A Natural Parterre

A Collaboration between Bob Chaplin, Miss Porter's School and Hill-Stead Museum, Farmington, Connecticut.

Foreword by Cate Rigoulot
Essay by Andrew M. Barton

A Natural Parterre

This site-specific art-work is a slowly evolving and long-term performance situated on a meadow at Hill-Stead Museum in Farmington, Connecticut.
The geometric garden design is approximately 136 feet by 64 feet and was installed in 2018. It is part of Hill-Stead's established walking-path system.
While it can be viewed from the museum's west terrace the parterre is also designed to be experienced up-close.

The concept of the formal, controlled garden that is separate from the wilderness dates to medieval times with gardens in monasteries made for medicinal and herbal plantings and later on for European palaces, manor houses and private estates for recreational purposes.
While the design of the parterre reflects the tradition of the formal garden, there is a twist. The pathways are mowed and manicured, but within the parterre sections where exotic plants or culinary herbs would normally be planted, naturally occurring grasses, shrubs and trees are encouraged to grow.

While *A Natural Parterre* should be considered an artwork, it is also a laboratory. Landscapes are not static. The observation and documentation of the migration of indigenous and invasive species, and the seasonal and annual changes over time are fundamental to the experience of the installation.

Under the supervision of Science Teacher Cate Rigoulot, students from Miss Porter's School in Farmington, Connecticut has used the installation as a part of her Advanced Interdisciplinary Seminar in Environmental Science. They have examined and analysed plant species charting the differences between the controlled mowed areas and the parterre sections where 'nature' is left to its own devices. Over time they will further experience the change and shifts in the dynamic of the landscape as shrub and tree growth, including invasive species such as Autumn Olive, Multiflora Rose and Barberry, claim back the open meadow.

Bob Chaplin

November 2021

September 2020

October 2021

A Natural Parterre

I was first introduced to Bob Chaplin in the spring of 2018 when he first started the process of planning the installation of *A Natural Parterre* at the Hill-Stead. As an environmental science teacher at Miss Porter's School, I had little knowledge or experience with landscape art, but I was very intrigued by Bob's vision and his enthusiasm for involving students in the process of tracking the ecological changes to the installation over time. My first reaction after meeting with Bob and seeing his drawings and plans was: "wow!" Then I thought: "what a cool opportunity to have students observe ecological succession in real-time!"

Ecological succession is the process of change in the species structure of an area over time. There are two types of succession, primary and secondary. Primary succession occurs in areas where life has not existed yet (a freshly hardened lava flow or the bare rock revealed after glacier retreat, for example); while secondary succession occurs in a place where a previous ecosystem once was after a disturbance such as a forest fire or a plowed field that has been left fallow. In the case of the parterre, we can see the process of secondary succession occurring in the plots left to grow while the mowed areas are under continual disturbance. As time moves on, the species in the unmowed section have begun to change. We see a shift away from annual plants and grasses to perennial herbs, woody shrubs, and small trees.

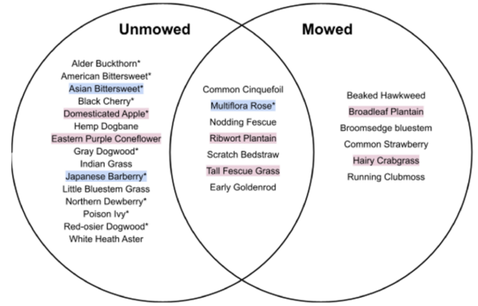
2021 was the third year that I have taken my Advanced Interdisciplinary Seminar in Environmental Sciences classes to *A Natural Parterre* for data collection. Students use quadrat sampling to inventory the species present and compare the mowed areas to the unmowed areas. Although our species inventory may not be fully complete (undoubtedly, there are species we have missed or misidentified), it has been incredible to see the change in just three years. Just the variation in the appearance of the parterre from the drought of 2020 to very wet and green 2021 is staggering.

I am grateful that I was introduced to Bob and that I teach at a school just a mere ten-minute walk from the parterre. It has been a wonderful way for my students to gain real-world data collection experience as well as an opportunity for them to leave a legacy for next year's students. I am looking forward to my continued partnership with Bob and seeing how the parterre continues to evolve.

Cate Rigoulot (she/her/hers)
Science Teacher
Miss Porter's School

November 2021

Percentage of native and non-native species in mowed vs. unmowed plots in 2020



Comparison of species found in mowed versus unmowed plots, 2020. A pink highlight indicates species that are non-native to Connecticut. A blue highlight indicates a non-native, invasive species. * indicates woody plants.

An Ecologist Views *A Natural Parterre*: Megafauna, Nature, Science, and Art

Fifty thousand years ago, *Homo sapiens* shared the world with a diverse menagerie of very large mammals and birds–so called "megafauna." Mammoths and mastodons, car-sized armadillos, giant cave bears and lions, 12-foot tall ground-dwelling birds, elephantine sloths, the monstrous gomphothere–to name just a few. Some of these species are depicted in meticulous paintings on the walls of France's Chauvet cave (and others) that date to at least 30,000 years ago. In North America alone, dozens of megafaunal species roamed, grazed, and stalked the continent when the first humans walked across the land bridge from the Old World into the Americas.

Remarkably, by 10,000 years ago, nearly all of these species were extinct. A small herd of dwarf mammoths held on until about 4,500 years ago on what is now Wrangell Island, Alaska. The large mammals encountered by early European explorers and colonizers in North America, for example–bison, deer, pronghorns, elk, moose, wolves, bears, etc.–were a small remnant of a continent chock full of big furry herbivores, carnivores, and omnivores.

What happened? Much of the blame appears to rest on the shoulders of our human ancestors. Most megafauna survived multiple glacial cycles, but, scarcely believable, human hunters apparently decimated hundreds of these slow-moving, slow-reproducing species. On one land mass after another, mass extinctions ensued after human arrival: 46,000 years ago in Australia, 41,000 years in Tasmania, 30,000 in Japan, 13,000 in North America followed by South America 500 years later, Madagascar 2,000 years ago, New Zealand 700 years ago, and so on.

Homo sapiens arose more than 300,000 years ago in Africa, according to the most recent archeological discoveries. Walking upright, equipped with a relatively weak body but a creative and resourceful mind, this primate created art and religion, maintained complex social relationships, traveled nomadically near and far to exploit new opportunities, and, apparently, wiped out a Noah's Ark of giant animals. It also harnessed fire, mastered a pharmacopeia of natural medicines, built canals for fishing and irrigation, and developed complex transportation networks. Starting about 15,000 years ago, as the Earth cycled into the present warm interglacial period, one human society after another settled into permanent communities in concert with the domestication of plants and animals for food, work, mobility, and protection.

We often think of these early human societies as living harmoniously with non-human nature. Modern industrial civilization is viewed as the root of global environmental destruction, as humans overexploited their resources and exerted their will over nature. Like many indigenous peoples today, early human societies no doubt developed practices that use and manage the Earth in ways that honored, worshiped, and sustained kindred species. Moreover, Nobel Prize winning economist Elinor Ostrom and her colleagues have shown that small, contemporary communities of all types have the capacity to share natural resources in a sustainable and equitable manner, avoiding the "tragedy of the commons." Correspondingly, there is no denying that cheap fossil fuels, rapid population growth, and affluence over the past two centuries have brought Planet Earth to the brink, as the climate departs from natural boundaries and mass extinction ensues. But the reality, it seems, is that *Homo sapiens* has been bending the rest of nature to its will for a very long time, well before the modern era, often benignly but sometimes with damaging global impacts. The narrative of human striving for control of non-human nature is indeed complex and primeval.

That brings us to Bob Chaplin's *A Natural Parterre*. No megafauna were slaughtered (but what's that in his freezer), and nature was hardly shaped to the whims and needs of humans. But, like many of his recent installations, this small parcel of land provokes us to ponder the complex relationship of humans with the rest of nature. Typical of his work, Bob accomplishes this by posing paradoxes, not explicitly but submerged under leaf and stem, soil and organic matter. Frankly, as a research ecologist, I'm still pondering these incongruities. Let me start by describing what I see.

