

Earthworm Invasion?

Citizen scientists needed for research at Jay Cooke

By June Kallestad
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CARLTON, Minn. – The hunt is on for invading earthworms in Jay Cooke Park. In late August, scientists were searching the forest floor for visual indicators that non-native earthworms might be having an affect on this ecosystem. This fall, citizen scientists interested in the project are invited to help collect and identify earthworms.

Many people are still surprised to learn that these ribbed wigglers, coveted by anglers and gardeners, are not native to this region. Earthworms were introduced by Europeans some 250 years ago through plants and in ship ballasts from across the ocean. Subsequent generations of Americans have unwittingly spread them throughout the country.

What does this mean for the forests of Jay Cooke Park? According to NRRI scientist Cindy Hale, it can mean stress on the forest floor. Trilliums, orchids and other flowering plants are threatened as is perhaps even the regeneration of sugar maple trees.

In Jay Cooke in recent weeks, scientists went to random plots all over the park looking at the leaf litter, the decomposing duff layer, and the mineral soil and identifying tree types. These walk-through surveys have been conducted at about 150 plots in 10 regional parks and a couple of wayside rests. In mid-September they'll go back to 10 percent of the sites – including Jay Cooke – with citizen scientists to help extract earthworms and identify them.

There are several species of earthworms that are not yet widespread across the Great Lakes region but have the potential to be very destructive. Since earthworms on their own travel very slowly, people need to be aware and help prevent spreading them unintentionally. There are about 16 earthworm species

invading North America and research shows that the more species of earthworms found in a site, the greater the potential impacts.

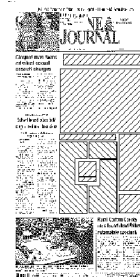
"Many people have learned since kindergarten that earthworms are good because they mix and aerate the soil," said Hale. "But researchers are documenting dramatic changes to the native understory plant species and tree seedlings because earthworms change the soil structure and nutrient availability for these plants."

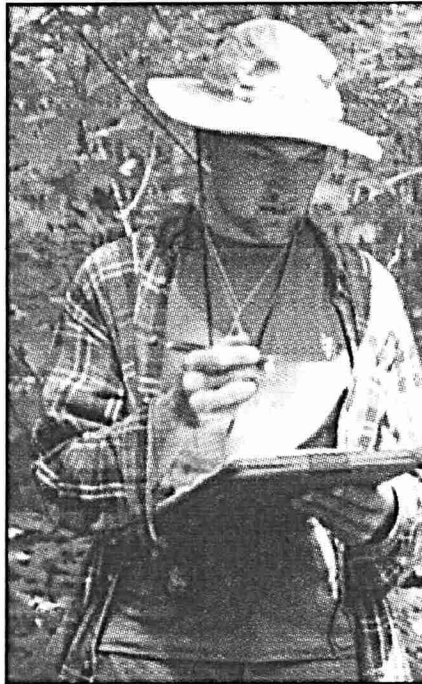
Hale and her research team are seeing evidence that earthworm invasions can lead to a cascade of changes in hardwood forest ecosystems. Many animals – ground-nesting birds, small mammals, amphibians, reptiles, insects, etc. – lose their primary habitat and many food sources with a diminished forest floor.

To become a citizen scientist for this project or for more information, visit GreatLakesWormWatch.org.

Did you know?
 Earthworms can live in water for many months because they "breathe" through their skin (although

they probably don't prefer it).





Leif Olson (above), a biology student at UMD, records data during a survey in Jay Cooke State Park. Earthworms (top) are often introduced by anglers dumping bait shop worms on the ground.
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