A Natural History of the Garfield Avenue Conservation Area

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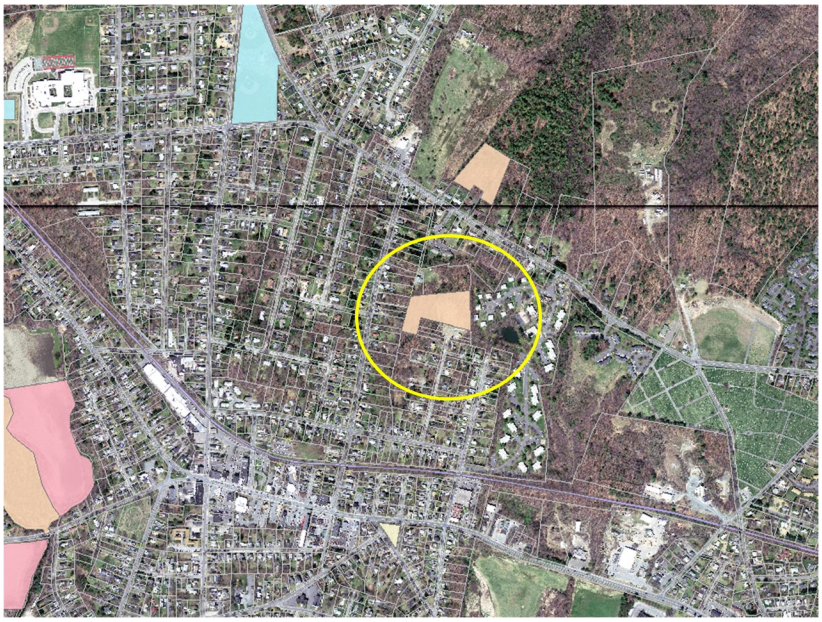
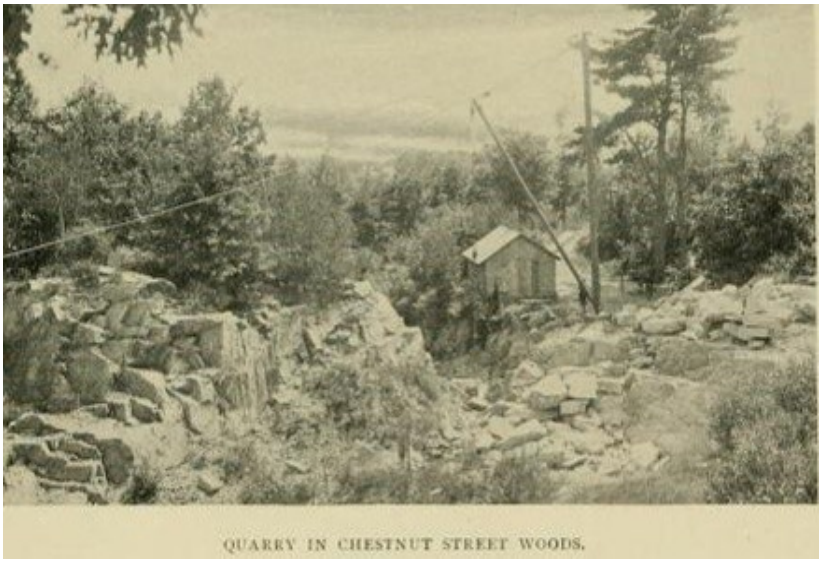
Garfield Avenue Conservation Area

Of all the City-owned conservation areas, this 5-acre site near downtown Florence has one of the strangest histories. Accessed from Garfield Avenue, it opens into a grassy, ½ acre clearing surrounded by woods that are dominated by oak in the drier, rockier areas and sugar maple in the sections with deeper, richer soils.



The conservation area, circled, is within easy walking distance of hundreds of homes and the bike trail.

On the other side of the clearing, a narrow rim of bedrock along one edge is a clue to the site's former uses. In the 1890s this property was operated as a small rock quarry. The blocks of stone were probably used locally for foundations and walls. A few, for instance, can be seen in a low stone wall at the entrance to the bike path on Chestnut Street.



