

Upcoming DCIST Monthly Meeting

Monday September 26th, 2pm

Crossroads at Big Creek

Invasive Earthworms

Healthy, undisturbed forests are typically stable ecosystems anchored in a very complex soil structure that teems with macro and microscopic life. Over the last 15,000 years the forests north of the glacial moraine evolved without earthworms. The glaciers scoured the land down to bedrock, forcing all life forms to move south. The only possibly native earthworms surviving the glacier in Wisconsin are in the southern driftless area of the state. Though the earthworms we are all familiar with were introduced by explorers and the first settlers, the problematic European and Asian worms arrived in agricultural and horticultural material. Similarly, the fishing industry has fostered the spread of earthworms when they are sold by bait shops and then often dumped at the edge of wooded lakes and streams.



Since Wisconsin's forests evolved without earthworms, these ecosystems depend upon the **slow break down of organic matter** to gradually release nutrients back to the soil for use by native wildflowers and tree seedlings. The key to health in our state's forests resides in a fungal-based soil that slowly decomposes its organic matter. A healthy layer of leaf litter (duff) in a northern forest is woven together with threads of fungi that binds the litter to the soil.



The leaf litter in a forest is comparable to the skin on an animal. It retains moisture, protects the organs (roots), breathes, prevents erosion, deters pathogens (non-native plants), and promotes seed germination. A **nutrient balance has evolved** in this stable system between the vegetation above ground and below the leaf litter. When that system loses its leaf litter it is like puncturing your skin. Erosion follows and nutrients bleed quickly from the soil. Such disturbance soon exposes the soil, **making it vulnerable to non-native, invasive plant species, compaction, and increasing the run-off of rainwater**, which would normally keep the soil moist. The disturbed soil and invasive plants soon alter the stable system, causing a **decrease in the diversity** of plant/animal relationships, which in turn begins a cycle of non-native invasions that tends to lead to monoculture conditions which are not beneficial for forests. The presence of the invasive species, dryer soils, lack of seed bed and compacted soil greatly decrease tree regeneration.



Earthworms are notorious disturbers of soil. Their disturbance creates *healthy conditions for farms and gardens*, but *unhealthy conditions for forests*. Earthworms have voracious appetites. In one acre of land, earthworms can turn over five tons of organic matter in one year. When a forest system becomes heavily infested with earthworms they consume most of the leaf litter in one season. By summer's end the forest floor is depleted and the vulnerable soil becomes exposed to weathering and compaction. This rapid consumption and digestion of leaf litter also releases the stable nutrients, which in effect is like fertilizing the forest. Again, fertilizing farm fields and gardens, which are essentially monocultures, benefits those systems. On the other hand, fertilizing a forest, which is not monocultures, is **like planting weeds in your garden**.

What can you do?

While we don't have a way of ridding the forests of worms once they are established we can keep them from spreading to forests that are not as yet invaded.

- Don't release live worms on land or in the water
- Dispose of live worms in the trash.
- Avoid introducing worms and their eggs (vermicomposting) to native landscapes.
- Wash your tire treads and shoes.

Join DCIST and Bernie Williams of the DNR Monday September 26th at Crossroads at Big Creek to learn more!!

Monster Grass

a regionally wide issue, *Phragmites australis* is the largest and most visible invasive species problem we have here on the peninsula. Due to naturally occurring low water levels in the last 10 to 15 years, exposed lake bed has become a favored space for phragmites establishment. These dynamic shoreline areas are native habitat to many rare and threatened plant species and shore birds will avoid nesting in aggressive phragmites patches. Phragmites is a grass and therefore can reproduce by seed, although only about 10-15% is viable. Spreading is usually accomplished with its rhizomes, or root structures, and by its above ground runners (called stolons). Rhizomes can break off during beach maintenance activities and in ice shoves and are able to float around in shallow bays and then



establish elsewhere. Exotic phragmites clones can spread over 30 feet diameter area in one growing season and can reach heights of 16 feet.

Controlling phragmites will be an issue of maintenance for the next decade or so. Land managers do not hope to eradicate it, but are using control efforts as a tool to preserve the biodiversity that exists on the Door Peninsula shoreline. To avoid further facilitation and transport to our natural areas and preserves, we are now targeting phragmites clones in our Right-of-Ways. If you would be interested in assisting DCIST map these areas please let us know! dcist1@gmail.com

DCIST would like to highlight a few of the successful phragmites treatment projects that have been happening throughout the peninsula. Thank you to all who have helped in mapping, communicating, treating, coordinating, and supporting these efforts!

Jacksonport (various projects), Washington Island, Bjorklunden, Appleport Lane-Liberty Grove, Little Sturgeon Bay, Lake Forest Park Road, Baileys Harbor, Whitefish Dunes State Park, Detroit Island, Spikehorn Bay/Cana Island, Chambers Island, Moonlight Bay, Ephraim (various individual properties), Newport State Park, Clark Lake, The Ridges Sanctuary, Gardener Swamp, Clar-Lin Road-Clay Banks, Sand Bay-Liberty Grove, Toft Point

If you have phragmites in your wetland or on your shoreline property, please help the community by controlling it. For available resources, contact DCIST at 920-746-5955. *Phragmites australis* is an aquatic emergent plant. It prefers wetlands, areas along stream banks, shorelines, and saturated soils. Exotic clones are very tolerant of different environments.



Phragmites Mapping Workshop

With an almost complete inventory of the phragmites along Door County shorelines, we are looking to obtain the last of the information on the Southern Door bay side. **Mark your calendars for November 20th at 8:30am. Meet at Sugar Creek County Park.** After, we will meet at Rites Cove (2733 Bay Rd) to watch the Packers destroy the Buccaneers.

**For any questions regarding upcoming volunteer opportunities, please contact Marne Kaeske at 920-839-2802*



Mapping workshops throughout the county have helped us determine the amount and distribution of Phragmites clones. This information is necessary to develop a practical management plan.

Weed Ecologist at University of Nebraska-Lincoln, Steve Young has asked DCIST to assist in a research project. He is designing an experiment testing drought tolerance of Phragmites. DCIST is looking for volunteers to do some seed head collections of both exotic and native stands of Phragmites next month. (This will be difficult with all the control projects that have gone on!) If you are interested in helping out, please give Marne a call: 920-839-2802

Great Job! To those stewards who got aquatic pesticide applicator certified, and took to the phragmites in their own back yard!