

## *Rare Salamanders Threatened by DCR's Cutting Plan*

On Saturday, January 12, 2019 the Wendell State Forest Alliance held the *Rally to Save Our Oaks* at the Wendell State Forest Ranger Station. Oaks are not the only living things being affected by the Department of Conservation and Recreation's cutting plan for this 117.6-acre section of the forest that straddles Montague Road at Brook Road in Wendell.

One of the many things I love about Wendell is the community's almost universal respect for the wildlife with whom we share our neck of the woods. We put up turtle crossing signs, and, on warm, rainy spring nights, we grab ponchos and flashlights and head out to carry frogs, toads and salamanders safely across roads during the annual amphibian migration.

The large vernal pool in the Wendell State Forest just to the northeast of the Brook Road - Montague Road intersection is the breeding habitat of several amphibian species, including the Jefferson Salamander, a Species of Special Concern under the Massachusetts Endangered Species Act. (1) While the presence of Jeffs has not been general knowledge, Wendell's herp fans are proud that our tiny town is one of only 51 towns in the state with officially-recognized Jefferson Salamander populations.

Because of this vernal pool this section of Montague Road is one of the busiest amphibian crossings in Wendell. And it's not just in the Spring. According to Mass Wildlife's Natural Heritage Endangered Species Program (NHESP), Jefferson salamanders are terrestrially active in both the Spring and Fall. (2) This past fall, however, contractors for the state Department of Conservation and Recreation brought heavy equipment onto the rain-soaked ground and began cutting the trees.

In its Jefferson Salamander fact sheet, NHESP recommends that wetlands with Jefferson Salamander populations be given a 1,000-foot buffer zone where "forest loss/fragmentation, road traffic, soil compaction, and introduction/growth of invasive, non-native vegetation" should be kept to a minimum. The fact sheet goes on to say, "... to guard against the introduction and spread of amphibian pathogens and infectious disease ... [visitors] should adopt and promote appropriate equipment-sanitation procedures ..." (1)

The recommendations in NHESP's fact sheet are not laws and so do not carry the weight of the state's Wetlands Protection Act or the Wendell Wetlands Protection Bylaw. Our bylaw requires a 200-foot buffer zone, to which the DCR plan does adhere, but by NHESP's standards these laws are inadequate where rare species are concerned.

Nor are the contractors required to sanitize their tires, and boots, etc., which is as yet the only defense against emerging amphibian diseases, including the chytrid fungus. This deadly pathogen is driving amphibian species to extinction in warmer climates. Scientists hypothesize that it may have been kept in check by New England's cooler temperatures, but that defense is likely to disappear as climate change progresses.

Wickett Pond, which abuts the cutting area to the northeast, is also state-recognized rare species habitat.(2) In addition, visitors to the site have found two potential vernal pools near the center of the cutting area that have yet to be surveyed for the obligate species that would allow state certification.

Citing a study in the journal *Ecosphere*, in 2014 *The New York Times* reported that salamanders also play an important role in carbon sequestration by eating leaf-shredding insects: Leaf litter from deciduous trees is on average 47.5 percent carbon, which tends to be released into the atmosphere, along with methane, when the shredding invertebrates shred and eat them ... If there aren't as many shredders at work (because salamanders ate them) and the leaves remain in place, uneaten, they are covered by other leaves ... The anaerobic environment under those layers preserves the carbon until it can be captured by the soil, a process called humification.(3)

As humanity's knowledge about ecology grows, it is slowly dawning on us how much our well being is interwoven inextricably with that of our fellow creatures and the ecosystems we all inhabit. Unfortunately, recent news reports tell us that humans have wiped out about 60% of the Earth's wildlife, primarily by destroying habitat. "Freshwater habitats are the worst hit," *The Guardian* reported on October 30, "with populations having collapsed by 83%."(4) Wouldn't it be nice if this section of the Wendell State Forest could remain a safe haven for wildlife in what is for them an otherwise inhospitable world?

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