The unmowed portions of *A Natural Parterre* stand in sharp contrast to the surrounding lawn: a riotous tangle of plant life versus a homogeneous, two-dimensional carpet. This disparity did not emerge instantaneously, but, instead, is the product of four years of seed dispersal, germination, growth, reproduction, and death–the fundamental ecological pulses of populations and communities. Initially, without their weekly shave, the grasses grew tall and lanky, and were released to complete their evolutionary impulse to flower and produce seeds. New herbaceous plants–many would call them weeds–germinated from seeds dormant in the soil, blown in on the wind, or dropped by birds or mammals. Woody plants–shrubs, trees, and vines–then began to invade from the nearby woods. Species diversity and physical complexity are slowly emerging. Vines knit life into a tangled tapestry. Woody plants are adding verticality. Animals join the party: first birds and rabbits accustomed to the lawn, and, then, as the habitat becomes ever more complex, snakes, rodents, deer, turkeys, and more. *A Natural Parterre* is becoming a complex menagerie of interacting species–an *ecological community*.

This process of ecosystem development is called *succession* by ecologists–changes in natural communities as they recover from disturbances. Usually, ecologists study how forests or other ecosystems develop after natural or human-caused disturbances, such as fires, floods, windstorms, and tree harvests. So, here's the first paradox about *A Natural Parterre*. By not mowing, Bob has "disturbed" the status quo of an icon of western civilization, the lawn–a fundamentally artistic act. By *not* mowing, he has removed a long-standing disturbance, releasing nature from the grip of *Homo sapiens*. Most people would find that weird, a little discomfiting, even unnatural, a small act of defiance. The stark contrast of the simple lawn and the emerging chaos reminds us that human control of nature is deeply embedded in us; it has become our cognitive default. To many, it is unbridled non-human nature that is strange.

Here's another bit of irony. Take a look at the names of the plant species that have sprung up in *A Natural Parterre* plots. Many are not native plants that evolved in and comprised the pre-human natural communities of North America, but, instead, are plants purposefully or accidentally introduced into North America from other continents over the past three centuries. Here's just one prominent example. The very conspicuous entangling vine is Asian bittersweet (*Celastris orientalis*), a well-known non-native, invasive plant in the Northeast USA. Even the seedling trees, elms, are not the trees of yesteryear, for at some point, they will succumb prematurely to Dutch elm disease, a fungal blight accidentally transported by humans to North America last century. I don't list these species as infractions against the raucous vitality of the emerging mini-forest. These are not paragons of pristine nature, but they exhibit an exquisite wildness. Instead, it is another lesson: the impact of *Homo sapiens* is so pervasive that even when we try to relinquish control, the human imprint remains.

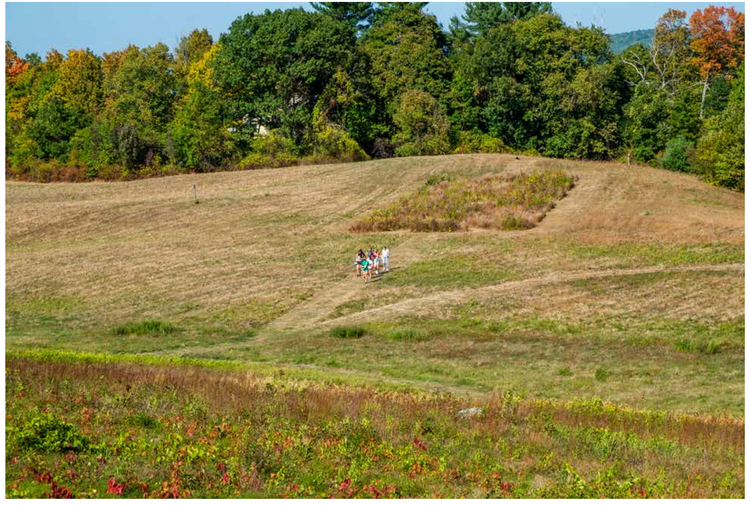
Back to that word, *succession*. The term was coined in an 1860 address to the Middlesex Agricultural Society in Concord, Massachusetts, by a man whom some scholars have called an early American ecologist. He was a pretty good writer and philosopher as well. His name was Henry David Thoreau. Thoreau was fascinated by seeds and fruits, by seasonal cycles, and by changes in forests as they recovered from disturbances. In closely observing nature around him, Thoreau was acting not only as a scientist but also an artist, in the sense that his immersion in the forests, lakes, and fields was a creative and philosophical act. In reaching for an apt descriptor, Thoreau scholars have often called him a poet-naturalist. Although he had a complicated relationship with science, Thoreau sought to approach nature as both a scientist and an artist.

Thoreau was working in the tradition of his contemporary, the German naturalist, Alexander von Humboldt, a strong advocate of combining art and science in our views of nature. In her brilliant biography of Humboldt, *The Invention of Nature* (2015), Andrea Wulf writes, "Fascinated by scientific instruments, measurements and observations, he was driven by a sense of wonder as well. Of course, nature had to be measured and analyzed, but he also believed that a great part of our response to the natural world should be based on the senses and emotions." This holistic, fully human, objective and subjective, artistic and scientific view of nature frayed in the 20th and 21st centuries as scientists became more "objective" and specialized and artists more disconnected from nature and science. What strikes me most about *A Natural Parterre* is that it is both art and science; the installation attempts to bring these two back into proximity.

In his contribution to the 2014 book, *This Idea Must Die: Scientific Theories That are Blocking Progress*, dinosaur paleontologist Scott Sampson argues that science is ultimately failing us by objectifying nature. "Why? Because much of our unsustainable behavior can be traced to a broken relationship with nature, a perspective that treats the nonhuman world as a realm of mindless, unfeeling objects. Sustainability will almost certainly depend upon developing mutually enhancing relations between humans and nonhuman nature."

Take another look at the photos and words about *A Natural Parterre*. To me, they admirably blur the line between art and science, between subjective and objective, and between feeling and observing.

Andrew M. Barton
Drew is a forest ecologist, science writer, and professor of biology at the University of Maine at Farmington. His research focuses on climate change, wildfire, ecosystem recovery, and endangered plants in the American Southwest and northern Mexico.



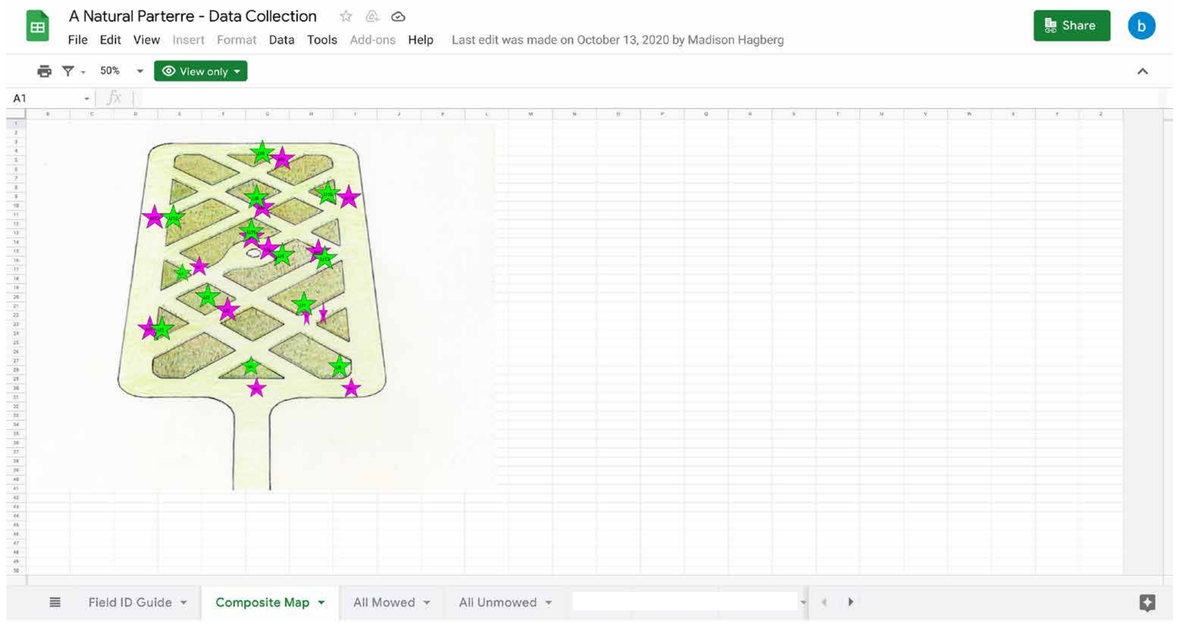









1st Session September 2020



	Common Name	Native/Non-Native	Images	Notes
Symphyotrichum ericoides	white heath aster			
Solidago canadensis	goldenrod			
Rosa Multiflora	Multiflora Rose			
Cornus racemosa	Gray Dogwood			
Rhamnus frangula	Alder Buckthorn			
Rubus Caesius	Dewberry			
rubus flagellaris	Norther Blackberry / Dewberry			

https://gobotany.nativeplanttrust.org/simple/

Apocynum cannabinum	dogbane	
Festuca Subverticillata	Nodding Fescue	 
common purslane	Portulaca oleracea	
	Domesticated Apple	
Celastrus scandens	American Bittersweet	 
Berberis thunbergii	japanese barberry	
toxicodendron radicans	poison ivy/poison oaks	

