

Knowing Vernal Pools

By Caleb Leahy, Kennett High School intern

Being a senior in high school with a real hunger for new experiences, my interest was piqued when I first heard about the Town of Tamworth's vernal pool monitoring program. Having spent portions of my early childhood living in the woods of Maine, I fancied myself a child of this sort of habitat. Where I lived, the always muddy little road leading up to our home would sometimes be rendered impassible by the rising waters of the surrounding wetlands in the early spring (except by canoe, of course). In my earliest memories, nighttime was never without the familiar voice of the spring peeper.



Photo by: Mia Akaogi

I had a longing, an itch to take a step out of the walls of the classroom, and into another world which elicited my participation. Now older, I wanted to immerse myself in the ecology of this habitat, to familiarize myself scientifically with a world which I knew intuitively.

This past spring I was an intern in the vernal pools monitoring program offered by The Great Hill Ecology Center, working in conjunction with the [Green Mountain Conservation Group](#) on water analysis. As the name implies, part of this program involved locating potential vernal pools (or "PVPS"). Thankfully, this was made easy by the hearty enthusiasm of our local community members, whose participation and support made this first part happen. It was their voluntary help which left us with a topographical map riddled with PVPS, and it was the continued assistance of a handful of community members which carried us forward in the identification and monitoring of the actual vernal pools within our area.

You may be wondering what a vernal pool actually is. At the time when my mentor and I visited our first pool, I had done a bit of research and had formulated a fuzzy definition. As we first approached



Photo by: Mia Akaogi

this pool, which bordered Lake Chocorua, I remember we heard the unmistakable duck-like call of a male wood frog, a fairly rare occurrence for these stoic amphibians. The pool came into view rather suddenly, separated from the lake by a thin barrier of land and a fallen tree. I was drawn to the still surface of the water, where several shrubs growing out of the surrounding terrain dipped into the water. Attached to the submerged plants were the eggs of the wood frog, hundreds of tiny black embryos encased in little islands of jelly, drawn together in clusters hardly the size of a baseball. I was asked by my mentor to observe and to count the individual clusters. I counted eight. He had counted four only earlier that same day.

Caleb Leahy, author of this article and currently a freshman at College of the Atlantic, holding up a salamander egg mass during the training.

I remember my uncertainty as I was encouraged to take a closer look at one of the clusters. Only a few feet from where I stood, I stepped in and kneeled to the surface, carefully wetting my hands, I cautiously cupped my hand underneath the living mass of potential pollywogs and slowly lifted them and the branch which they were fastened to above the water ever so slightly. There they emerged into the open air only a few hours after having been laid.

I choose to introduce you to the vernal pool in the same way that I first experienced it because, all definitions aside, this habitat is defined by the critters that depend on it, just as these critters are defined by their habitat. Vernal pools are seasonal, meaning most years they dry up completely. Because they do so, they are uninhabitable by fish, and so are critical breeding places for invertebrates and amphibians such as the wood frog, fairy shrimp, spotted, Jefferson, and blue-spotted salamanders. These species virtually require vernal pools for their life cycle, they are considered indicator species. Their presence in a seasonal wetland identifies it as a vernal pool.

I wasn't sure what to expect when I applied for this internship. As it turns out, I was definitely not disappointed. It is a very rare thing when one is able to physically immerse oneself in the very thing which one is striving to know and to understand. The experience of monitoring and learning about vernal pools is not only "hands on", rather it is an experience which immediately commands the participation of all of the senses. It doesn't hurt that I was able to work one-on-one with a knowledgeable teacher, one who was ready and willing to answer my questions and provide me with the guidance and assistance I needed. You really can't beat that. Here's a special thanks to my friend and mentor Jamie Riel for a much cherished experience.

More about the Tamworth Vernal Pool Monitoring Program

By Mia Akaogi, Water Quality Program Coordinator, [Green Mountain Conservation Group](#).

This spring, Great Hill Ecology Center (GHEC), Tamworth Conservation Commission (TCC), and Green Mountain Conservation Group (GMCG) partnered on a vernal pool monitoring program in the town of Tamworth. The chair of the Tamworth Conservation Commission, Ned Beecher, describes this project as very important to Commission: "Since it began in 1996, a main focus of the Tamworth Conservation Commission has been wetlands. But we have not managed to gather much information on vernal pools. This project is helping us do a better job in understanding these important local seasonal wetlands." In its first year, our vernal pool monitoring was successful in locating 32 potential vernal pools, monitoring several pools to confirm viability for certain species, and providing a field-oriented research internship for a local high school student. Jamie Riel (GHEC) is pleased with the results of this year's efforts: "Through the help of citizens and Kennett High School intern Caleb Leahy, we were able to monitor eight vernal pools this spring. Our goal is to monitor these pools as well as additional pools next year in the town."