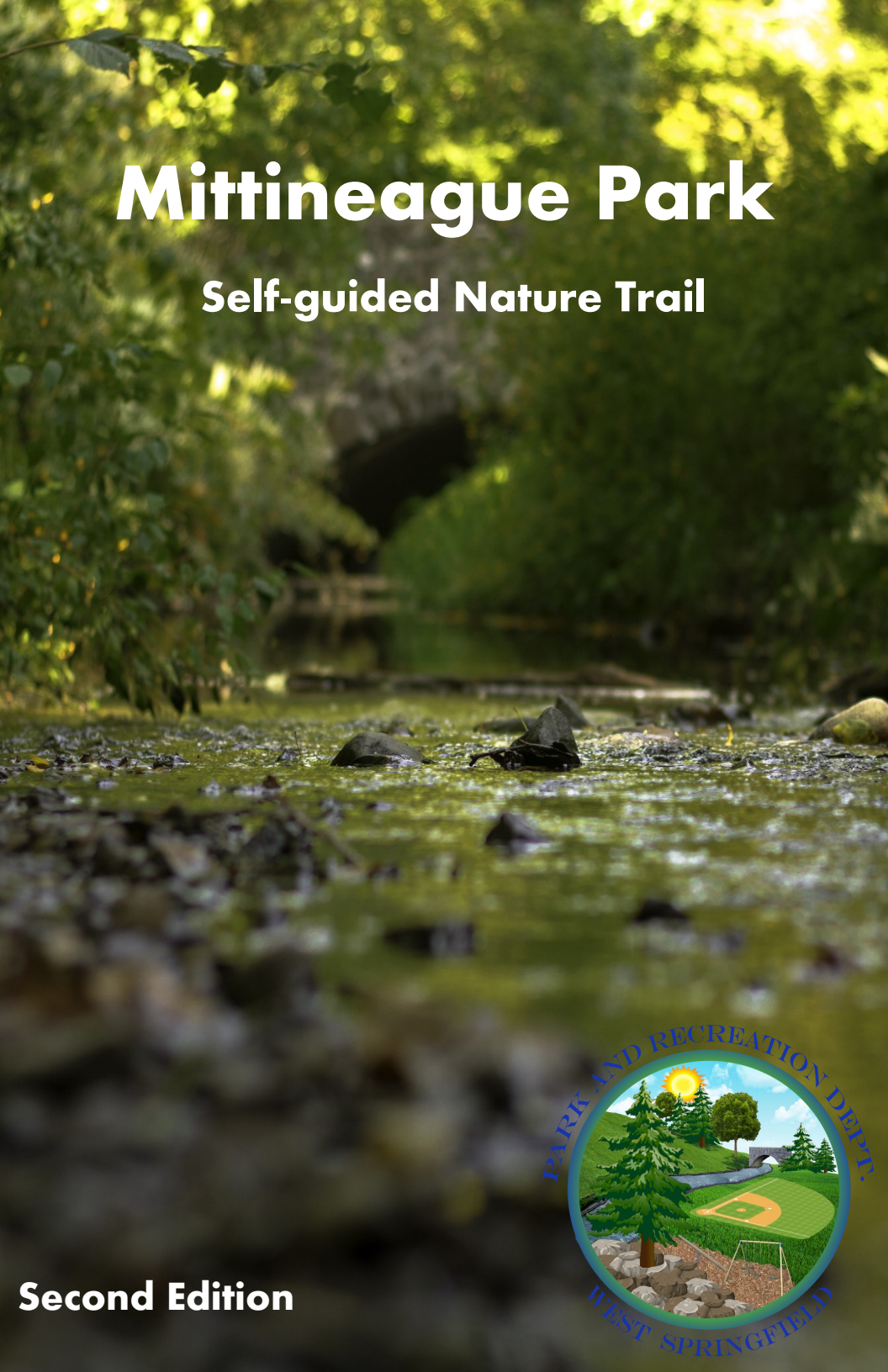
Mittineague Park

Self-guided Nature Trail



PARK AND RECREATION DEPT.
WEST SPRINGFIELD

Second Edition

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First Edition
2001 Guide Prepared by Friends of Mittineague Park
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INTRODUCTION

Welcome to the Mittineague Park Nature Trail. The trail is approximately 3 miles in length (see map inside back cover) and consists of 23 interpretive sites. The numbered posts along the trail correspond to the numbered acorns in this booklet. This self – guiding brochure will provide you with interesting information about the history, plants, animals and various habitats of the area. We hope this experience will increase your understanding and appreciation of the rich diversity of the natural environment within the park.

Most of the trail runs through what was once the 62 acre Aschenbach family farm and Churchill Property. The passing of the Aschenbach farm in the 1950's was symbolic of the end of an era. Agriculture had been in decline in the town for quite some time, making way for a more suburban, residential and commercial way of life. While the demise of agriculture was saddening for those who worked the land, the farm and park have contributed to the maintenance of valuable open space. The Achenbach's would probably be pleased to know that their farm is providing a sanctuary for wildlife and is preserving a precious natural resource for future generations.

STARTING THE NATURE TRAIL

Although the nature trail is numbered sequentially, you can begin at any location and walk in any direction. There is no official starting point, and it makes no difference if you follow the site numbers in ascending or descending order. What is presented at one site is not defendant on a previous or subsequent site. Walk at your pace, enjoy the trail and your park.