Field ID Guide

Cornus Sericea	Red Osier Dogwood	
unknown	unknown many leaves	
Hieracium	Hawkweed	
Potentilla	Common Cinquefoil	
Veronica Persica	Bird's eye Speedwell	

All Mowed

Scientific Name	Common Name	# Plots Dominant
Plantago Major	Broadleaf Plantain	
Digitaria	Crab Grass	1
Festuca arundinacea	Tall Fescue Grass	5
Andropogon virginicus	Whiskey Grass	
Potentilla	Common Cinquefoil	
Festuca Subverticillata	Nodding Fescue	1
Plantago lanceolata	Ribwort Plantain	
rose multiflora	Multiflora Rose	
Veronica Persica	Bird's Eye Speedwell	
Fragaria Virginiana	Strawberry	
Hieracium	Hawkweed	
Unkown	Many Leaves	

All Unmowed

Scientific Name	Common Name	# Plots Dominant
Symphyotrichum ericoides	White Heath Aster	
Rosa multiflora	Multiflora Rose	2
Cornus racemosa	Gray Dogwood	2
Malus pumila	Apple Tree Leaf	
Cornus Sericea	Red-osier Dogwood	1
Potentilla	Common Cinquefoil	
Rubus Caesius	Dewberry	1
Rhamnus Frangula	Alder Buckthorn	
Festuca Subverticillata	Nodding Fescue	
Apocynum Cannabinum	Dogbane	
Toxicodendron Radicans	Poison Ivy	
Solidago canadensis	Canada goldenrod	
Rubus Flagellaris	Northern Dewberry	
Festuca Arundinacea	Tall Fescue	1
Sorghastrum Nutans	Indian Grass	
Schizachyrium Scoparium	Little Blue Stem Grass	1
Berberis thunbergii	japanese barberry	
Celastrus scandens	American Bittersweet	

Mowed - M2

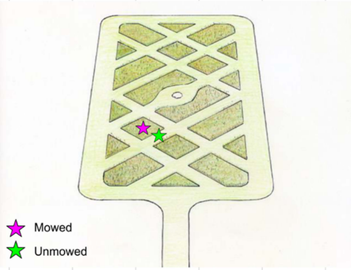
Scientific Name	Common Name
Plantago Major	Broadleaf Plantain
Digitaria	Crab Grass
Festuca arundinacea	Tall Fescue Grass
Species Richness:	3
Dominant Species:	Crab Grass
Estimated %	15

Image of Plot

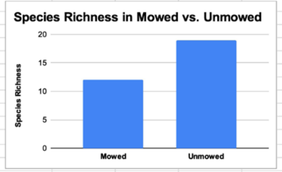
Unmowed - U2

Scientific Name	Common Name
Symphyotrichum ericoides	White Heath Aster (3)
Rosa multiflora	Multiflora Rose (2)
Cornus racemosa	Gray Dogwood (6)
Malus pumila	Apple Tree Leaf (5)
Species Richness:	4
Dominant Species:	Gray Dogwood
Estimated %	50

Image of Plot



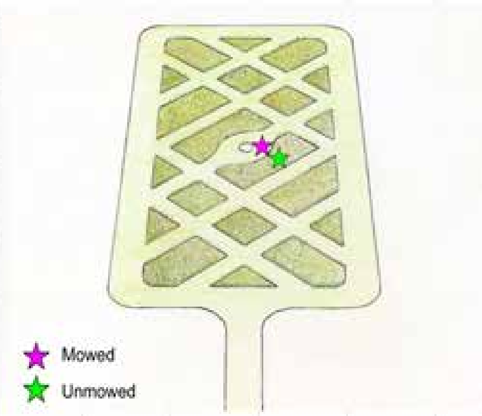
	Species Richness
Mowed	12
Unmowed	19



Mowed Areas		Unmowed Areas	
Scientific Name	**Common Name**	**Scientific Name**	**Common Name**
Plantago Major	Broadleaf Plantain	Symphyotrichum ericoides	White Heath Aster
Digitaria	Crab Grass	Rosa multiflora	Multiflora Rose
Festuca arundinacea	Tall Fescue Grass	Cornus racemosa	Gray Dogwood
Andropogon virginicus	Whiskey Grass	Malus pumila	Apple Tree Leaf
Potentilla	Common Cinquefoil	Cornus Sericea	Red-osier Dogwood
Festuca Subverticillata	Nodding Fescue	Potentilla	Common Cinquefoil
Plantago lanceolata	Ribwort Plantain	Rubus Caesius	Dewberry
rose multiflora	Multiflora Rose	Rhamnus Frangula	Alder Buckthorn
Veronica Persica	Bird's Eye Speedwell	Festuca Subverticillata	Nodding Fescue
Fragaria Virginiana	Strawberry	Apocynum Cannabinum	Dogbane
Hieracium	Hawkweed	Toxicodendron Radicans	Poison Ivy
Unkown	Many Leaves	Solidago canadensis	Canada goldenrod
		Rubus Flagellaris	Northern Dewberry
		Festuca Arundinacea	Tall Fescue
		Sorghastrum Nutans	Indian Grass
		Schizachyrium Scoparium	Little Blue Stem Grass
		Berberis thunbergii	japanese barberry
		Celastrus scandens	American Bittersweet
Total Species Richness:	12	**Total Species Richness:**	19

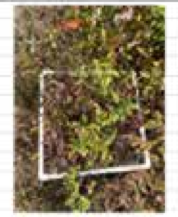
Mowed - M5	
Scientific Name	Common Name
digitaria	crab grass
festuca sp	tall fescue grass
potentilla	cinquefoil
fragaria vesca	wild strawberry
Species Richness:	4
Dominant Species:	tall fescue grass
Estimated %	70%
Image of Plot	

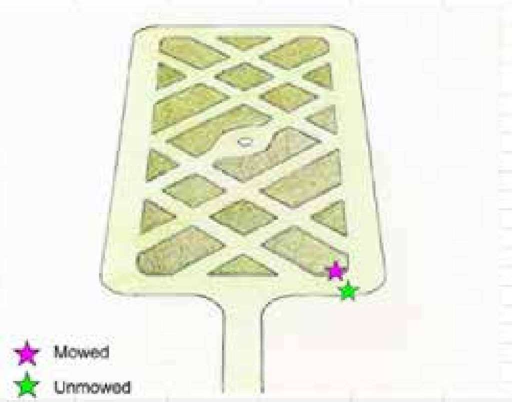
Unmowed - U5	
Scientific Name	Common Name
cornus racemosa	gray dogwood
rose multiflora	multiflora rose
rhomnus frangula	alder buckthorn
sorghastrum nutans	indian grass
schizachyrium scoparium	little blue stem
Species Richness:	5
Dominant Species:	little blue stem grass
Estimated %	52%
Image of Plot	



Mowed - M6	
Scientific Name	Common Name
Andropogon virginicus	Whiskey grass
Digitaria	Crab grass
Potentilla	common cinquefoil
Festuca arundinacea	Tall Fescue Grass
Species Richness:	
Dominant Species:	Whiskey Grass
Estimated %	
Image of Plot	

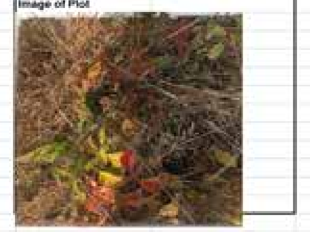
Unmowed - U6	
Scientific Name	Common Name
Symphyotrichum ericoides	white heath aster
Cornus racemosa	gray dogwood
Malus pumila	Apple tree leaf
Festuca arundinacea	Tall Fescue Grass
Species Richness:	
Dominant Species:	gray dogwood
Estimated %	
Image of Plot	

