

Along this Corridor

Water flowing from the Black Head Catskill Mountain Range gathers in this high gradient stream and wetland area. The stream, the adjacent wetland edges and the surrounding spring seeps create this habitat. This landscape has been largely undisturbed since the early 1900s when widespread logging drastically shifted a woodland swamp into an open shrub wetland. The introduction of this pump house also affected the wetland ecology by drawing ground water from its surroundings.

Occasional flooding and groundwater seepage through mineral sub-soils create nutrient rich soils that support a dense plant community. Steepletop Spirea and Sensitive Fern are the dominant wetland plants here. Deteriorating tree roots, trunks and snags add to make organic rich moist soils.

The wetland and stream purify water; filtering nutrient and sediments as the water winds from this headwater stream to the Schoharie Creek and then to the Schoharie Reservoir. This water eventually joins the Ashokan Reservoir where the Catskill Aqueduct begins its 163 mile tunneled trip to Yonkers. In Yonkers the water enters Water Tunnels 1 and 2 to provide water for over 9 million New York City residents. (Merguerian)

References:

- *Soil Survey of Greene County New York*, USDA
- *Biodiversity Assessment Manual for the Hudson River Estuary Corridor*, Hudsonia
- *A History of NYC Water Supply*, Charles Merguerian.



About the Mountain Top Arboretum

The Mountain Top Arboretum is a living museum of trees and shrubs created for the education and pleasure of the public. Its founders, the Ahrens family, designed and planted a seven acre mountain top area starting in 1977, to display the range of native and exotic trees and shrubs that successfully adapt to the rigorous climate at 2,400 feet elevation. Today we have twenty three acres of displays in three distinct areas: the West Meadow, the Woodland Walk, and the East Meadow. We conduct programs for the public including the Annual Garden Fair, summer lectures, and workshops. Self-guided tours are encouraged and guided tours are possible by contacting the Executive Director at info@mtarboretum.org

Our Mission

The mission of the Mountain Top Arboretum is to provide for the Catskill region a unique and beautiful mountain top environment for a living sanctuary of native and exotic trees and shrubs. Using this sanctuary we will:

- Engage in the applied science of horticulture;
- Promote stewardship of the environment; and
- Offer a diversity of programs for the education and pleasure of the public.



Route 23C and Maude Adams Road,
P.O. Box 379, Tannersville, New York 12485
518-589-3903 • www.mtarboretum.org



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Mountain Top Arboretum The East Meadow Wetland Water's Journey from "Mountains to Manhattan"



To the right of the Pump House you will find markers locating the following:

1. Filtering Plants

Plants along the stream bank edges slow the water flow and allow nutrients to seep through the soil and into the plant roots. Deep root structures stabilize the bank and reduce erosion creating a healthy and diverse plant community. The surrounding wetland acts as a large filtering sponge for both groundwater and rainwater.