In the 1700s and 1800s, numerous small quarries were present in Northampton, with most of the stone blocks used locally for building. For instance, some of the rock from this quarry can be seen in a low stone wall at the entrance to the bike path on Chestnut Street. This photograph is from *Sheffield's 1895 History of Florence.*

By the early 1940s, the rock-quarrying operation had ceased and true to the times, what better use for a hole than to fill it in? Beginning in 1943, the quarry became a private dump. Approved by the City, trash was hauled from the local neighbor-

hoods and businesses and then burned. Fifteen years later, the hole was close to full and after covering it with fill, the property was sold to new owners. They built a house on the land (but not on the former pit). Fifteen years later, they sold the house and property to a new owner.

By 1958 the quarry had been regraded and a house built along the edge. By 1965 it was growing in with vegetation.

Whether the new buyer was aware of the property's history as a dump isn't known, but in 1989, after an investigative report demonstrated high metal concentrations in the soils, the MA Department of Environmental Protection (MA DEP) categorized it as a former dump. Four years later, MA DEP formally recognized it as a "disposal site," which triggered a series of tiered investigations to assess the public health risks. As part of this, between 1993-2003, samples from groundwater monitoring wells and the soil were collected and tested, and although the groundwater monitoring wells showed no evidence of contamination, the soil test showed higher than acceptable levels of polyaromatic hydrocarbons, heavy metals and, in one area, PCBs.

In 1995, the owner took the City to court, citing an inability to sell the property at fair-market value and listing the City as the responsible agent for authorizing the burning dump during the 1940s. To settle the case, the City purchased the property for $240,000 and agreed that the former owner bore no future liability for any subsequent remediation costs. In 1998, the city demolished the house and in order to protect the public from any health risks associated with the soil contaminants, capped the former landfill.

Seven years later, as part of a limited development project, the City subdivided the property, selling six lots near the end of Garfield Avenue (one market-rate lot and five for affordable housing) and held on to

the remaining four acres as permanent conservation land. Today the DPW and Board of Health hold an easement over the conservation area and have the responsibility to maintain the landfill cap in perpetuity.

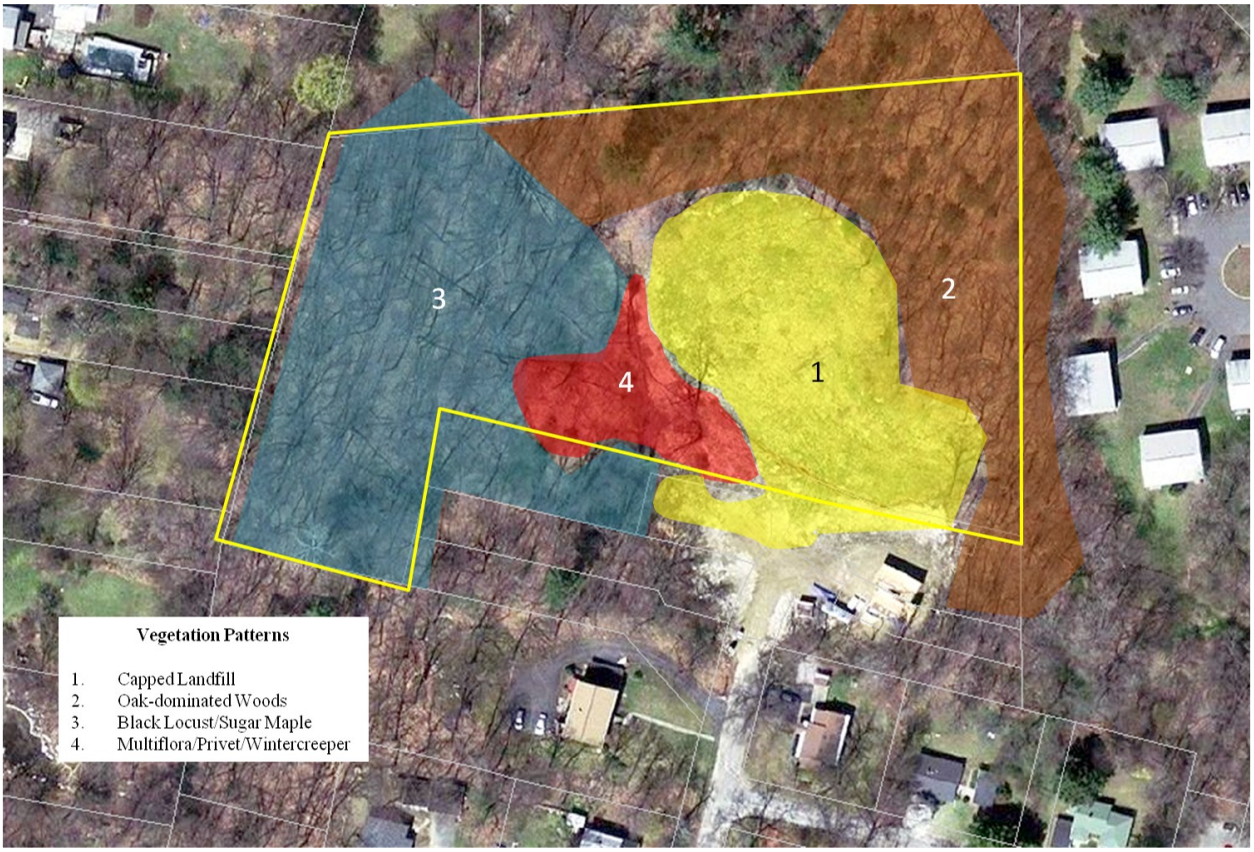
Since then, the property has not been managed other than brush-hogging the capped landfill each year. There are no signs or designated parking to let neighbors know that this is a conservation area, either along Garfield Avenue or from the Meadowbrook Apartment complex. But occasionally it has a visitor or two. Last spring, a small trail had been beaten down across the old landfill and leading into the woods. But, by July, the vegetation had grown up and overwhelmed it.

