

With temperatures slowly getting warmer, we are seeing more and more activity within our forests and ponds! As you walk by ponds, inland lakes and rivers, keep an eye out for turtles, snakes and frogs. Spring peepers have been peeping for a month or so already, and you can expect to start hearing leopard and pickerel frogs soon. We at the JLW Cisma also want to wish you happy Earth Day which is on April 22nd, hope you get the chance to get outside and enjoy a hike or some gardening!

Vulnerable Vernal Pools Serve As Critical Habitat For Some Species!

Vernal pools are naturally occurring bodies of water that undergo cyclical flooding in the spring and typically dry out by the end of summer, and thus cannot support fish populations. They can be small puddle like depressions or large lake like bodies of water, and found in a variety of habitats such as in forests, wetlands, meadows etc. Due to the absence of fish, these pools provide refuge for invertebrates, amphibians, and reptiles larvae. Not only is the protection of the vernal pool itself important, but also the area around it. Salamanders often live within 1000 ft of vernal pools, and faithfully migrate each year to the same vernal pool to lay their eggs. Unfortunately, vernal pools are under threat from fragmentation, destruction and invasive species, and so are the species that live near them!



Vernal pools serve an important role in the lifecycles of frogs and salamanders!

Salamanders often hide under logs and leaf litter, and emerge during the night to migrate. Invasive plants like garlic mustard, stiltgrass and knotweed can suppress the growth of new tree seedlings, and invasive pathogens can kill trees which decreases habitat over time. Areas with a lot of invasive species can gradually take up water that would have drained into vernal pools, potentially impacting water levels of smaller vernal pools. Last month, we discussed invasive earthworms and their roll in soil nutrient reductions. Research has found that salamander abundance decreased as soil nutrient decreased, indirectly linking invasive worms to fewer salamanders. Finally, herbicide and pesticide application can drain into vernal pools via runoff, killing organisms living there. We ask readers to keep an eye out for vernal pools in your area, and help protect them from invasive species and fragmentation should planning and zoning changes and construction take place nearby.

Invasive Species Spotlight—Garlic Mustard

- *Alliaria petiolata* is a biennial herbaceous plant from Europe
- Forms basal rosettes in the first year, and can grow up to 4 ft tall the next year
- Flowers are white with four petals, and clustered at the top
- Leaves have scalloped edges and triangular in shape
- When crushed, leaves smell like garlic
- Produces allelopathic compounds that limit other species from germinating



Photo Credit: Shikha Singh

Native Species Spotlight—Spotted Salamander

- *Ambystoma maculatum* is a found in the Eastern half of the country (but not in Florida)
- They have dark black skin with yellow or orange spots along their back
- They can reach 7 in in length
- Females lay eggs in ponds as young salamanders breath through gills for the first few months
- They migrate to the same pond every year



Photo Credit: Shikha Singh

Upcoming Events

April 23rd—Jackson County Conservation District *Earth Day Celebration in the Park* (Cascades Park, 1pm to 4pm).

jacksoncd.org

May 18th—NAISMA Seminar (virtual, 2pm to 3pm). *Using Community Based Social Marketing to Prevent the Spread of Invasive Species*

us02web.zoom.us/webinar/register/WN_ICTz-J9zSC2lZnHmQVMp-g



Website of the Month

Great Lakes Aquatic Nonindigenous Species Information System has a database that allows you to look up regulations for many aquatic invasive species within the Great Lakes region! It includes individual states as well as Canadian regulations!

glerrl.noaa.gov/glansis/raT2Explorer.html

If you have questions, please contact Dr. Shikha Singh at shikha.singh@macd.org or (517) 395 - 2089.

Visit our website for more events and resources: www.jlwcisma.weebly.com



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