1 THE ASCHENBACH FARM

You are now standing on what was once the Aschenbach family farm. This 62-acre farm makes up part of the current 325-acre park. Historical sources suggest that the property was first used for farming in the late 17th century. The first house on this site was probably the Ezekiel Day house dating back to 1764.

The last owners who farmed the land on a full-time basis were Frederick and Anna Aschenbach who moved here with their three young sons in the spring of 1897. Fred and Ann died in the 1940's and their son Robert lived here until his death in 1962. In 1963, the town acquired the land from surviving family members by eminent domain. The farmhouse, barn, and out buildings were demolished shortly afterward.

In the thicket behind this marker stood the largest structure on the property; a three storied barn which housed cattle, horses, hay, and in later years a sauerkraut operation. Beyond the thicket, stood the original farm house.

The meadow immediately behind you was once an important part of the Aschenbach farm; serving as pasture, hayfield or possible cropland. In the early 20th century the farm was primarily a dairy operation with a herd of 25 to 40 cattle. There were also 2 to 5 horses and at one time close to 100 pigs. The family also raised and sold hay. Later on, the dairying operation was reduced, and the Achenbach grew cabbage to produce sauerkraut in bulk. In addition to the sauerkraut, they grew and sold strawberries, raspberries, sweet corn, and asparagus.

The hillside beyond the "spring pond" (Vernal Pool Site #3) was an apple orchard. The plateau above, where the Unico building stands, was where the strawberry patches were located. Neighborhood children skated on the pond regularly in the winter up to the 1960's.

Can you find other evidence of a once active farm?

BIRDS

You are now in an excellent location for listening and viewing birds. Birds are attracted to areas which offer food, cover, and water. The shrubs and trees along the trail between this site and site #5 provide a variety of beautiful fruits and seeds including mulberry, black cherry, wild grape, crabapple, bittersweet, virginia creeper, and multiflora rose. This site includes an open field behind you, a stream running under the bridge, and finally a vernal pool with still water (site #3). All of these areas attract different species of birds.

Birds commonly seen in this field are robin, blue jay, crow, starling, catbird, phoebe, goldfinch, northern flicker, chickadee, nuthatch, titmouse, cardinal and various sparrows. While most of these birds are year-round residents, some like warblers and phoebes are spring and summer visitors, or migrating birds.

Perhaps the most common bird you are apt to see here, and throughout the park, is the black-capped chickadee. A mere 5 inches long, this creature wears a black cap and has a black throat and bib. The cheeks and belly are white. Its call is "fee-bee" or "chick-a-dee-dee-dee." Unlike most birds, chickadees are not shy around humans and will allow you to get within several feet at times. An optimal time to view birds is in the early morning and late afternoon.

Black-capped Chickadee

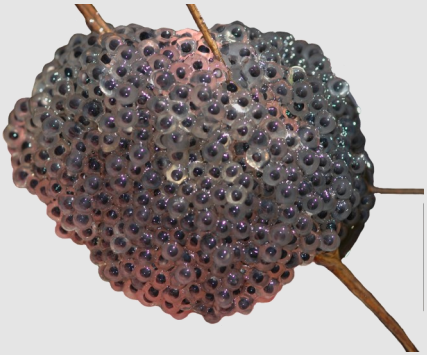
3

VERNAL POOL

Vernal pools are depressions which can hold water for two or three months in the spring. Many amphibians including wood frogs and mole salamanders breed almost exclusively in these birthing rooms. They are entirely dependent on these pools for their survival. Because the pools are temporary, they do not sustain fish which prey upon amphibian eggs and larva; making them safe habitats for these creatures.

In early March, when the ground thaws and night temperatures reach up to 50 degree, the rain soaks the landscape and migration begins. Wood frogs and spring peepers emerge from their winter homes buried beneath the leaf litter on the forest floor. The race for survival begins as they return to the breeding ponds to continue the life cycle.

The first indication of wood frogs is the sound of their breeding chorus which will fill the night with a quacking like song. By late March/early April, wood frogs will mate, deposit eggs and reverse their migration back to the forested hillside where they spend the rest of the year. Their eggs are easily recognized – thousands are gathered into softball size masses usually found below the water surface, attached to twigs or other plant material. The eggs and hatched larvae (tadpoles) then work to grow fast enough to undergo metamorphosis into frogs before their isolated wetlands evaporate. Vernal pools also support a rich and diverse number of invertebrate species such as fairy shrimp, caddisfly, whirligig beetle, and dragonfly's.



Wood Frog And Egg Masses

How many species can you find?

4

POISON IVY

A plant related to cashews and pistachio nuts, poison ivy is extremely variable in growth habit and leaf form. It is a vine, sometimes climbing trees and walls, other times running along the ground while sending up shrubby shoots. The leaves may be glossy or dull, small or large. They may have smooth edges or be toothed or even lobbed. However the leaves are always 3-parted and in summer are usually dark green. In the fall, the leaves of poison ivy turn yellow and reds. From August to November, female plants produce clusters of berries that are first green, then white.