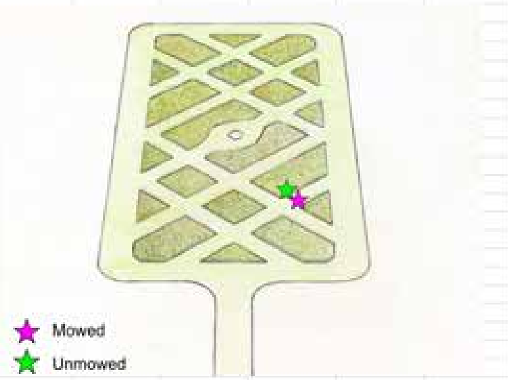




Mowed - M1	
Scientific Name	Common Name
Digitaria	crab grass
Portulaca oleracea	common purslane
Schizachyrium scoparium	little blue stem
Sorghastrum nutans	indiangrass
Fragaria virginiana	virginia strawberry
Species Richness:	
Dominant Species:	indiangrass
Estimated %	90%
Image of Plot	

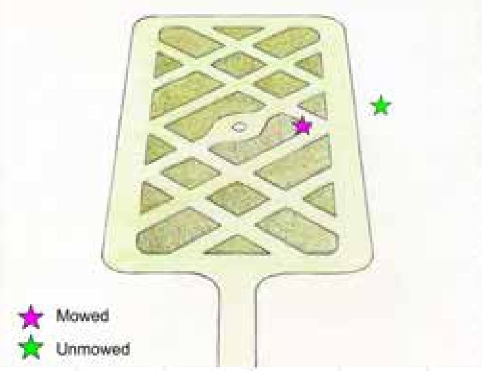
Unmowed - U1	
Scientific Name	Common Name
Cornus racemosa	grey dog wood
Symphyotrichum ericoides	white heath aster
Rhamnus frangula	alber buckthorn
Schizachyrium scoparium	little blue stem
Sorghastrum nutans	indiangrass
Fragaria virginiana	virginia strawberry
Portulaca oleracea	common purslane
	uknown rose cluster
Species Richness:	
Dominant Species:	little blue grass
Estimated %	
Image of Plot	



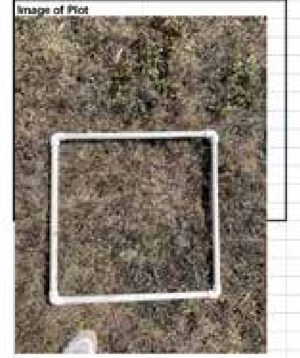


Mowed - M13	
Scientific Name	Common Name
Species Richness:	
Dominant Species:	
Estimated %	
Image of Plot	

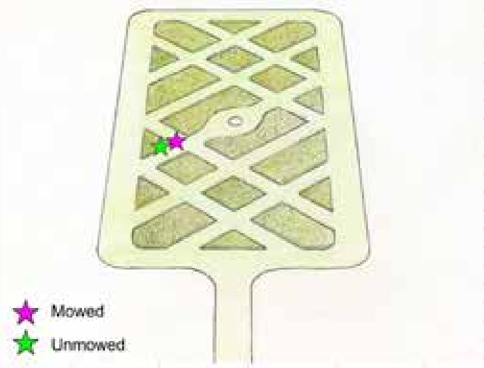
Unmowed - U13	
Scientific Name	Common Name
Frangula alnus	Alder Buckthorn
Celastrus scandens	American Bittersweet
Cornus racemosa	Gray Dogwood
Festuca subverticillata	Nodding Fescue
Toxicodendron radicans	Poison Ivy/Poison Oaks
Festuca arundinacea	Tall Fescue
Species Richness:	6
Dominant Species:	Tall Fescue
Estimated %	45
Image of Plot	



Mowed - M7	
Scientific Name	Common Name
Festuca arundinacea	Tall Fescue
Hieracium	Hawkweed
Species Richness:	2
Dominant Species:	Tall Fescue
Estimated %	55%
Image of Plot	

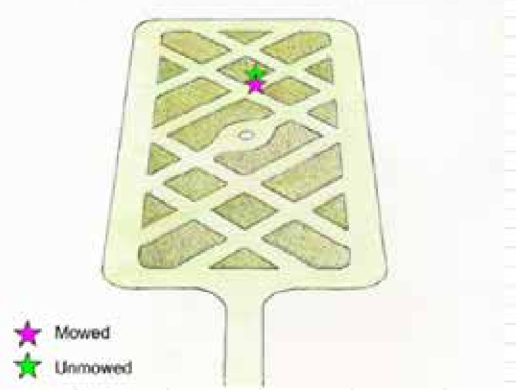


Unmowed - U7	
Scientific Name	Common Name
Festuca Subverticillata	Nodding Fescue
Cornus racemosa	Gray Dogwood
Celastrus scandens	American Bittersweet
Black Cherry Plant	Prunus serotina
Species Richness:	4
Dominant Species:	Nodding Fescue
Estimated %	40%
Image of Plot	



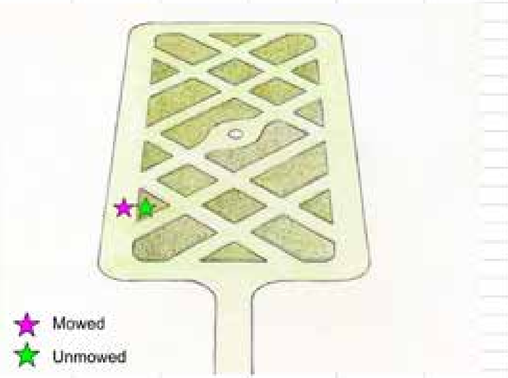
Mowed - M8	
Scientific Name	Common Name
Festuca arundinacea	Tall Fescue Grass
Digitaria	Crab Grass
rose multiflora	Multiflora rose
Species Richness:	3
Dominant Species:	Tall Fescue Grass
Estimated %	60%
Image of Plot	

Unmowed - U8	
Scientific Name	Common Name
rose multiflora	Multiflora Rose
Cornus racemosa	Gray Dogwood
Festuca Subverticillata	Nodding fescue
Rhamnus frangula	Alder Buckthorn
Sordago canadensis	Golden Rod
Symphyotrichum ericoides	White Heath Aster
toxicodendron radicans	Poison Ivy/Oaks
Species Richness:	7
Dominant Species:	Nodding Fescue
Estimated %	30%
Image of Plot	



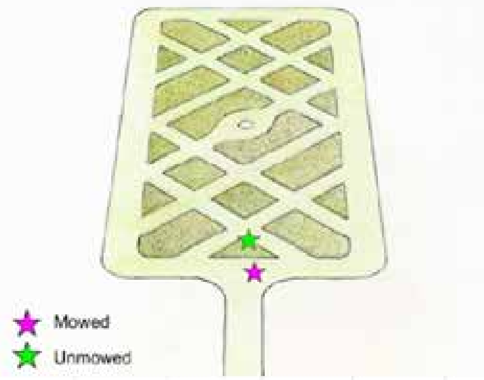
Mowed - M3	
Scientific Name	Common Name
Festuca Subverticillata	Nodding Fescue
Veronica Persica	Bird's Eye Speedwell
Festuca Arundinacea	Tall Fescue
Potentilla	Common Cinquefoil
Species Richness:	4
Dominant Species:	Tall Fescue
Estimated %	75%
Image of Plot	

