

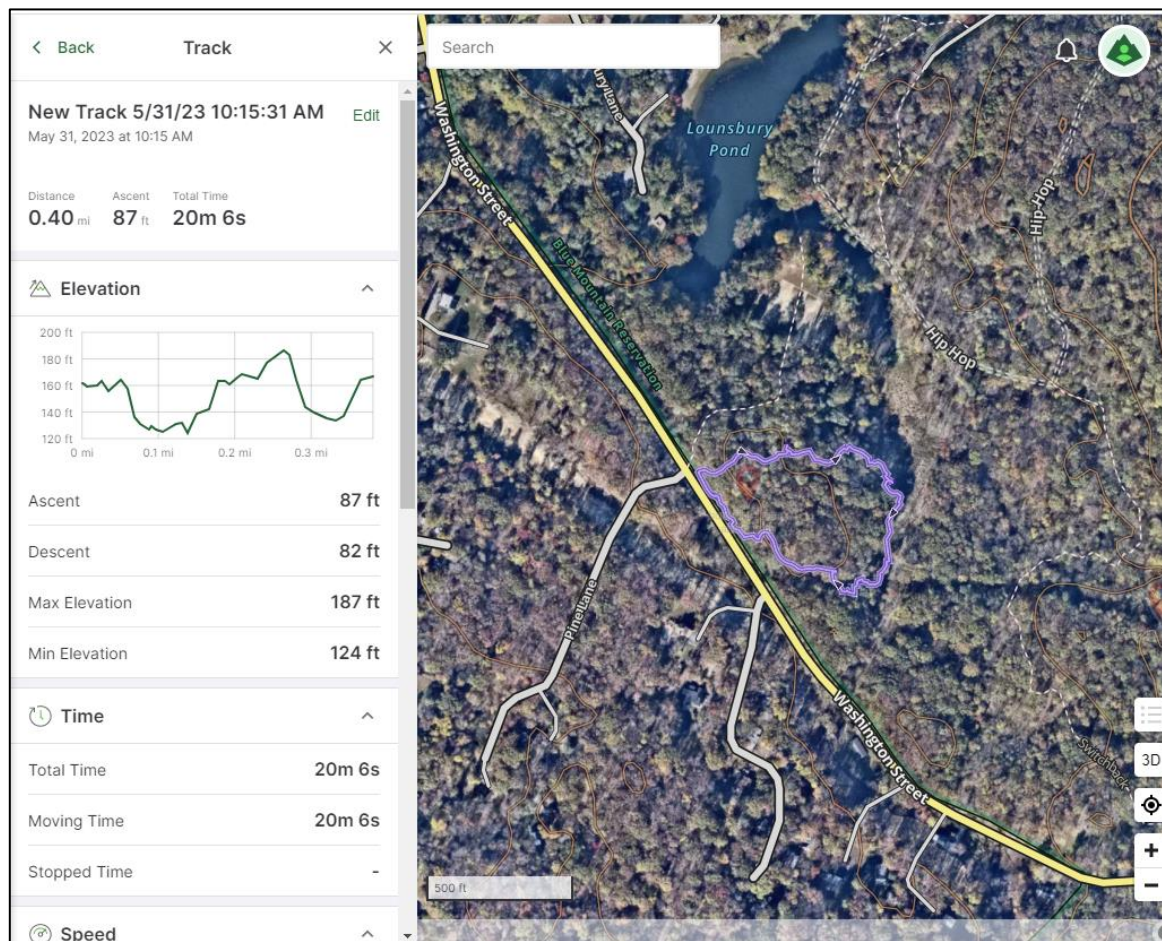
Blue Mountain Reservation Burn Site visit

May 31st 2023

Notes by Kristina Hayek (Cranberry Lake), Taro Ietaka (Mt Lakes), Hayley Lewis (Trailside), Leah Cass (WPRR). Also present: Lindsey Feinberg (Hilltop), John Zeiger (Westchester Land Trust; a.m.), Molly Hickey (Trailside), Scott Williamson (Read), Michael Zazzaro (Read), Danniela Ciatto (Trailside), Julia Snook (Lenoir), Uri Sarig (Lenoir) and interns from Trailside and Hilltop.

Background

Conservation staff visited Blue Mountain Reservation on May 31, 2023 with the goal of documenting the aftermath of a wildfire that ignited on April 13, 2023 at approximately 2:45 pm. News coverage claimed 40 acres burned ([Large fire contained at county park reservation in Town of Cortlandt \(news12.com\)](https://www.news12.com/news/local/large-fire-contained-at-county-park-reservation-in-town-of-cortlandt/news12.com/)) however staff mapped only 5 acres of damage (see map below). The gas line clearing to the south and brook to the east flowing out of Lounsbury Pond appeared to act as a firebreak. Staff continued to search beyond those areas, proceeding east, north, and west to return to the parking area without encountering additional burn locations. [iNaturalist observations from Blue Mountain, May 31, 2023](#)



Burn mapped by Molly Hickey – approx. 5 acres

In addition to mapping the perimeter of the burn, meter-square ground cover and 10 meter square tree inventories were done semi-randomly. Data appears at the end of this document.