Poison Ivy

What irritates our skin, sometimes severely, is the oil urushiol in the sap of the plant. While not everyone will experience symptoms of an allergic reaction at first exposure, scientists believe 8 out of 10 people will have an allergic reaction when exposed to the oil for the second time. Poison ivy is most dangerous in the spring and summer when there is plenty of sap and plants are easily bruised. The best defense is to wash the oil off the skin as soon as possible. Despite its sinister side, poison ivy has ecological importance. Its berries are eaten by many birds and animals that are naturally immune to the poison, and the extensive network of stems and roots developed by the plants holds the soil and helps limit erosion. Keep a lookout for poison ivy at other points along the trail and inspect any 3-leaved plant before touching! At this site, it is located mainly on the left side of the post.

"Leaves of three, let them be!"

5 FERNS AND SHRUBS

In this general area, there are several odd looking, non-flowering plants in front of and behind you. Over 200 million years ago, when dinosaurs ruled the animal world, ancestors of the fern you see here grew in vast swamps, some to the height of forest trees. Their accumulated remains supplied much of the vegetable matter which later formed the great coal beds we still mine today.

Cinnamon Fern

Sensitive Fern

Unlike most of the prominent plants in Mittineague, ferns do not bear flowers but reproduce by spores formed in fruit dots or fern sori on the back of their leaves or in clusters on separate stems. At least 4 to 5 kinds of ferns are visible here. The tallest is the cinnamon fern, named for its cinnamon-colored flowering stems and the tawny fuzz at the base of its leaf stalks. The other fern species here are sensitive wood and Bracken fern. Ferns are only green during the growing season except for Norway Spruce and Wood fern which retain their green color in the colder months. Look for these and other kinds of ferns along the trail.

5A

As you go up the driveway towards the UNICO Building , turn right just before the pool house. Follow back to the woodline entering the woods at the post marker. This trail will take you to post 5A. This is a beautiful scenic overlook of parts of Meadows #1 and #2, the Greenhouse, The Vernal Pool (Frog Pond), and Block Brook. Follow the trail out of the woods and cross the UNICO Lawn, entering the Altamont property at the fence opening. Walk towards the Guest House, turning right just before the building. Go to the wood line, entering the woods at the marker post. This short loop also provides a nice scenic view.

5B

As you leave the woods you will come to Post 5B. This is an area that includes the Altamont House built in 1920. Notice the beautiful stone walls of the House and the unusual roofline. There are also two beautiful 90 year old trees located here, a Maple & Spruce.

5C

Follow the trail West across the Altamont Lawn entering the woods at the marker post. Follow the marked trail and you will come to Post 5C. This is a beautiful untouched section of Mittineague Park that shows how Block Brook moves through this section of the Park and across the Altamont Property.

DECOMPOSITION

Behind you and along this section of the trail, you will find lots of Spice Bush. This shrub is easily recognized because the bark is "speckled with little raised dots." If you crush the leaves, or scratch off the bark on smaller stems, you will notice an aromatic, somewhat spicy, citrusy smell.

The other interesting ecological feature of this area is decomposition. There are several dead trees and stumps in various stages of decay. Fungi and bacteria thrive in these moist, shady areas and feed on the dead trees and other plant life. When the leaves and ferns decay, the soil is nourished for new life and growth. The cycle of life only continues.

7 THE CHANGING FOREST

The forest type most common in southern New England woodlands is the oak forest. Although various species of oak (mainly red, white and black) may dominate in many areas, hickories, birches, and maples are also common and grow alongside the oaks. At one time, the American chestnut was also an abundant tree in the northeast, but the chestnut blight, a fungus introduced from Asia, has significantly reduced the abundance of this species.

Another species of tree present at this stop is sassafras. Sassafras is usually a small shrub but can grow into a large tree with ridged bark similar to the aspen. A large, healthy sassafras tree with a smaller, dead trunk connected at the base is growing (behind the post) on the downhill side of the trail. Sassafras leaves are very distinctive since three shapes (oval, 3-lobed, and mitten-shaped) can occur on the same plant. The twigs have a pleasant spicy aroma.

Sassafras

Big Tooth Aspen

Sometimes, an examination of trees in an area can tell us something about the history of the land-use at the site; such is the case here. Look on the upslope side of the trail where many of the larger trees with the ridged bark are big tooth aspen. Since aspen can only germinate and grow in open areas, their presence suggests that this hillside was once cleared land and the aspens were the first trees to reforest the site. In future decades, the aspen will be shaded out as the other oak forest species grow taller and replace them. These species of the mature oak forest (oaks, beech, maples, and hickory) being tolerant of shade, will probably persist indefinitely here unless human activity again modifies the landscape.

8 HEMLOCK

This isolated evergreen bound firmly to a red maple and oak tree is known as a hemlock. Hemlocks prefer cool, moist woodland and are shade tolerant. There are not many in this particular area, but they are quite abundant in other sections of the park. Hemlocks are brown barked trees with vertical ridges or furrows. They grow to about 70 feet in height. Their needles are about ½ inch long and have white stripes underneath. The cones are on the smallish side.