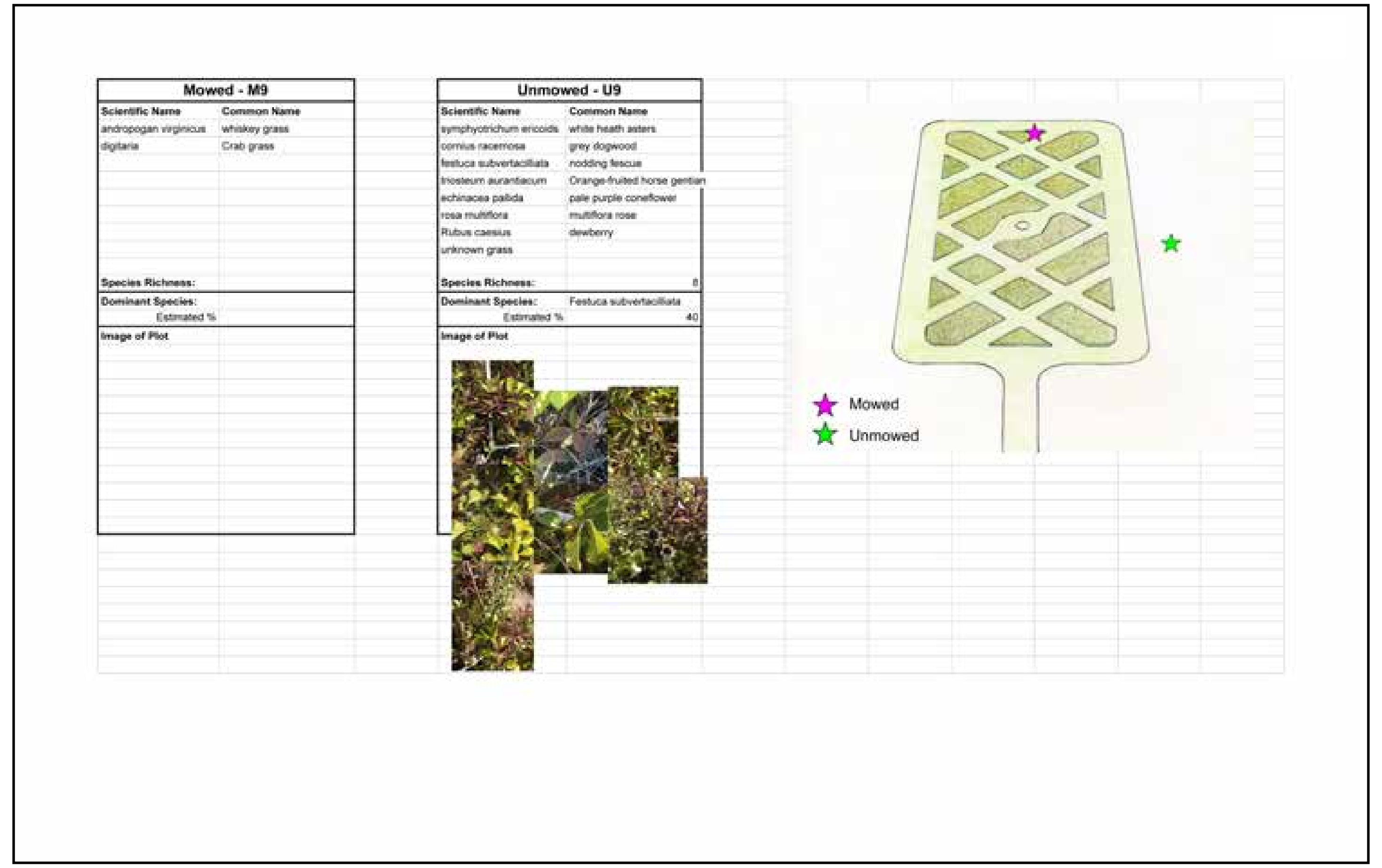
Unmowed - U3	
Scientific Name	Common Name
Cornus Sericea	Red-osier Dogwood
Potentilla	Common Cinquefoil
Symphyotrichum Ericoides	White Heather Aster
Rubus Caesius	Dewberry
Rhamnus Frangula	Alder Buckthorn
Festuca Subverticillata	Nodding Fescue
Apocynum Cannabinum	Dogbane
Toxicodendron Radicans	Poison Ivy
Festuca Arundinacea	Tall Fescue
Species Richness:	9
Dominant Species:	Tall Fescue
Estimated %	45%
Image of Plot	



Mowed - M4	
Scientific Name	Common Name
fragaria virginiana	strawberry
Festuca arundinacea	Tall Fescue Grass
Hieracium	Hawkweed
Species Richness:	
Dominant Species:	
Estimated %	
Image of Plot	

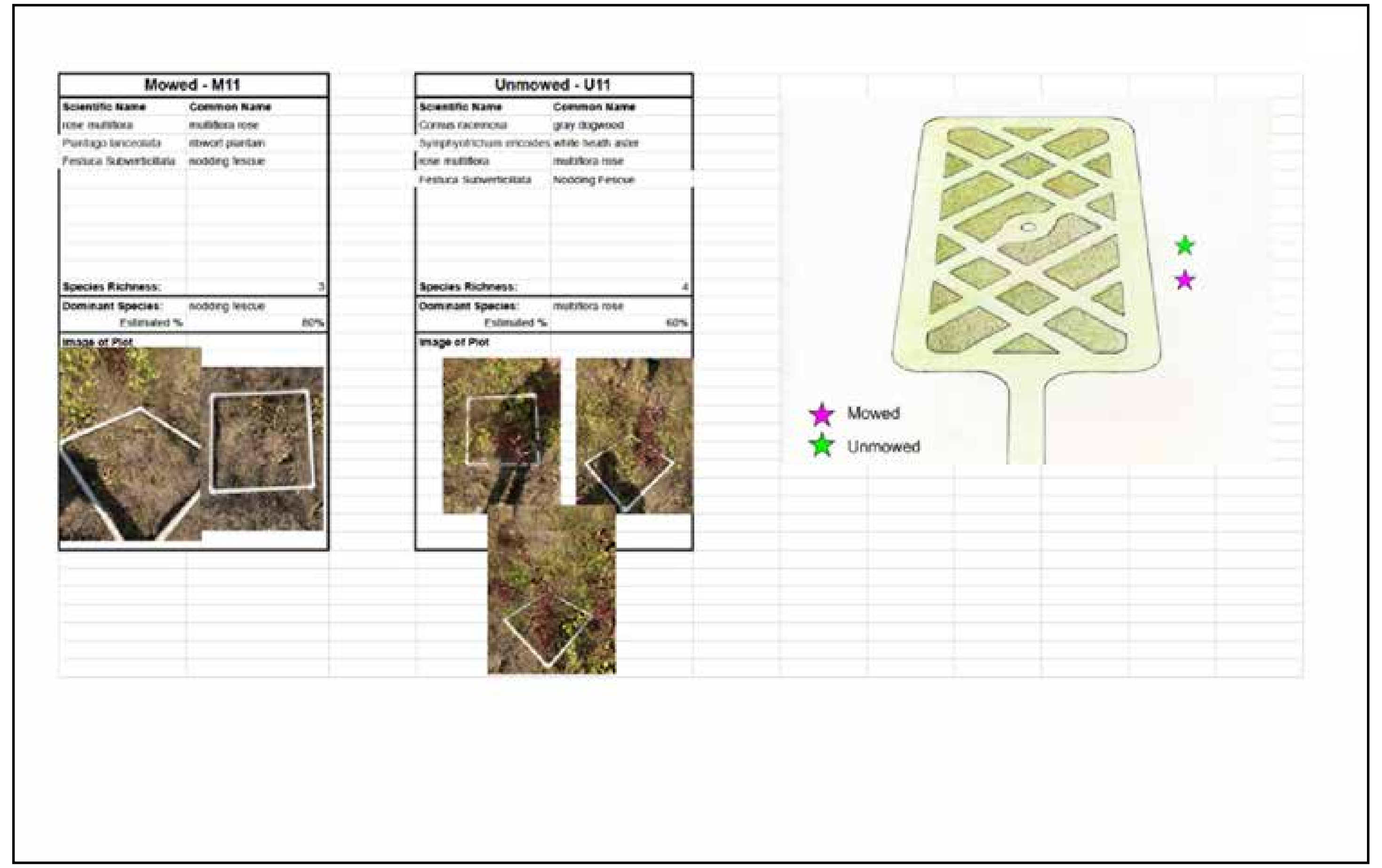
Unmowed - U4	
Scientific Name	Common Name
Symphyotrichum ericoides	White heath aster
Solidago canadensis	Canada goldenrod
Apocynum cannabinum	Dogbane
Rubus Caesius	Dewberry
rubus flagellaris	northern dewberry
tall fescue	grass
Species Richness:	5
Dominant Species:	Dewberry
Estimated %	40%
Image of Plot	