Staff also documented vegetation along the gas line clearing and searched for populations of native plants from which to collect seed for restoration purposes. There were a number of interesting species, however the presence of Sea Oats (*Chasmanthium latifolia*) was notable – the New York Flora Atlas considers this a non-native (to NY) species and with only one vouchered specimen found in Manhattan. It is a popular plant in near-native plantings though, prompting further investigation. News coverage of work on the Algonquin pipeline from 2015 may have been responsible for this and other species' presence: <https://www.lohud.com/story/westchester/2014/11/12/algonquin-pipeline-projects-impact-on-westchesters-blue-mountain-reservation-under-review/18912209/> Subsequent correspondence with David DeLucia confirmed that post pipeline seeding and invasive species management was performed. Seed list was not included but *it can confidently be concluded that the area at the convergence of two cuts to the east of Washington St and just north of Montrose Station Road (41.263512, -73.916438) is a restoration site.*

Burn site general observations & discussion

- Fire was large in some locations – tree branches were blackened 20' above ground in spots.
- Mature ailanthus seems to have survived and abundant seedlings (not suckers) present. "Why didn't the ailanthus seeds burn up?" See https://www.fs.usda.gov/nrs/pubs/jrnl/2019/nrs_2019_rebbeck_001.pdf - "Effects of prescribed fire and stem-injection herbicide on *Ailanthus altissima* demographics and survival" by Joanne Rebbeck, Todd F. Hutchinson, Louis R. Iverson. Their experiments showed flourishing of seedlings after prescribed burns but those did not persist.
- Barberry (*Berberis thunbergii*) resprouted, burning bush (*Euonymus alatus*) with some regrowth but appears to have been damaged more permanently than barberry.
- Larger Norway maples (*Acer platanoides*) overall seemed okay.
- A lot of suspected grape (although possibly porcelainberry). is grape fire triggered? → makes sense given life history and requirement of smaller trees to make way to canopy
- Dogwood, hornbeam and hop hornbeam did NOT do well
- Adult sassafras didn't seem to do well but, the sprouts seem to be growing rapidly. Some evidence of deer browse on sassafras.
- Fireweed (*Erechtites hieracifolia*) → will there be a lot more next year?
- Some Japanese maple (*Acer palmatum*) seedlings – currently evaluating it for inclusion in LHPRISM invasive tier rankings
- Stiltgrass (*Microstegium vimineum*) filled in patches in sunny areas.
- Not a lot of oak/hickory regeneration. Did the preceding bad mast year/ summer drought have impact?

Recommendations:

- Consider retreatment of resprouting barberry with targeted flame to keep it out.
- Fencing and/or seedling tubing
- Re-seeding → Lindsey will make list. Jumpseed, pokeweed, snake root, carex spp. Hog peanut.
- Maybe plots with fencing and seeding combos
- Continue revisits to monitor progress/changes overtime. Maybe composition will change.

- Some mile a minute vine. Attempt to eliminate so it cannot dominate the area.

Observations upon entering burn site

- *Carpinus caroliniana*, American Hornbeam with basal regeneration
- *Ailanthus altissima*, Tree of Heaven abundant sprouts throughout site
- *Acer rubrum*, Red maple survived fire growing from base
- *Celastrus orbiculatus*, Oriental bittersweet sprout
- *Arisaema triphyllum*, Jack in the Pulpit
- *Vitaceae spp.*, Grape resprout. Abundant. Fire associate? Makes sense if needs to grow along with seedlings/poles to reach canopy. Topic for further research?
- *Persicaria perfoliata*, Mile a Minute. Sparse and pulled where encountered.
- *Populus tremuloides(?)*, aspen. One survived, one dropping green leaves
- *Carya spp.* Survived
- *Viburnum spp.*
- *Trifolium spp.* Clover
- *Hackelia virginiana*, Virginia stickseed
- *Polystichum acrostichoides*, Christmas Fern
- *Sassafras albidum*, sprouting
- *Smilax rotundifolia*
- *Eurybia divaricata*, White Wood Aster
- *Solidago caesia*
- *Dicanthelium spp.*
- *Anaxyrus americanus*, American Toad
- *Pantherophis alleghaniensis*, Eastern Black Rat snake. 4 adults in the same old sugar maple in burn site
- *Odocoileus virginianus*, scat and browse present

Ground cover and tree surveys

Plot centers were chosen semi-randomly within the burn perimeter. After separating from each other, teams semi-randomly selected center points for meter-square ground cover plots and 10-meter-square tree plots. Data appears below.