Hemlock

Hemlock with woolly adelgid

Hemlocks produce dense foliage which can hold a lot of snow. With less snow accumulation beneath them, they are a favorite places for deer to gather in winter. Porcupines like to feed on the bark and twigs. Branch and twig litter under the tree is a clear sign of porcupine activity. Hemlock needles are also preferred food for white-tailed deer. In the past, hemlocks were highly valued for their bark which produced tannin. This dye was used in the processing of animal hides for leather goods in the 19th century. Native Americans used hemlock bark for a variety of medical purposes and brewed a tea rich in Vitamin C from the needles. At the present time, hemlocks are threatened by a tiny insect (the woolly adelgid) which is infesting and killing the trees.

9 WOODED SWAMP

Elevation and soil type influence the kinds of trees you find in the area. This site is the lowest of 4 locations along the Woodland Trail. The slightly lower land, with its increased level of soil moisture, favors different species of trees than those found at higher elevations. At this stop, the large trees bending over the trail are red maple; further downhill, nearly all the trees are of this species. This type of species comprises the wooded swamp community, the most common wetland type in southern New England.

Although red maple dominates (sometimes in almost pure stands), American elm is often present in smaller numbers. The elm here is recognized by their oval, toothed leaves with a sandpapery texture on the upper surface. American elm was formerly the common species of the elm in most of the swamp, but the Dutch elm disease has reduced its numbers nearly everywhere.

Other plants common in this habitat include the shrub known as spicebush and non-woody plants such as skunk cabbage, cinnamon fern, and jack-in-the-pulpit. In the spring, wooded swamps often have some standing water, at least in low spots, and may be troublesome because of mosquitoes well into the summer.

Red Maple

Slippery Elm

Jack-in-the-Pulpit

10

SHRUB SWAMP

Alder Shrub Leaves

Willow Shrub Leaves

When trees or shrubs gain a foothold in a marsh or wet meadow, the transitional community known as the shrub swamp begins to appear. The two most typical species of this habitat, the willow and the alder, are growing side by side here. These species are considered shrubs or small trees. The willows are particularly a challenging group to identify, even for many botanists, but as a group their narrow and elongated leaves are distinctive. This is the wooded swamp community described at Site #9. The shrub directly in front of you and behind the post is Alder. The Alder can be easily identified by its clusters of small, woody catkins or cones. The curling cutoff vines behind you are Asiatic Bittersweet Vine, a parasitic invasive plant not native to North America. This area of the trail includes a mixing of several habitat types. The open portion of the old roadway leading to the meadow supports grasses and wildflowers, typical of sites with abundant sunlight. Invasive species such as multiflora rose, and bittersweet are spreading at the edge of the woods behind you, and plants requiring wetter conditions are growing in and around the brook. Areas such as these (with a mixing of habitats) are often the best place to see birds and other wildlife because all their needs for food, cover, and water are met.

11 THE MEADOWS

You are now standing in an open field or what park users call the "meadows." This area and much of the land going back up to Route 20 was a pasture or hay fields 50 to 150 years ago. Meadows, like other aspects of nature, are in a constant state of change. If these meadows are not managed or mowed, over time they will revert to woodlands.
The area approximately 50 yards in front of you is a good case in point. It has not been mowed for over 30 years and pioneer species of trees and shrubs are slowly filling in what was once open pasture or field. Red maple, alder, American elm and silky dogwood are the dominant trees and shrubs in this successional woodland. The soil is wet, a condition which these species favor. In the future, this may become a red maple swamp.

The meadows and its edges also play a vital role in the life cycle of many animals. Meadow voles, which live in long tunnels, make pathways through the dense summer grass. These mice-like animals are very abundant, producing many litters of young in a given year. Moles and shrews are also common here, as are the red fox and sometimes the red-tailed hawk, which both `prey on these small animals. Song sparrows, goldfinches, catbirds, titmice and red-winged blackbirds are commonly found along the edges of the meadow. A variety of plant foods and insects sustain these birds. Deer also thrive near side areas. They prefer brushy areas, woods, and access to cover and can occasionally be seen feeding along the edges of the meadow. Of all the creatures in this meadow, the insects are the most numerous. A close examination of the meadow grass in summer or early fall will reveal a horde of flies, beetles, bees, leafhoppers, and ants.

At this point, you may want to pause and take a few minutes to listen only. What do you hear? Most of us are overwhelmingly sight-reliant. Our auditory senses have become lazy, and we don't hear as much as we potentially could. Historically, people made much more use of their senses because it was necessary for their survival. People today have lost much of their sensory potential because of the way they live.
Experiment with quiet – only listen to your breath, the wind rustling some leaves, a chipmunk scampering through the brush, a bird chirping. What is faint or distant? What is close or loud? What is natural and what is human-made? What can you hear, but not identify? How many different sounds can you distinguish? Are the sounds you hear now distinct from those at the beginning of your hike? Will they be different in another environment?

STONE WALLS

One of the most picturesque legacies of settlement and farming in New England are stone walls, this can be seen in the park if you continue on Meadow Trail by taking a left after site #11. In the 18th and 19th century when farmers cleared and tilled their rocky fields, they had to deal with the problem of where to put all the rocks. Consequently, many built stone walls which became fences and property boundaries. In short, when farmers wanted to keep cows or sheep in one area and out of another; stone walls were the answer. In 1871, a U.S. Department of Agriculture report estimated that there were over 16,000 miles of stone walls in Massachusetts.

