

Vernal Pools Survey Results Unveiled at Farm and Home Center Forum

By Amy Belotti

Dr. Michael Klemens, a research conservationist at the Cary Institute of Ecosystem Studies presented results from a vernal pools survey on Wednesday, December 2. The presentation was held at the Farm and Home Center, and approximately 40 people attended, some of whom were participants in the survey. The project was collaboration between the Cary Institute and the Cornell Cooperative Extension of Dutchess County. The study was created after Millbrook Matters, a non-profit, voiced concerns about amphibian mortality.

The survey of vernal pools was conducted with the help of over 30 volunteers and took place in the Town of Washington, which has approximately 200 vernal pools. Klemens defined a vernal pool, describing it to be an isolated water mass that is small, seasonal and fishless. The pools are often unregulated by the New York State Department of Environmental Conservation (NYDEC), leaving them unprotected. He pointed out that there could be unidentified vernal pools in the town, as well as sites that may not actually be vernal pools. There is a degree of inaccuracy in identification. He said that on-site examination is the only way to do a positive identification.

The Cary Institute partnered with Cornell Cooperative Extension in training the participating volunteers who provided the data from 83 of the 200 vernal pools believed to exist in the town. 35 pools were located on Cary Institute land, 48 on private property where permission to conduct the survey was granted. Volunteers were assigned to specific pools. Volunteers assessed such questions as: Are there New York State listed species using the pool? Are there two or more vernal pool indicator species breeding in the pool? Are there 25 or more amphibian egg masses present in the pool? Volunteers listened and looked for vernal pool inhabitants, taking photographs to document and

identify what was found.

Volunteers were able to identify Wood Frogs and Spotted Salamanders, popular findings in the pools. Jefferson salamanders were identified in 15 pools, and Marbled Salamanders were identified in two, possibly three pools. Both are listed as species of special concern. There was also a sighting of a Four-Toed Salamander, a first for the Town of Washington.

Participating scientists surveyed the land in order to understand the locations of vernal pools in high-traffic areas and untouched areas. He said that most activity coming from the vernal pool is within the 100-foot radius of its center, while a radius up to 750 feet from its center is called a "Critical Upland Habitat". It was this larger area that was studied for the landscape analysis.

The study found that many of the vernal pools were located in intact landscapes, untouched by primary or secondary use roads. Vernal pools are not distributed evenly; pool sizes varied. 42% of pools surveyed were on the Cary Institute ground, statistically skewing the results, since they were located on protected ground while the other 58% were not. However, a remarkable amount of intact pools in healthy condition were found.

Anticipating that there would be another survey in 2010, Klemens stated that the next study would target those pools missed in the 2009 survey. It was hoped that other towns would adopt the survey methods to broaden the data base of information.

It will take several months for Michael Klemens and Neil Curri to process the survey's results. They will prepare a technical paper which will be available on the Cary Institute website. It is also expected to be a resource to the Town of Washington as it prepares its comprehensive plan and land use regulations.