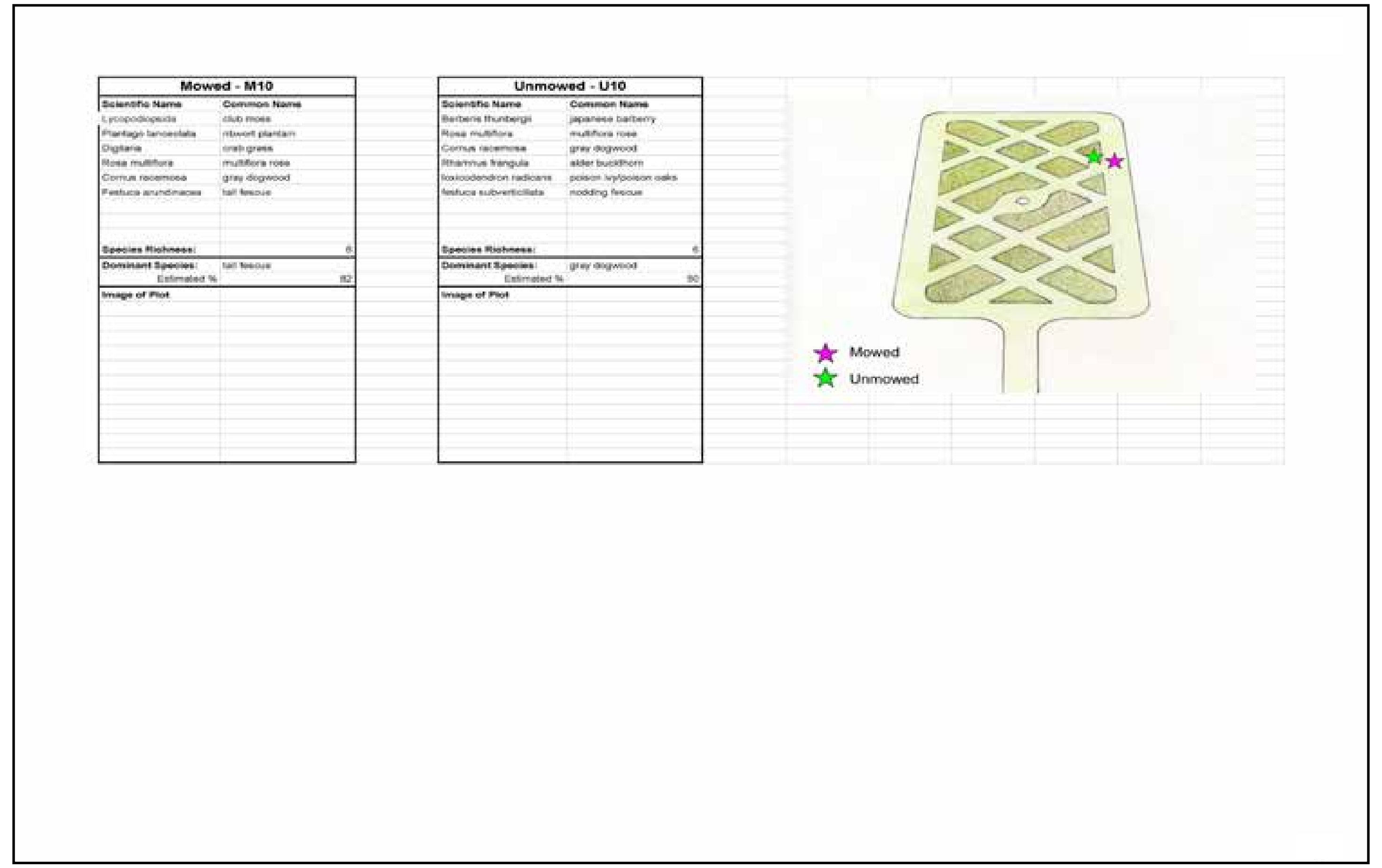
Mowed - M9	
Scientific Name	Common Name
andropogan virginicus	whiskey grass
digitaria	Crab grass
Species Richness:	
Dominant Species:	
Estimated %	
Image of Plot	

Unmowed - U9	
Scientific Name	Common Name
symphyotrichum ericoids	white heath asters
cornius racemosa	grey dogwood
festuca subvertacilliata	nodding fescue
triosteum aurantiacum	Orange-fruited horse gentian
echinacea pallida	pale purple coneflower
rosa multiflora	multiflora rose
Rubus caesius	dewberry
unknown grass	
Species Richness:	8
Dominant Species:	Festuca subvertacilliata
Estimated %	40
Image of Plot	



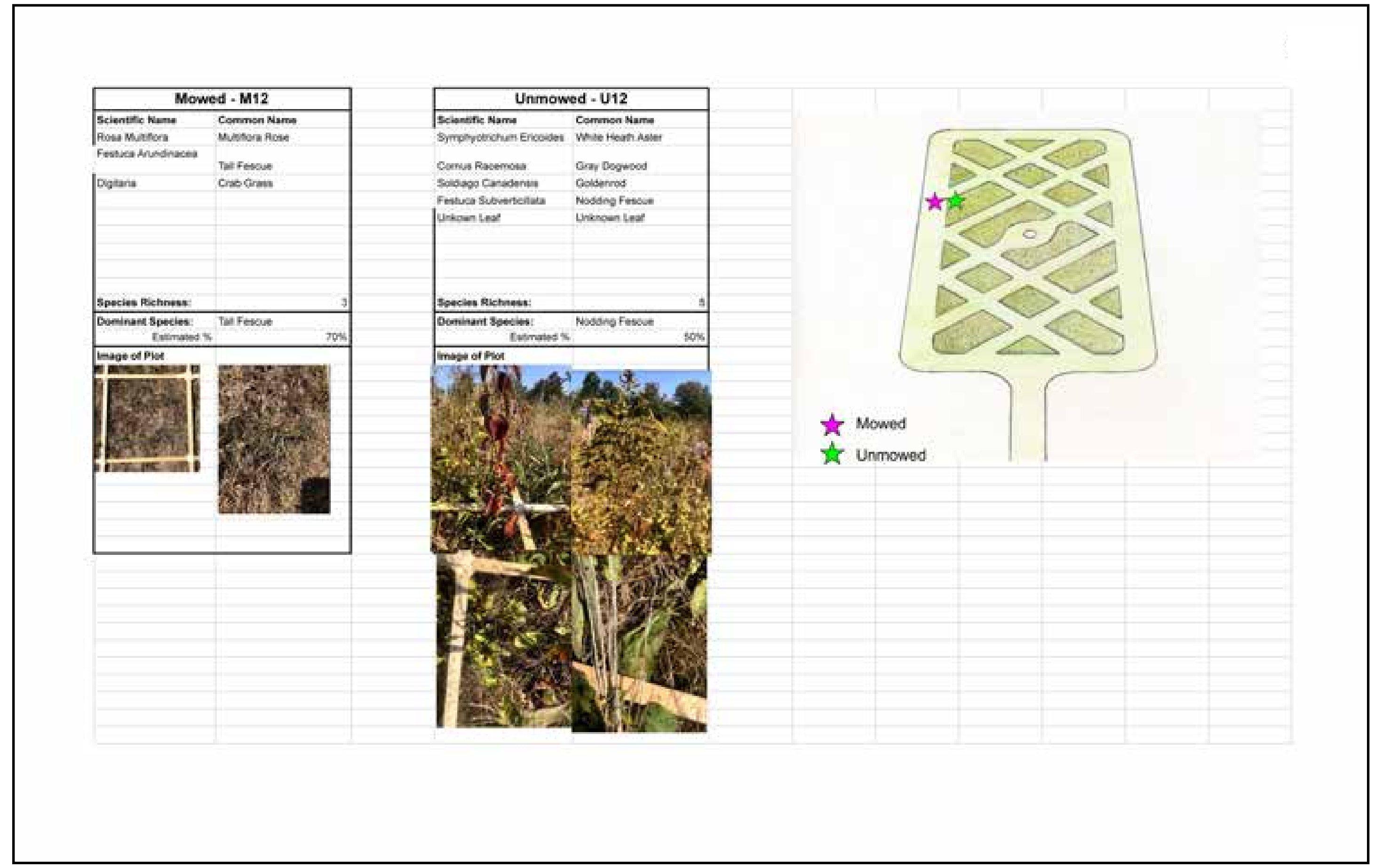
Mowed - M11	
Scientific Name	Common Name
rose multiflora	multiflora rose
Plantago lanceolata	ribwort plantain
Festuca Subverticillata	nodding fescue
Species Richness:	3
Dominant Species:	nodding fescue
Estimated %	80%
Image of Plot	

Unmowed - U11	
Scientific Name	Common Name
Cornus racemosa	gray dogwood
Symphyotrichum ericodes	white heath aster
rose multiflora	multiflora rose
Festuca Subverticillata	Nodding Fescue
Species Richness:	4
Dominant Species:	multiflora rose
Estimated %	60%
Image of Plot	



Mowed - M10	
Scientific Name	Common Name
Lycopodiopsida	club moss
Plantago lanceolata	ribwort plantain
Digitaria	crab grass
Rosa multiflora	multiflora rose
Cornus racemosa	gray dogwood
Festuca arundinacea	tall fescue
Species Richness:	6
Dominant Species:	tall fescue
Estimated %	82
Image of Plot	

