MHLC: Fighting Climate Change Through Conservation

What does conserving land have to do with climate change?

MHLC has two climate-oriented goals which help our staff prioritize land conservation projects:

1) To provide habitats and corridors for wildlife affected by climate change, and

2) To fight climate change with carbon sequestration.

Providing Space for Wildlife as the Climate Changes

Wildlife biologists use the term **species range** to describe where a particular animal or plant species historically resides within a landscape. In the past four decades, scientists have seen these ranges shift as animals and plants are forced to adapt to a changing climate. The New York State Breeding Bird Atlas, a project of the NYS Department of Environmental Conservation, was completed in 1980-85 and again in 2000-05. The reports showed significant changes in dozens of bird species' ranges in New York over a twenty year period.

How can a land trust help species adjust to these changes? By prioritizing the conservation of **resilient areas,** which are more resistant to the effects of climate change, we preserve critical habitats. Resilient areas often include forested, hilly landscapes, which help buffer plants and animals from regional climate shifts. They also include microclimates: areas where extensive temperature ranges are found. Microclimates are pockets of specific atmospheric conditions which many animals require to thrive when seasonal changes become more and more extreme.

Focusing on resiliency ensures that the land we bring with us into the future is best equipped to withstand the challenges of a changing climate. MHLC's resource priority areas include the Hudson and Mohawk River Corridors, Hoffman's Fault, the Albany Pine Bush, and the Helderberg Escarpment: some of the most resilient features of the Capital Region.

These priority areas also provide connectivity to larger conservation areas, creating longer pathways for wildlife movement through the landscape. Between the Catskills and the Adirondacks, our three-county service area plays an enormous role in providing natural migratory corridors for plants and animals as their habitat ranges shift northward.

Fighting Climate Change with Carbon Sequestration

Protecting land from development ensures that this land will continue to sequester carbon, or store carbon in one place. Plants use greenhouse gases (including atmospheric carbon) during photosynthesis and, in turn, remove these gases from the atmosphere, trapping them within plant tissues and into the ground. By conserving tracts of land with trees, bushes, grasses, and shrubs, we are increasing carbon storage and allowing plants to remove greenhouse gases from the atmosphere. Wetlands, such as the Vly Creek wetland described on page 3, are also extremely effective at sequestering carbon. By increasing carbon storage, we remove greenhouse gases from the atmosphere and slow climate change and its effects, acting locally for a global impact.

Conserving land means protecting our dynamic, living world, but we can't do it alone. By supporting Mohawk Hudson Land Conservancy, you are helping make a difference here in the Capital Region to save the land that matters most.

Top right: Black-capped chickadee by Robert Stone.

Bottom photo: Acorn on a rock wall by Kelsie E. Burgess.