Geology

Although almost all traces of the quarry have been covered, a few bedrock outcrops appear in the wooded portion to the north. The bedrock here is part of a long, north-south running band of 450 million year old metamorphic rock that stretches from Whately to Connecticut. In the old days, many of the bedrock knobs in this part of town were used as small, unofficial quarries—almost like borrow pits. The 1831 map, for instance, calls a nearby knob Millstone Mountain (presumably because it was a good site to quarry millstones) and the dirt road/driveway near St. Mary's Cemetery is now known to a few old timers as Quarry Road. And another small quarry lies just beyond the boundary of the conservation area. Whether it was open and operating at the same time as the Garfield Avenue Conservation Area's quarry isn't known, but a 1965 aerial photo suggests that rocks from the second quarry were being removed during the early 1960s.

In spite of this property's bedrock underpinnings, most of it is fairly level. This is a function, not of human alteration, but of the land's glacial history. After the last of the continental glaciers retreated from the region, this area was covered by glacial till and then by the icy waters of glacial Lake Hitchcock. The lake waters were shallow here, with a drumlin due west (High Street) and bedrock outcrops to the north-

east. Over time, the underlying till was covered with layers of lake clays, which were subsequently covered with layers of sand as the Mill River formed a large delta into Glacial Lake Hitchcock.
During the last 12,000 years, these glacial deposits have been modified by erosion and more recently, by people.



Vegetation Patterns

After the dump was covered in the late 1950s, most of the land around the old quarry/dump was left idle and is now almost entirely forested. Based on land use history and soil conditions, the property can be divided into four broad vegetation communities (see Vegetation Patterns).

Capped Landfill/Former Quarry Pit (1)

Now an open field, the capped landfill/ former quarry is a jumble of goldenrod and asters, along with giant ragweed, burdock and three good-sized clumps of Japanese

knotweed. On the northwest side is a small exposure of the old quarry wall where garlic mustard, celandine, multiflora rose, euonymus and catalpa have established. Just beyond and ringing the northern boundary of the old quarry, the forest edge is a mix of black locust, staghorn sumac and scattered oak.

By late summer the capped landfill is thick with vegetation, including Japanese knotweed in the foreground.

Oak-Dominated Woods (2)

Just north of the old quarry pit is a small, but almost park-like, oak-dominated forest, with impressive rock outcrops. In addition to oaks (red, white and black), the thin soils also support a mix of red maple, sugar maple, shagbark hickory, sassafras, black birch, and white pine. Witch hazel, maple-leaved viburnum, wild raisin, huckleberry and low-bush blueberries are common shrubs, while white woodland aster (*Eurybia divaricata*) and Virginia creeper are the most abundant ground cover. Other ground plants include Canada mayflower, Pennsylvania sedge, true solomon's seal, wild sarsaparilla, teaberry, poison ivy, and bracken fern. The leathery, evergreen fronds of marginal shield fern grow in the nooks of the rock outcrops, and a few Japanese barberry bushes can be found here too.