Unmowed - U10	
Scientific Name	Common Name
Berberis thunbergii	japanese barberry
Rosa multiflora	multiflora rose
Cornus racemosa	gray dogwood
Rhamnus frangula	alder buckthorn
toxicodendron radicans	poison ivy/poison oaks
festuca subverticillata	nodding fescue
Species Richness:	6
Dominant Species:	gray dogwood
Estimated %	50
Image of Plot	



Mowed - M12	
Scientific Name	Common Name
Rosa Multiflora	Multiflora Rose
Festuca Arundinacea	Tall Fescue
Digitaria	Crab Grass
Species Richness:	3
Dominant Species:	Tall Fescue
Estimated %	70%
Image of Plot	

Unmowed - U12	
Scientific Name	Common Name
Symphyotrichum Ericoides	White Heath Aster
Cornus Racemosa	Gray Dogwood
Solidago Canadensis	Goldenrod
Festuca Subverticillata	Nodding Fescue
Unkown Leaf	Unknown Leaf
Species Richness:	5
Dominant Species:	Nodding Fescue
Estimated %	50%
Image of Plot	

Year Two
September 2021

2nd Session September 2022

A Natural Parterre - Data Collection 2021

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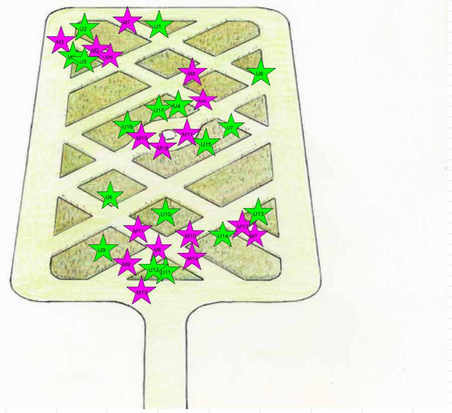


Common Name	Native/Non-Native	Images	Notes
unknown- frilly long leaf			
unknown- ruffled leaf			
American Asters			
Grey Dogwood			
Clover			

https://gobotany.nativeplanttrust.org/simple/

Common Name	Native/Non-Native	Images	Notes
Arching Blackberry Brambles			
Common Self-heal			
Golden Rod (Canadian)			
Mint?			
Golden Rod (early)			

https://gobotany.nativeplanttrust.org/simple/

Common Name	Native/Non-Native	Images	Notes
Corniculatae			
wild carrot			
Calico Aster			
Unknown- spinach grass	we have this too - in plot 7		
Unkown- Cilantro Leaf			

https://gobotany.nativeplanttrust.org/simple/

Screenshot

	Scientific Name	Common Name	Plots Present	Native vs. NonNative
1	Linnaea Borealis	American Twinflower	10	Native
2	Polytrichum commune	Haircap Moss	4,9,10, 11	Native
3	Potentilla canadensis	Dwarf Cinquefoil	6, 13	Native
4	Potentilla simplex	Common cinquefoil	4,7,8	Native
5	Prunella vulgaris	Common Self-heal	6,3,15	Native
6	Solidago Rugosa	Common Wrinkle-Leaved Golden	6	Native
7	Symphyotrichum lancelolatu	Panicled Aster	6, 8	Native
8	Symphyotrichum lateriflorur	Calico American-aster	4,2, 10	Native
9	Mentha	Mint	12	Native
10	Polytrichum commune	Common Haircap moss	13, 14,16	Native
11	Aster Amellus	Wild Aster	9,11,15	Non-Native
12	Bedstraw	Galium	5	Non-Native
13	Daucus carota	Queen Anne's Lace	6	Non-Native
14	Digitaria	Crab Grass	4,5	Non-native
15	Fescue grass	Festuca arundinacea	7	Non-native
16	Galium Mollugo	Whorled Bedstraw	8,16	Non-native
17	Hieracium caespitosum	Yellow Hawkweed	4	Non-native
18	Oxalis Acetosella	Woodsorrel	9,11	Non-native
19	Paspalum setaceum	slender beadgrass	6	Non-native
20	Rhamnus frangula	Alder Buckthorn	1	Non-native
21	Plantago lanceolata	Ribwort plantain	7, 8	Non-native
22	Symphyotrichum	Asters	12	Non-native
23	Unkown Thick Blade Grass	Unkown Thick Blade Grass	8	Non-native
24	Trifolium repens	White Clover	4,5,10,12, 13, 1, 2, 3, 14, 15	Non-native
25	trifolium pratense	Red Clover	10,12	Non-native
26	Oxalis corniculata	Corniculatae	12	Non-native
27	Filosella officinarum	Mouse-ear Hawkweed	5, 7	Non-native
28	Festuca arundinacea	Tall Fescue	4,15	Non-native (invasive)
29	Festuca rubra	Creeping Red Fescue Grass	4,5,9,11	Non-native (invasive)

	Scientific Name	Common Name	Plots Present	Native vs. NonNative
1	Galium	Whirled Bedstraw	5	Native
2	Celastrus scandens	American Bittersweet	1,3,5,9	Native
3	Corylus americana	American Hazelnut	10	Native
4	Dasiphora Floribunda	shrubby-cinquefoil	10	Native
5	Fraxinus americana	White Ash	8, 17	Native
6	Fraxinus nigra	Black Ash	3	Native
7	Panicum virgatum	Switch Grass	4,5	Native
8	Prunella Vulgaris	Heal-All (selfheal)	10	Native
9	Prunus serotina	Black Cherry	7, 16	Native
10	Rhamnus alnifolia	Alder Buckthorn	7,6,11,8, 3	Native
11	Solidago canadensis	Canada goldenrod	2,4,15,16, 9, 10, 3	Native
12	Solidago juncea	Early Goldenrod	1,5	Native
13	Solidago Rugosa	Wrinkle-leaf Golden Rod	10, 11, 12, 13, 14,6	Native
14	Swida/Cornus racemosa	Gray Dogwood	12,6, 1,8, 2, 16	Native
15	Symphyotrichum	American Asters	12,26	Native
16	Toxicodendron radicans	Poison Ivy	5,12	Native
17	Apocynum cannabinum	Hemp Dogbane	8,16	Non-Native
18	Celastrus orbiculatus	Oriental Bittersweet	4,5,8	Non-Native
19	Malus Domestica	Apple tree	14, 2	Non-Native
20	Plantago lanceolata	Ribwhort Plantain	10, 11	Non-Native
21	Rosa multiflora	Multiflora Rose	4,6	Non-Native
22	Rubus Recurvicaulis	Arching Blackberry (Brambles)	9, 12, 13,11,15	Non-Native
23	Schizachyrium scoparius	Little Blue Stem	2	Non-Native
24	Trifolium pratense	Red Clover	4	Non-Native
25	Festuca rubra	Creeping Red Fescue Grass	4,15	Non-Native (Invasive)
				9:16 non-native/native

Species	Mowed	UnMowed
Alder Buckthorn	x	x
American Twinflower	x	
Asters	x	x
American Bittersweet		x
American Hazelnut		x
Apple		x
Arching Blackberry		x
Black Ash		x
Black Cherry		x
Calico American-aster	x	
Canada goldenrod		x
Common cinquefoil	x	
Common Haircap moss	x	
Common Self-heal	x	x
Common Wrinkle-Leaved Goldenrod	x	
Corniculatae	x	
Crab Grass	x	
Creeping Red Fescue Grass	x	x
Dwarf Cinquefoil	x	
Early Goldenrod		x
Festuca arundinacea	x	
Galium	x	
Gray Dogwood		
Unknown Thick Blade Grass	x	
Haircap Moss	x	
Hemp Dogbane		
Slender Beadgrass	x	
Little Blue Stem		x
Mint	x	
Mouse-ear Hawkweed	x	
Multiflora Rose		x
Oriental Bittersweet		
Panicled Aster	x	
Poison Ivy		x
Queen Anne's Lace	x	
Red Clover	x	x
Ribwort plantain	x	x
Switch Grass		x
Tall Fescue	x	
Whorled Bedstraw	x	x
White Ash		x
White Clover	x	
Wild Aster	x	
Woodsorrel	x	
Wrinkle-lesf Golden Rod		x
Yellow Hawkweed	x	
shrubby-cinquefoil		x

Mowed - M2

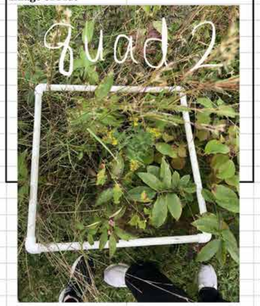
Scientific Name	Common Name
genus trifolium	clover
Festuca arundinacea	tall fescue
Symphyotrichum lateriflorum	calico aster
	mouse ear hawkweed
Species Richness:	
Dominant Species:	
Estimated %	

