Asian Jumping Worms

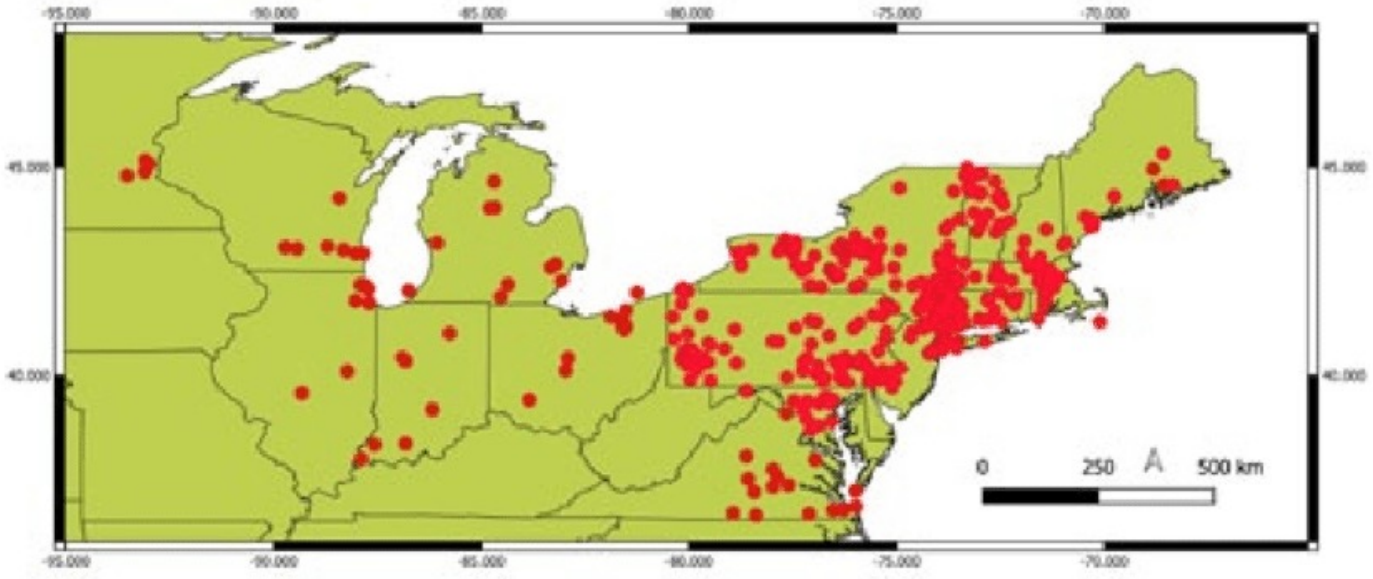
By: Tara Roy, Logan Collier, &
Nick Rodano

Outline

- Data: winter temperatures increasing and Asian worm sightings
- Causes and Effects of Asian Jumping worms' invasion
- Adaptation strategies
- Conclusion