In some cases, a collection of stones may have been just a trash pile or a convenient place to dump unwanted stones. It's not clear what the stones at this site represent: a collapsed wall or a scrap pile.
On the opposite side of the trail, about 25 yards to your left is a struggling white oak tree. This tree, which has begun to die, is an important food source for woodpeckers, other birds, insects, fungi, and bacteria. Can you find evidence of this?

What do you think these stones represent: a collapsed wall or a scrap pile?

12 BUFFALO MOUNTAIN

Look around you. What do you see and hear? The rushing rapids, railroad tracks, and surrounding forest tell us a lot about the history of West Springfield. If you were standing here in the springtime 400 years ago, you might have seen natives down by the river catching alewives, shad, and salmon. Each year these fish made their way up the Agawam River to spawn. Three hundred years ago, some of the early settlers of West Springfield were clearing nearby land for pasture and planting. One hundred fifty years ago, the Industrial Revolution made the development of the railroad possible, a change which moved America from a rural agrarian society to an urban industrial one.

If you want to relive these events, try remaining silent and shutting your eyes. See if the sounds of the rapids below can take you back in time. Visualize what this area was like for earlier settlers. Use your imagination and the sounds to recreate images in your mind.

Can you see signs of agricultural activity as you move along the trail?

13 OAK-HICKORY FOREST

At this site, you are surrounded by an upland broadleaf or hardwood forest. Most of the trees around you are broadleaf or deciduous, meaning they lose their leaves. Their wood is harder than that of conifers (trees with needles), so broad leaf trees are known as hardwood.

Oak-Hickory forest communities are common on drier hilltops in the Connecticut River Valley. The dominant trees are oaks – white, red, black and scarlet as well as pignut hickories. The largest trees here on Buffalo Mountain are red oaks, some well into their second century of life. In the Northeast, red oak is still in high demand for hardwood flooring.

Smaller trees underneath the oak-hickory canopy include flowering dogwoods and American chestnuts. The chestnuts are sprouts from still-living roots of giant trees felled by blight early in the last century. Though some of these saplings may live long enough to produce burs and nuts, all will eventually succumb to the blight, unless a cure/immunity is found.

Acorns and hickory nuts make this Oak-Hickory forest a haven for squirrels, chipmunks, blue jays and other birds. White-tailed deer and wild turkeys also feed on the acorns and nuts.

Red Oak

White Oak

Pignut Hickory

14

EXCAVATION

Quaking Aspen

This huge hole in the side of Buffalo Mountain is not natural. It is a human-made excavation probably from the 1930's. Some of Buffalo Mountain on the north and east side consists of red clay. This material may have been used for reinforcing the dikes by the Big E and along Riverdale Road.

Nature is in the process of reclaiming this area through "primary succession." Moss spores are blown in by the wind and grow on rocks. Leaves and other litter from nearby plants and trees also blow in and begin to decompose, forming fertile soil. The surrounding plants and trees also contribute seeds which begin to grow in the new soil.

Ever since the pit was abandoned, the surrounding forest has been trying to reclaim it. Water leaching from the hillside has created wetland pockets in the very center, allowing grasses and herbs to exist. Shrubs, such as willows and osier dogwoods, are taking over the grasses. Birches, aspens and other pioneer tree species have successfully colonized the sloping sides of the pit; shading out most of the shrubs that preceded them. Eventually, many generations from now, the plants we see here today will have been succeeded by the dominant trees of the surrounding Oak-Hickory forest of Buffalo Mountain. The reclamation will be complete; the forest will have filled the hole.

15

STONE BRIDGE AREA

The first known people in this area were Native Americans who were known as Agawam's in the Algonquian, meaning "lowland" or "place overflowed by water." They called the stream Block Brook. That name comes from a bridge of eight-inch square timbers, known as blocks, which crossed the brook upstream from here as part of a road to Westfield. William Pynchon was the leader of the first English settlers who acquired this land and Block Brook was the western boundary of this acquisition.

The stone walls and bridges were constructed in 1938 during the Great Depression by the men working for the Works Progress Administration (WPA). This area was an important recreation area for the Town. Residents swam in the pool between the two bridges until flood damage, erosion, sedimentation, and fears about contaminated water forced its closure.

In 1999, Town Meeting appropriated more than $640,000, and the "stone bridge area" of the park was renovated in the summer and fall of 2000. The stonework was repaired, the stream dredged, roadways and parking areas reworked, erosion corrected and a canoe landing from Westfield River was provided. In 2011, the stone bridge was repointed and missing stones were replaced. The Town completed this work by using Community Preservation Funds. The cost of this project was $4,000.

16 FALLEN BEECH TREE

This large, mature beech tree came down in about 2010. What might have caused this to happen? We don't know. Was it a disease, was it a powerful wind storm, was its location? Beech trees do have a thin bark, which makes them vulnerable to injury by fire, logging, insects and fungus. One hint, which is fairly obvious, is that it had a shallow root system. This is typical of beech trees and may have played a role in its demise.

