

Eastern Hemlock *Tsuga Canadensis*

The Eastern Hemlock operates as a foundation species in the Sanctuary, providing food for squirrels, chipmunks, voles, deer, and various bird species. Beyond being a source of food, Eastern Hemlocks provide habitat for other species, creating more unique spaces for various species to use. Deer use the dense canopies of Hemlock stands to escape deep snow and access food in the winter, while Hemlocks growing near water keep localized water temperatures cool by providing the year-round, deep shade necessary for native trout species like Brook Trout. The shade of Hemlock canopies over water also keep the water more oxygenated, an important factor for the biodiversity of streams and ponds. Additionally, the falling needles of Hemlock trees, combined with their dense canopy, creates a uniquely acidic, moist, and cool soil for the understory, providing critical habitat for plant species that struggle to survive elsewhere, contributing to the species-level biodiversity of the Sanctuary. Some notable native plants that thrive in these soils are Blueberries, Rhododendrons, and even Pink Lady's Slippers, a rare orchid.

Eastern Hemlocks in the Sanctuary and New England as a whole provide many benefits to humans too! Because of their dense canopies, Hemlocks keep soils moist in forests, building the Sanctuary's drought resistance. Hemlocks also need less water to grow than other trees commonly found in New England, allowing more water to be available to watersheds during the growing season. In addition to keeping water around, Hemlocks also help prevent flooding during times of the year when other trees are dormant. In times of heavy winter precipitation, Hemlocks along waterways are able to take in excess water to reduce flooding. Hemlocks are also important for watersheds because of their ability to intake runoff, making our watersheds cleaner. On top of these things, Hemlocks provide less tangible ecosystem services like aesthetic beauty, cultural value, and outdoor recreation. Because of their benefit to cool-water fish species, trout fishermen rely on Hemlock stands for fish populations.



This fish sculpture created with Eastern Hemlock branches and needles highlights the connection between Hemlocks and the many unexpected species it supports, like freshwater fish. Try making your own conservation-inspired art incorporating the nature found here in the Sanctuary and tag @agreenerblue and #DrawnToEarth