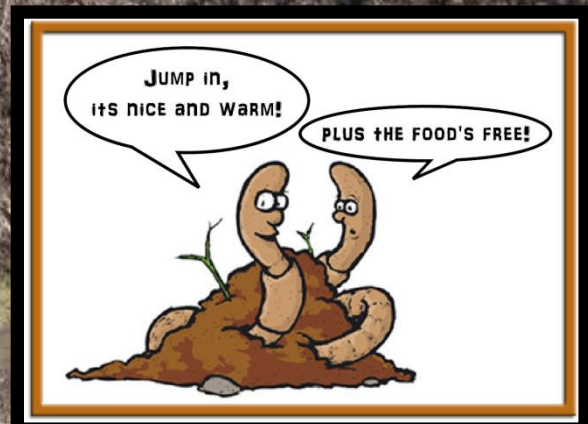
- Reaches maturity in 60 days much faster than Lumbricidae species at 120 days – thus allowing for 2 hatches a season.
- Voracious appetites
- Highly adaptive to temperature changes
- Cocoons winter over
- Adaptive, non-particular to habitat types
- Outcompetes and pushes out non-native European species of earthworm
- Produces a unique soil signature

Jumping worms are surface-dwelling consumers of leaf litter that may turn up everywhere from suburban backyards to the forest.



HOW ARE THEY SPREADING?

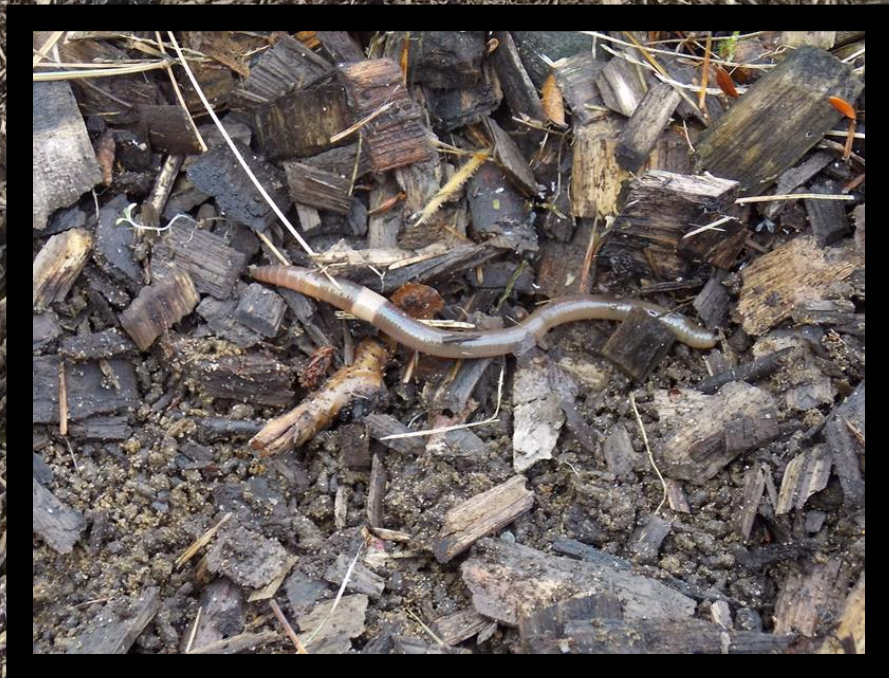




JUMP IN,
IT'S NICE AND WARM!

PLUS THE FOOD'S FREE!

HARDWOOD MULCH







Blue Portulaca

Rainbow Swiss Chard
Hardy & easy to grow!