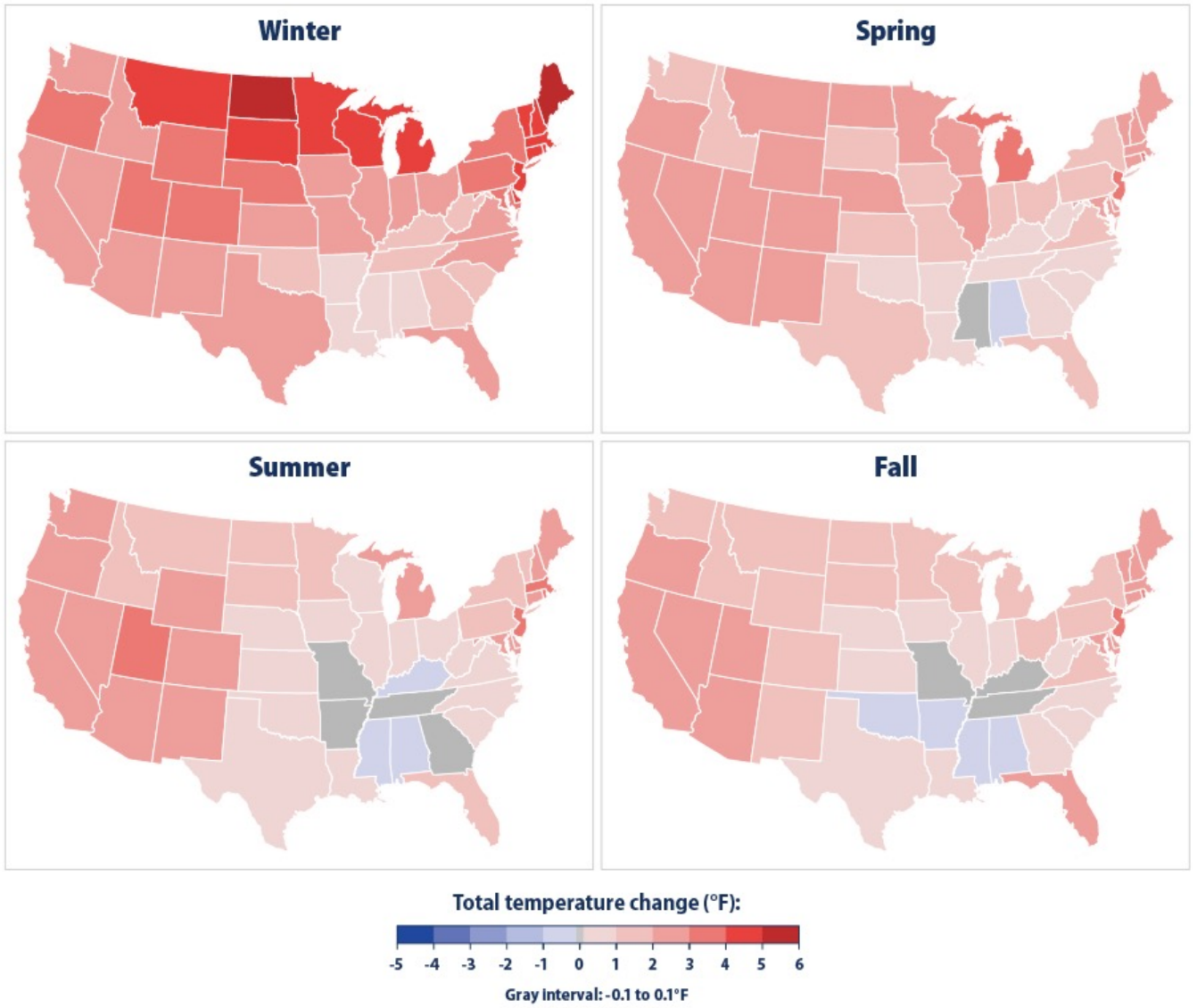
Map of confirmed Asian jumping worms' sightings