Oak leaves carpet the surface of the conservation area in the fall.

Black Locust/Sugar Maple Woods

This pretty section of the property was obviously cleared in the past and has wetter, richer soils than the adjacent oak-dominated forest. No bedrock is visible here, and the forest is dominated by black locust and sugar maple, with a

healthy component of red maple. Fallen trunks of black locust crisscross the forest floor. In the shrub layer, spicebush is common, and multiflora rose, privet and winged euonymus are occasionally encountered.

The forest floor is much richer and includes swaths of lady fern, spinulose woodfern, and hayscented fern. Virginia creeper and Canada mayflower are also common, while the dreaded garlic mustard is found here too. A single large sycamore is located on the property boundary; it is impressive...but it also has wintercreeper clambering up its trunk. Not far away is a small, shallow, isolated depression where American toads may breed in the spring.

<u>Multiflora/Privet/Wintercreeper Area</u>

This pocket near the isolated wetland was the most recently altered, and is an absolute mess of multiflora rose, privet and wintercreeper, with even a little *Phragmites*. Spotted touch-me-not and enchanter's nightshade are also here, but the invasives dominate this patch.

Wildlife

In spite of its small size and residential location, this property is used by a variety

This part of the conservation area is open, with sugar maple and black locust.

An enormous sycamore grows at one end of the property. Note the wintercreeper scrambling up the trunk.

Winged euyonumus, one of several non-native plants, found in the Garfield Avenue conservation area. It is related to Asiatic bittersweet.

of wildlife. What enhances its value is its proximity to the protected and wooded land within the Fitzgerald Lake Conservation Area.

Insects, like this beautiful clymene moth (*Haploa clymene)* use this conservation area too.

Nearly a dozen birds were heard or seen during my brief visits (crow, cedar waxwing, junco, blue jay, red-bellied woodpecker, nuthatch, Carolina wren, gold finch, yellow-bellied sapsucker, indigo bunting, wood pewee, and palm warbler) and it is probably used as a pass-through by raccoons, skunk, deer, etc. Bear have been observed on Straw Avenue many times, and so it is not unlikely that they pass through here too.

Recommendations

Although this conservation area will never become a destination for a wide audience, it can function like a pocket preserve for the neighborhoods around Verona Street, Straw Avenue, Chestnut Avenue, and the Meadowbrook Apartments. This won't happen, however, unless more people become aware of what a nice little patch of woods this is. So in addition to putting a sign up, I would recommend organizing a field walk for local neighbors to introduce them to this conservation area. With their help, a loop trail could be created and the invasive species could be controlled. In the future, it might make sense to build a ki-osk and/or create a brochure that describes the conservation area's history.

The roof tops of the Meadowbrook Apartments can be seen from the edge of the conservation area. A linking trail to this neighborhood would be beneficial to residents.

It will also be important to work with the DPW and Board of Health to ensure that the Japanese knotweed is controlled and does not spread. It could easily overwhelm the capped landfill and spread into the black locust/sugar maple forest as well.

(A) The edge of the later quarry that lies just off the northern boundary of the conservation area. During the last 50 years its side slopes have grown in with trees and polypody fern and spinulose woodfern grow in its rocky nooks. (B) Although most of the rim of the old quarry/land fill has been covered, there are a few places where you can still find the former edge.

(A) Although this conservation area has a long history of alteration, there are a few impressive trees, including this large white pine in the central part of the conservation area. (B) Cut stumps, probably of black locust, reveal that this area has a long history of human disturbance that continued even after the landfill was covered in the early 1950s.

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All photographs by Laurie Sanders.

Sources

Sheffield, Charles. 1895. A History of Florence, Massachusetts, including a complete account of the Northampton Association of Education and Industry. Florence, MA.

Tighe & Bond. 2003. Activity and Use Limitation and Response Action Outcome. DEP Site 1-00524. 148 pp.

Above, the thin soils over the bedrock are part of the reason this forest is fairly open and easy to navigate through.

Natural Resource Summary for the Garfield Conservation Area	
Estimated Habitat for Rare Species	No
Vernal Pool Habitat	Possible
BioMap	No
Supporting Natural Landscape	No
Coldwater Fisheries	No
Conservation Priority (CAPS-UMass)	No
Climate Change Resilience	No
Medium Yield Aquifer	No