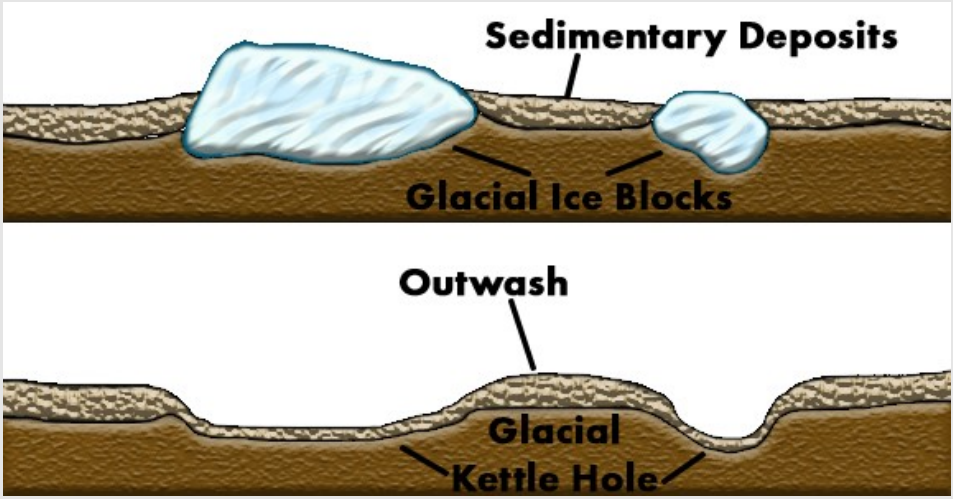
This fallen beech, however, lives on in many other ways. You can see that a large number of younger beeches have sprung up close by. These surrounding beech trees probably did not germinate from seeds (from fallen beech nuts), but rather from colonization, they sprung up from the fallen tree's root system. Another possible future use is that this tree will become a nursery log. As time passes, decay, leaf litter, evergreen needles and even animal scat creates a rich humus which provides a seed bed for plants and other species of trees.

Beech Tree

17 Glacial History of Mittineague Park

Let's try to listen to the water flow and think geologically. During the past 2 million years, glaciers advanced and retreated over New England many times, depositing sediment and carving the landscape we see today. The landforms visible and the habitats available for plants and animals in Mittineague Park are a legacy of the glaciers that once buried West Springfield under a mile of ice. Advancing ice sheets sculpted the land into elongated hills, called drumlins, like Buffalo Mountain and the Tatham Soccer field. As the last glaciers melted about 10,000 years ago, they dropped the sand and rocks they carried depositing sandy glacial till that now blankets most of Mittineague Park. Many of the rocks within this glacial till were carried many hundreds of miles down from the north and are often well-rounded and have glacial striations from being ground down by the ice. Occasionally, giant chunks of ice broke off the receding glacier into it's till and later melted, leaving depressions on the land called kettles. The small vernal pools that dot Mittineague Park are kettles filled with rain or ground water.

Just under 200 million years ago, volcanoes to our west erupted resulting in thick lava flow that formed a basalt ridge, which includes the mountains we know as Mt. Tom and Holyoke Range. West Springfield was a lot warmer back then; our latitude was about 10 degrees north of the equator – or where southern Mexico is today, and the dinosaurs roamed the Connecticut Valley. Exposed to the tropical climate at the surface of the earth, these lava flows weathered and eroded, filling in the valley with the sediment that became the smooth layers of fine-grained red sandstone exposed in the streambed here. Over the years, these rocks were tilted up and eroded by ice and water, leaving them in the position you see today.



18 TRIANGLE OF TREES

BEECH

At this location we have three interesting and very different trees which stand out. To your left stands a beautiful beech tree. Notice its smooth gray bark, which usually catches people's attention. Beech is a very common tree throughout New England. Its smooth surface is due to the barks elasticity which separates it from most other trees which develop plates and furrows as they age.
In colonial times, settlers learned that beech trees were a sign of fertile soil and therefore cleared the land for farming. In addition, forest folklore suggests that 17th century settlers used beech leaves to stuff pillows and mattresses, because the leaves have a spongy quality and don't break down easily. Many animals seek beech nuts as a food source. Even bears will climb these trees in search of nuts and leave pronounced scars on the smooth bark from their claw marks.

American Beech

White Oak

WHITE OAK

Slightly to your right and looking straight ahead along the trail, we see a series of White Oaks. These trees get their name because of their light gray colored bark. The bark tends to look loose, shaggy and scaly. They can grow from 70 to 100 feet tall. Their leaves distinguish them from other oaks by having rounded rather than pointed lobes. White Oak, like most other oaks, are an excellent source of fire wood. In addition, its nuts (acorns) are an important food for many animals and birds. Their nuts are sweet tasting and are a high energy food source. Native Americans gathered these nuts, and boiled them to reduce their acidity. Then they ground them into a mix for baking bread or flat cakes.

NORWAY SPRUCE

To your right stands a less than prominent example of Norway Spruce. This tree is not native to New England. It is natural to Europe, but has been planted in the eastern United States since colonial times. It was frequently used as a wind break and ornamental tree. Norway Spruce is easily recognized by its drooping branches with upward curving tips. Its needles are a half to one inch long and its 4 to 7 inch cones are the largest of any spruce trees. A large variety of birds use this tree for shelter in harsh winter weather. Norway Spruce are also used as Christmas trees.