Sightings all over the Northeastern United States

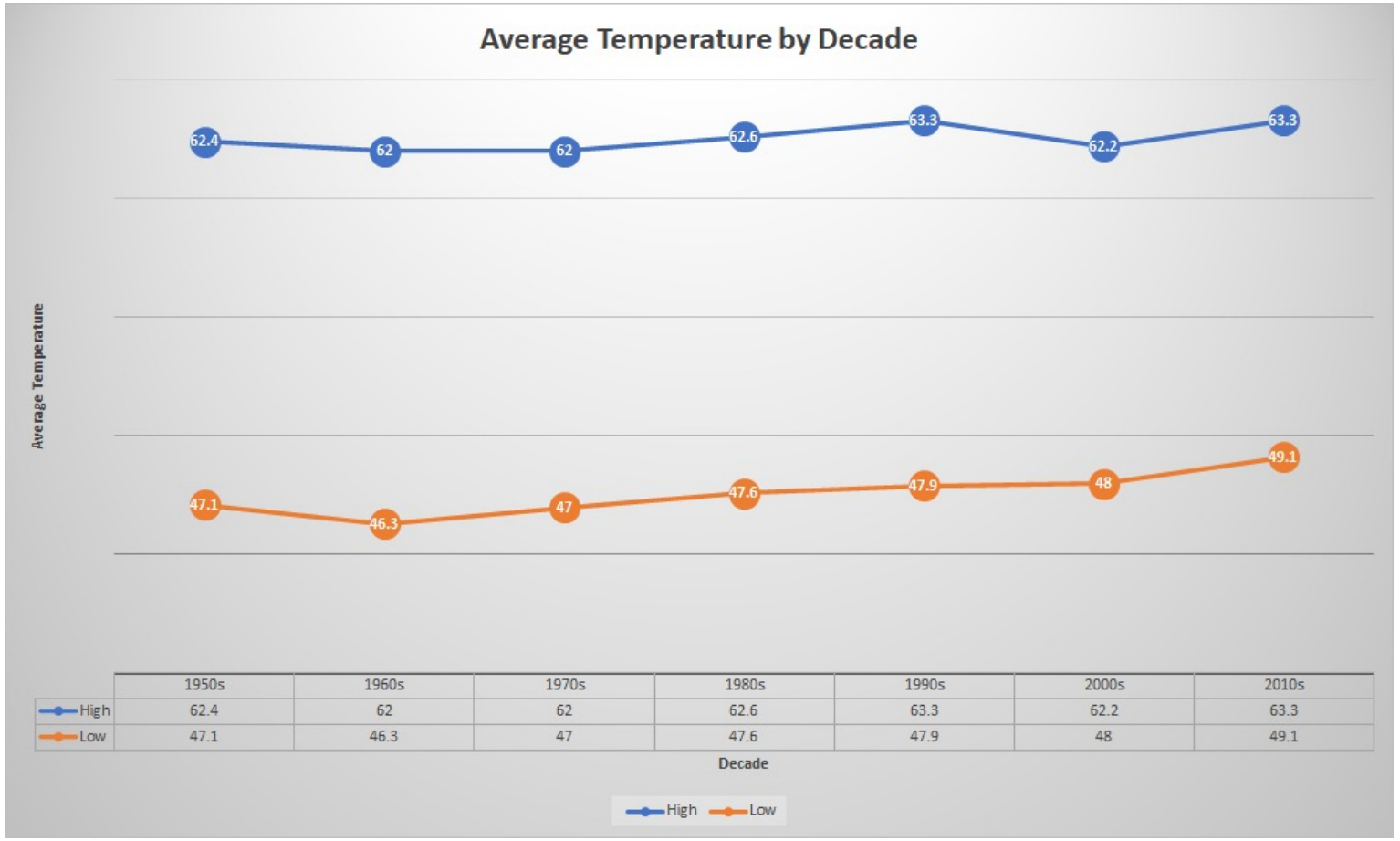


Why are they here now?

- Average winter temperature increasing
- Northern States especially suffer



Temperature Increase by Decade



What harm can they cause?

- Devour organic matter too quickly since they are endo-epigeic
- Deprives soil of nutrients needed for plants and other life to grow
- Excrement over fertilizes soil changing its chemistry dramatically
- Excrement does not easily break down into the soil

How to differentiate from Earth worms

- Both are bad in excess
- Jumping worms are worse
- Earth worms are outcompeted by jumping worms
- Asexual verse sexual reproduction

Comparison: jumping worm vs. European nightcrawler

Jumping worm	Eurpean nightcrawler
Brown/gray	Pink/reddish
Bodies are sleek, dry, smooth and firm	Bodies are thick, slimy, floppy
Thrash violently when disturbed; snake-like movement	Wiggle and stretch when disturbed.
Mature worm 4-5 inches long	Mature worm 6-8 inches long
Light colored, smooth clitellum* that is flush with body, relatively close to head. Completely encircles body.	Reddish or pink clitellum* slightly raised from rest of body. Partially encircles body (like a saddle).

How did they get here?

- Mulch needs to be heated to 104 degrees Fahrenheit
- Many came over from Asia in mulch or dirt
- Illegal to sell as bait but sometimes gets mixed up

Adaptations?

- Mostly small scale currently
- Use charcoal soil in gardens to kill them
- Use mustard powder and water to get them to surface to hand pick them

Larger scale adaptations

- Not eaten by many native predators
- Only eaten by chickens and moles
- Maybe leave that mole in your yard alone and alive
- Plant species that deter worms
- They are also affected by Pine needles
- Don’t like native blue grass

Conclusions

- Threat to forest ecosystems
- Few effective adaptations
- Spreading quickly and moving farther north
- Reducing climate only way to reduce spread of invasive jumping worm populations