Ground Cover Assessment #1 – Blue Mountain Reservation

41.264743, -73.924099

Canopy cover <5%

Species Present:

Ailanthus – 5%

Vitaceae spp. – 5%

Portulaca oleracea <1%

Microstegium vimineum <1%

Carex spp. <1%

Oxalis spp. <1%

Erechtites hieraciifolius <1%

Closest tree >6" facing each cardinal direction outside of plot, Burn Height, Diameter

North - *Quercus rubra*, 6'6" burn, 9.5" diameter

West - *Quercus rubra*, 6' burn, 10'6" diameter

South - *Acer* spp. 3' burn, 6" diameter

East - *Quercus stellata*, 4'6" burn, 8" diameter

Ground Cover Assessment #2 – Blue Mountain Reservation

41.265024, -73.923968

Canopy cover 25-50%

Species Present:

Ailanthus – 5-25%

Vitaceae spp. – 5-25%

Carex spp. <1%

Acer palmatum 1-5%

Phytolacca Americana <1%

Rubus phoenicolasius <1%

Chamerion angustifolium <1%

Solidago spp. <1%

Closest tree >6" facing each cardinal direction outside of plot, Burn Height, Diameter

North - *Acer rubrum*, 3" burn, 6" diameter

West - *Quercus alba*, 2' burn, 18" diameter

South - *Acer rubrum* 4.5' burn, 14" diameter

East - *Quercus velutina*, 4'6" burn, 14" diameter



Ground Cover Assessment #3 – Blue Mountain Reservation

41.26555, -73.92487

Trees over 6 inches in nearest quadrant

Norway maple - *Acer platanoides*

Hickory species - *Carya* sp.

Red oak - *Quercus rubra*

Poplar sp - *Populus* sp

Canopy cover 76-100%

Slope - minimal 1-5

Herbaceous cover

Ailanthus seedlings - 1-5%

Vitaceae (grape or porcelain berry?) species - 6-25%

Celastrus orbiculatus/ Bittersweet (sucker)- 0-5% Unknown
grass -1%

Unknown seedling -1% (photo listed)

Erechtites hieracifolia - 1%

Ground Cover Assessment #4 – Blue Mountain Reservation

41.26552, -73.92444

4 closest trees

Quercus rubra (red oak)

Acer saccharum (Sugar maple)

Quercus rubra (Red oak)

Carya sp. (Hickory sp.)

Canopy cover- 76-100%

Slope- west aspect, 2-3%

Herbaceous cover

Oxalis sp- 1%

Unknown species same as last plot- 1% (most likely wineberry)

Ailanthus seedlings - 1-5%

Vitaceae (grape or porcelain berry ?) sp.- 1-5%

One mature *Euonymus alatus* within meter square

Ground Cover Assessment #5 – Blue Mountain Reservation

41.26519, -73.92386

Four closest trees

Acer rubrum (Red maple)

Acer rubrum (Red maple)

Quercus rubra or *velutina* (red or black oak - red oak group)

Quercus rubra (Red oak)

Canopy cover - 50-75%

Slope - 3% east aspect

Herbaceous cover

Vitaceae species (grape or porcelain berry?) 1-5%

Ailanthus seedlings - 1-5%

Erechtites hieracifolia- 1-5%

Unknown grass sp. 1-5%

Tree plot

Location: 41.26520, -73.92512

species	burn height	DBH est	notes
red maple	4ft 8in	6in	mostly dead, resprout on 5 branches
winged euonymous	6ft 6in	2.5 in	dead
winged euonymous	1ft 6in	1 in	dead
winged euonymous	5 ft 6in	2 in	resprout at base
red maple	3ft 3in	3.5 in	dead
winged euonymous	4ft 5in	2.5 in	dead
winged euonymous	5ft 9in	2.5 in	base resprout
winged euonymous	1ft 6in	1.5 in	dead
winged euonymous	2ft 8in	2.5 in	base resprout
grape vine	7ft	1.5 in	unsure if dead
winged euonymous	5ft	2 in	4 base resprouts
shagbark hickory	1ft 6in	7in	continuous char at base, but burn spots higher up, dead
red maple	1ft 3in	1in	base resprout
winged euonymous	10in	1.5 in	no reprout
winged euonymous	2ft 6in	1.5 in	no reprout
winged euonymous	2ft	1.5 in	no reprout

red oak	3ft	10 in	7 resprouts in canopy and 1 base resprout
winged euonymous	2ft 9in	1.5	triple trunk, dead
chestnut oak SNAG	20 ft	10 in	20 ft tall, burned all the way up
red oak	2ft	6in	dead pre-burn
nannyberry/blackhaw?	5ft 7 in	3.5 in	base resprout
dogwood	none	3.5 in	dead, no burn char