BLOCK BROOK TRAILS

Along with this portion of the trail, some of the common trees of the oak forest have been labeled. If you have been noticing the kinds of trees present elsewhere in the park, you may see some different ones here. The difference is due to the slightly cooler and moister conditions present here in the lower land along the brook. Two of the trees which prefer these conditions are yellow birch, with its peeling, golden-colored bark and beech whose bark is usually smooth and light gray.

Two species of maples are also common here and can be easily distinguished by their leaves. Red maple have finer and more abundant teeth around the leaf margin than the sugar maple. Two other trees with a distinctive bark along this trail are shagbark hickory and ironwood. The former has a bark which separates into long, narrow, curved strips. The latter is named so because of the strong muscular appearance of its trunk.

From this site, you can see the terrace of an old streambed. The brook has apparently moved further east, and water erosion on the opposite bank is very apparent.

Yellow Birch

Pignut Hickory

Shagbark Hickory

20

INVASIVE SPECIES

Have you ever wondered why some plants seem to prosper and even dominate? Invasive species are plants which are native to another region (often another continent) and have been either intentionally or accidently introduced into our area. Such plants frequently arrive without the animals or pest that kept them in check in their native area which gives them an advantage over native species. At this site, multiflora rose, bittersweet, and honeysuckle are all present and have taken over the forest edge habitat. All three of these grow rapidly along roadsides and edges and can produce tangled impenetrable thickets. Birds feeding on the seed help to spread these plants to other areas where they continue to out-compete native species.

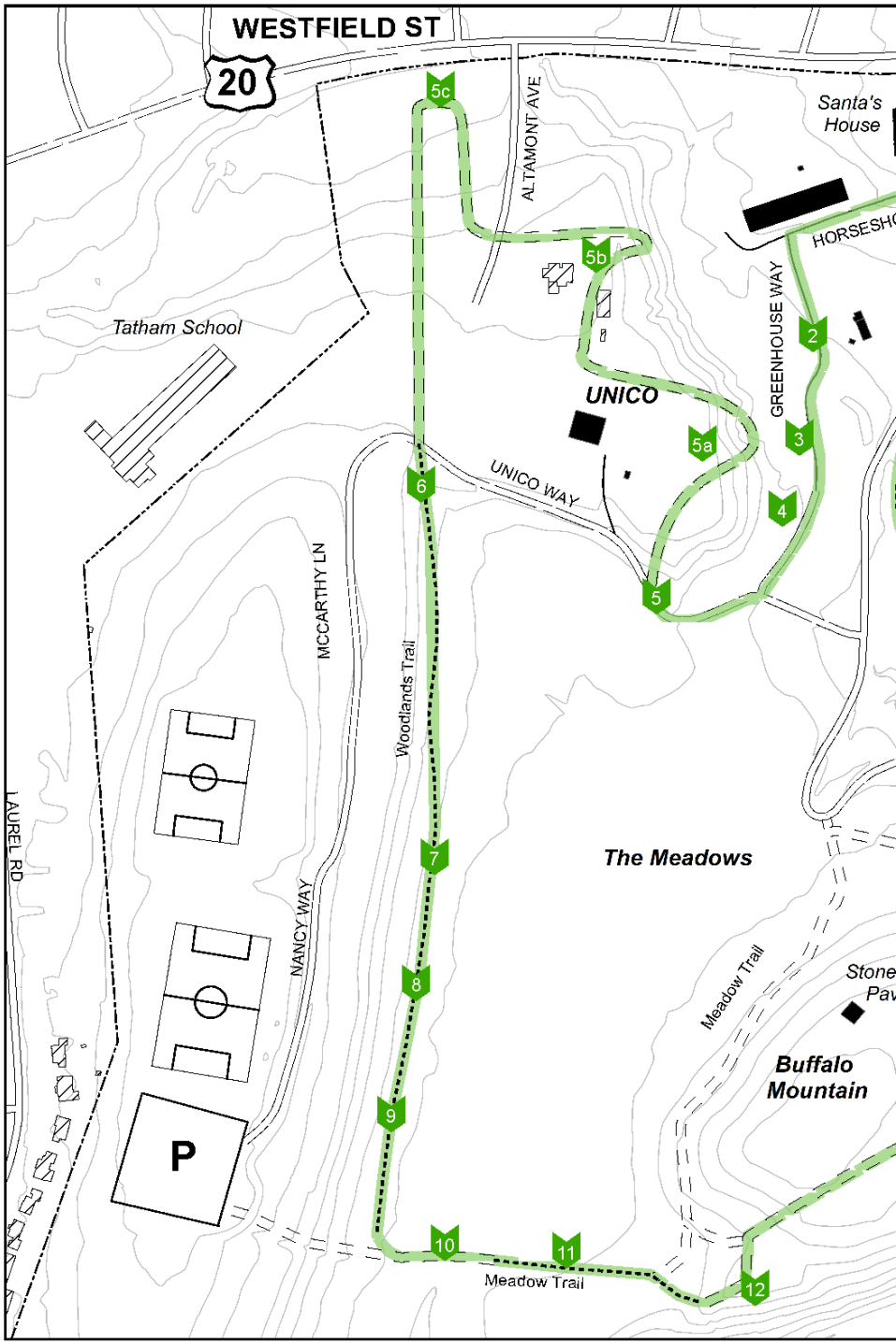
In most areas of the northeast, about 25% of the flora consists of introduced species. Fortunately, most of these do not become invasive, but those that do can create complex control and management problems. Behind you, across the road "phragmites" (giant reed) have taken root. This more aggressive wetland plant frequently replaces cat tails .