2. The Nature of this Soil

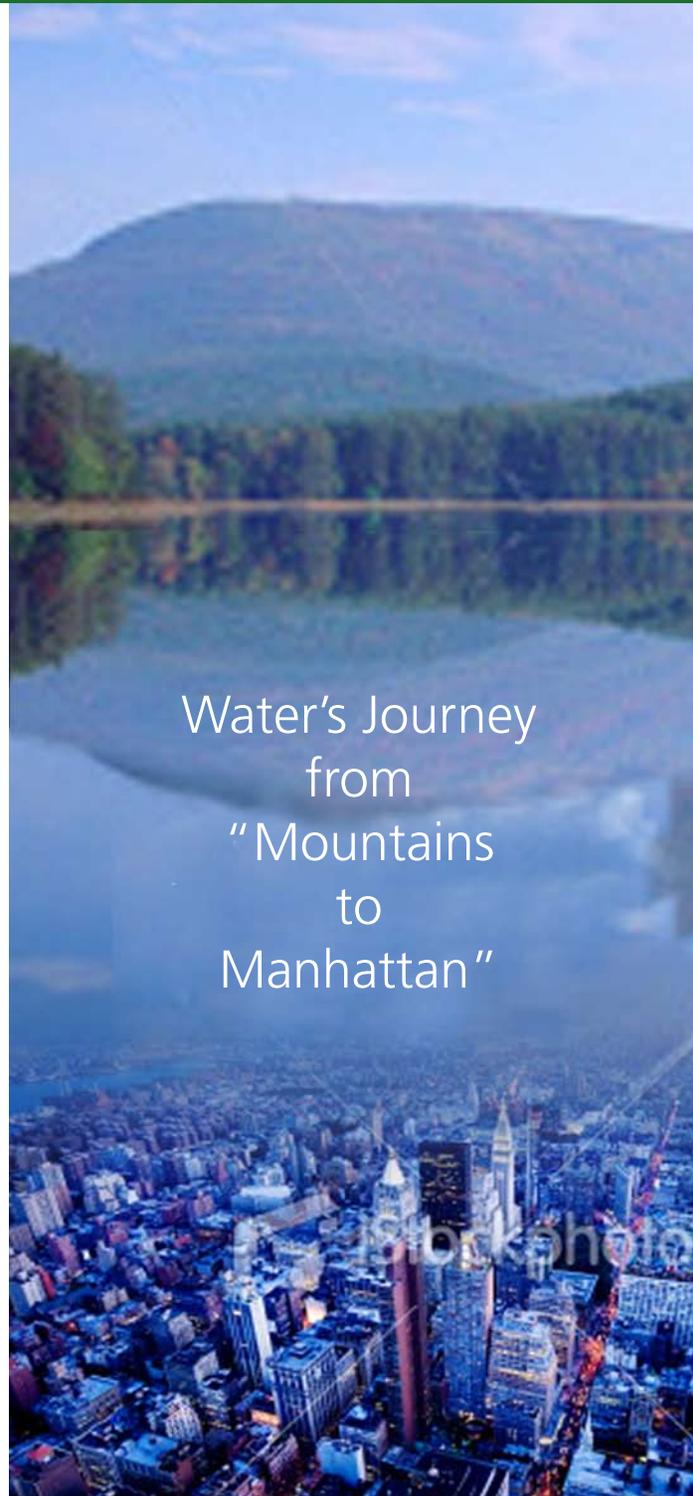
The slow and gradual accumulation of nutrients provides a rich organic base for plant life. These silt loam soils are glacial till, derived from reddish sandstones, siltstones and shale. An elevated ground table keeps soils moist year round. The oily appearance on the soils is naturally occurring from magnesium.

3. Stream Dynamics

This relatively stable stream slowly meanders through ground held in place by large rock outcroppings. The ox bow shape, characteristic of a slow stream, creates more stream edge habitat. As the stream reaches the steeper slopes of the woodland, the route becomes less serpentine and the rushing water erodes the soil, exposing the rocky till.



A stream runs through the Arboretum's Wet Meadow.



Water's Journey
from
"Mountains
to
Manhattan"

4. Seeps

Seeps are the places in this wetland where the mineral rich groundwater seeps out of the ground. 50 degree groundwater temperatures create a warmed microclimate, most visible at the beginning and end of winter. Seep habitats support salamanders and dragonflies; the northern dusky salamander and the tiger spiketail, in particular, are of special "conservation concern" due to their diminishing populations. (Hudsonia)

5. Plants found here

All of these plants belong in a primarily open shrub wet acidic meadow community. Some of these plants tolerate low oxygen conditions, yet may also be happy in average garden conditions.

Trees: Alder (*Alnus*); Eastern Larch (*Larix laricina*); Moosewood (*Acer pennsylvanicum*); Red Spruce (*Picea rubra*) and White Pine (*Pinus strobes*).

Shrubs: Steepletop Spirea (*Spiraea tomentosa*); Winterberry (*Ilex verticillata*) and Willow (*Salix*).

Perennials, Ferns and Grasses: New England Aster (*Aster novae-angliae*); Buttercup (*Ranunculus reptans*); Goldenrod (*Solidago*); Creeping Speedwell (*Veronica umbrosa*); False Hellebore (*Veratrum viride*); Sensitive Fern (*Onoclea sensibilis*) and Sedges (*Carex*).



Sedge (*Carex*), Robert H. Mohlenbrock. USDA SCS. 1989. *Midwest wetland flora: Field office illustrated guide to plant species.* Midwest National Technical Center, Lincoln. Courtesy of USDA NRCS Wetland Science Institute