Kale Italian Lacinate

BROCCOLI

The Red

The Purple

Ball







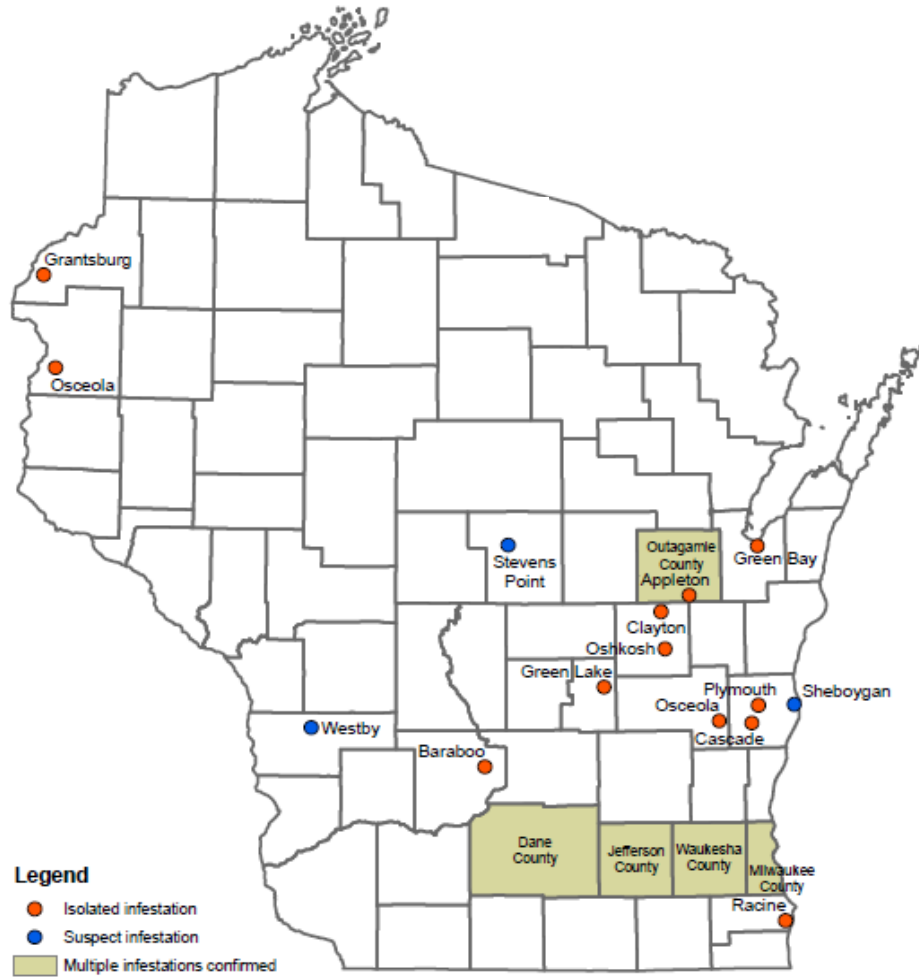




Moving soil from one place to another, the horticultural trade can facilitate the passive spread of invasive earthworms.

A single Jumping worm stowed away in a potted plant can go home with a customer and start a new infestation.

Amyntas spp. (crazy worm) Infestations



October 2014

WHERE
ARE
THEY?

WHO IS IMPACTED?

- Homeowners
- Gardeners
- Composting (large & small scale operations)
- Mulch (large & small scale operations)
- Landscapers
- Nurseries
- Cities, Towns, Municipalities

WHAT ARE WE DOING?

Developing BMPs

Reasonable precautions means intentional actions that prevent or minimize the transport, introduction, possession or transfer of invasive species. Reasonable precautions include but are not limited to **BEST MANAGEMENT PRACTICES practices (BMPs)** for invasive species.

POTENTIAL BMPs

- Cleaning
- Mulch onsite
- Mow leaves into lawn
- Don't share or move plants if you suspect Jumping worms
- Check plants before you purchase
- Buy certified soil, mulch, and compost. Know the origin

DRAFT BMPs

- Watch for worms and signs of their presence.
- Educate yourself, and others to recognize Amyntas.
- Only use, sell, plant, purchase or trade landscape and gardening materials and plants that appear to be free of Amyntas.
- Only sell, purchase or trade compost that was heated to appropriate temperatures and duration following protocols for reduction in pathogens (PFRPs - detailed under NR 502.12)
- **Arrive clean, leave clean.** Clean soil and debris from vehicles, equipment and personal gear before moving to and from a work or recreational area.

CAN WE KILL THEM?

We're working on that...

Research indicates that tea seed meal, a natural by-product of tea oil manufacture, and containing natural surfactants called saponins, is effective for expelling earthworms. The mode of action is similar to that of mowrah meal, a mainstay for managing earthworms on golf courses a century ago. Tea seed meal has been formulated into an organic fertilizer (Early Bird™ 3-0-1) suitable for use on fairways and putting greens.



WHAT CAN YOU DO?

SPREAD THE WORD NOT THE WORM!