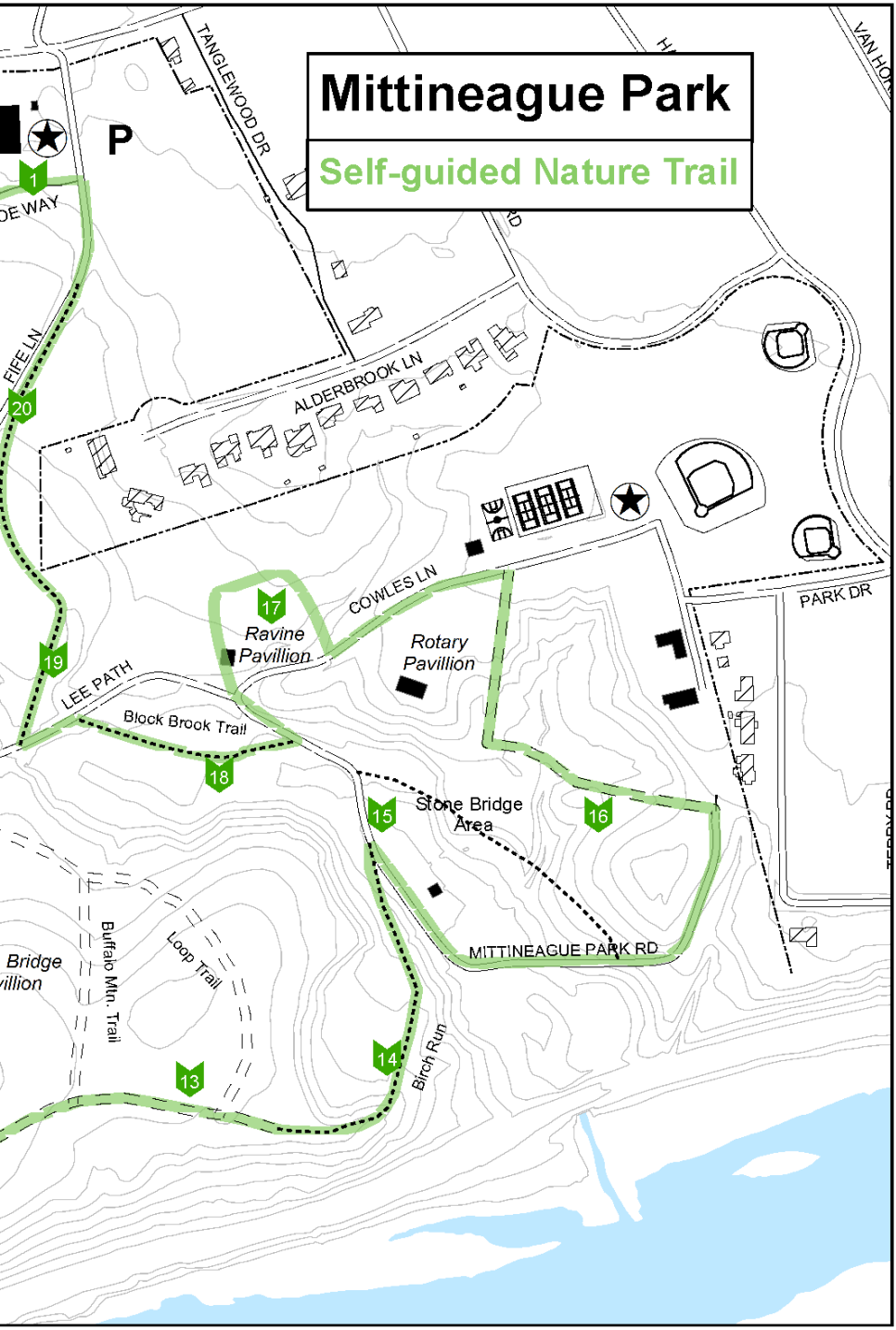
Multiflora Rose

Phragmites

The woods are made for the hunters of dreams,
the brooks for the fishers of song;
To the hunters who hunt for the gunless game
The streams and the woods belong.
There are thoughts that moan from the soul of pine
And thoughts in a flower bell curled:
And the thoughts that are blown with scent of the fern
Are as new and as old as the world.

~SAM WALTER FLOSS


WESTFIELD ST
20
ALTAMONT AVE
Santa's House
HORSESHO
GREENHOUSE WAY
Tatham School
UNICO
UNICO WAY
MCCARTHY LN
Woodlands Trail
LAUREL RD
NANCY WAY
The Meadows
Meadow Trail
Stone Pav
Buffalo Mountain
Meadow Trail
P
5c
5b
5a
2
3
4
5
6
7
8
9
10
11
12


Mittineague Park
Self-guided Nature Trail
P
TANGLEWOOD DR
ALDERBROOK LN
COWLES LN
PARK DR
Ravine Pavillion
Rotary Pavillion
LEE PATH
Block Brook Trail
Stone Bridge Area
MITTINEAGUE PARK RD
Loop Trail
Buffalo Mtn. Trail
Birch Run
1
13
14
15
16
17
18
19
20

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