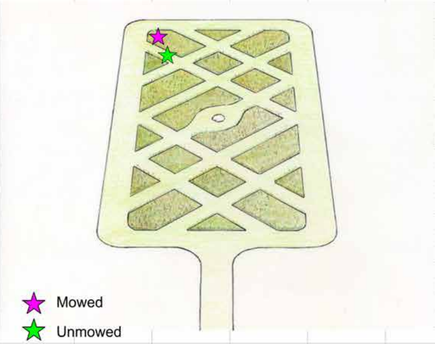
Image of Plot

Unmowed - U2

Scientific Name	Common Name
Solidago asteraceae	Canada Golden Rod
Cornus Racemosa	Grey Dogwood
Malus Domestica	Apple Tree
Schizachyrium scoparium	Little Blue Stem
Species Richness:	
Dominant Species:	
Estimated %	

Image of Plot





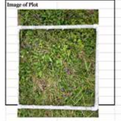
Mowed - M6

Scientific Name	Common Name
Prunella vilgaris	Common Selfheal
Potentilla canadensis	Dwarf Cinquefoil
Paspalum Conjugatum	Hilograss
Symphyotrichum lanceolat	Panicled Aster
Daucus carota	Queen Anne's Lace
Solidago Rugosa	Common Wrinkle-Leaved Goldenrod

Species Richness: 5

Dominant Species:
Estimated %

Image of Plot



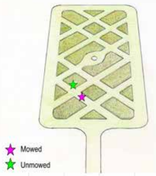
Unmowed - U6

Scientific Name	Common Name
Solidago rugosa	Common Wrinkle-leaved Goldenrod
Rosa palustris	Multiflora Rose Bertics
Rhamnus alnifolia	Alder Buckthorn
Sveda racemosa	Grey Dogwood
	(dogwood is dominant here)

Species Richness: 4

Dominant Species:
Estimated %

Image of Plot



Mowed - M7

Scientific Name	Common Name
Prunella simplex	Common Cinquefoil
Pilosella officinarum	Mouse ear hawkweed
Ribwort plantain	Plantago lanceolata
Fescue grass	Festuca arundinacea
Unsure	Unsure #1

Species Richness: 5

Dominant Species:
Estimated %

Image of Plot

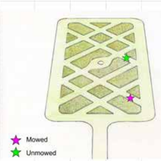
Unmowed - U7

Scientific Name	Common Name
Rhamnus alnifolia	Alder Buckthorn
Black cherry	Prunus serotina
Solidago juncea	Early goldenrod
Sevda racemosa	Dogwood

Species Richness: 4

Dominant Species:
Estimated %

Image of Plot



Mowed - M1

Scientific Name	Common Name
genus trifolium	clover
Festuca arundinacea	tall fescue
	fern
Rhamnus frangula	alder buckthorn

Species Richness:

Dominant Species:
Estimated %

Image of Plot

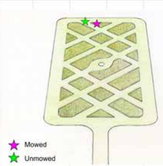
Unmowed - U1

Scientific Name	Common Name
solidago juncea	early golden rod
cornus racemosa	grey dogwood
celastrus scandens	bittersweet

Species Richness:

Dominant Species:
Estimated %

Image of Plot



Mowed - M4

Scientific Name	Common Name
Polytrichum commune	Common Haircap Moss
Symphyotrichum lateriflo	Calico American aster
Potentilla simplex	Common cinquefoil
Hieracium caespitosum	Yellow Hawkweed
Digitaria	Crab Grass
Festuca rubra	Creeping Red Fescue Grass

Species Richness:

Dominant Species:
Estimated %

Image of Plot

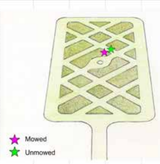
Unmowed - U4

Scientific Name	Common Name
Solidago canadensis	Canada goldenrod
Trifolium	Clover
Rosa multiflora	Multiflora Rose
Festuca rubra	Creeping Red Fescue Grass
Celastrus orbiculatus	Oriental Bittersweet
Panicum virgatum	Switch Grass

Species Richness:

Dominant Species:
Estimated %

Image of Plot



Mowed - M8

Scientific Name	Common Name
Symphyotrichum lanceolat	Panicled Aster
Prunella simplex	Common Cinquefoil
Plantago lanceolata	Ribwort Plantain
Hick hicks	Grass??
Galium Mollugo	whorled bedstraw

Species Richness: 5

Dominant Species:
Estimated %

Image of Plot

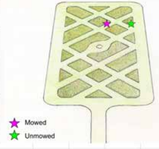
Unmowed - U8

Scientific Name	Common Name
Celastrus orbiculatus	Oriental Bittersweet
Sveda racemosa	Gray Dogwood
Rhamnus alnifolia	Alder Buckthorn
Apocynum cannabinum	Hemp Dogbane
Fraxinus americana	White Ash

Species Richness: 5

Dominant Species:
Estimated %

Image of Plot



Mowed - M9

Scientific Name	Common Name
Aster Amellus	Wild Aster
Oxalis Acetosella	Woodsorrel
Polytrichum commune	Haircap moss
Festuca Rubra	Creeping Red Fescue Grass

Species Richness:

Dominant Species:
Estimated %

Image of Plot

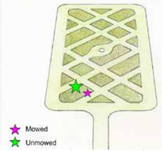
Unmowed - U9

Scientific Name	Common Name
Solidago	Goldenrod
Rhamnus frangula	Alder Buckthorn
Plantago lanceolata	Ribwort Plantain
Celastrus Scandens	American Bittersweet

Species Richness:

Dominant Species:
Estimated %

Image of Plot



Mowed - M3

Scientific Name	Common Name
genus trifolium	clover
Festuca arundinacea	tall fescue

Species Richness:

Dominant Species: Clover
Estimated % 98%

Image of Plot

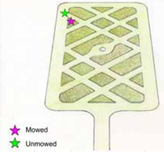
Unmowed - U3

Scientific Name	Common Name
Rhamnus frangula	alder buckthorn
Solidago asteraceae	golden rod
celastrus scandens	bittersweet
Prunus sapo	black ash

Species Richness:

Dominant Species:
Estimated %

Image of Plot



Mowed - M5

Scientific Name	Common Name
Pilosella officinarum	Mouse-ear Hawkweed
Trifolium	Clover
Bedstraw	Galium
Festuca rubra	Creeping Red Fescue Grass
Digitaria	Crab Grass

Species Richness:

Dominant Species:
Estimated %

Image of Plot

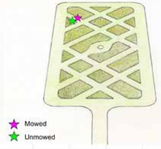
Unmowed - U5

Scientific Name	Common Name
Pseudotsuga radicans	Poison Ivy
Solidago juncea	Early Goldenrod
Celastrus scandens	American Bittersweet
Bedstraw	Galium
Celastrus orbiculatus	Oriental Bittersweet
Rosa multiflora	Multiflora Rose
Panicum virgatum	Switch Grass

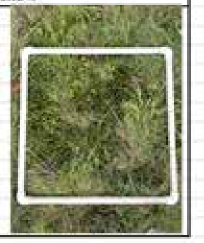
Species Richness:

Dominant Species:
Estimated %

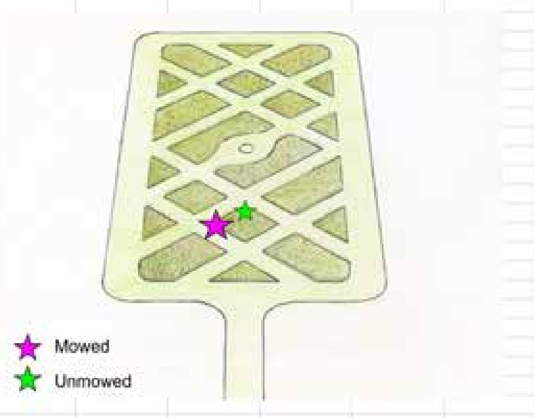
Image of Plot



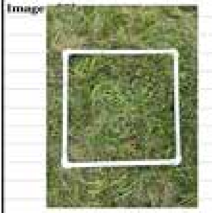
Mowed - M10	
Scientific Name	Common Name
Polytrichum commune	Haircap moss
Trifolium	Clover
Symphyotrichum	Asters
Pteridophytes	Allies
Linnaea Borealis	American Twinflower
Species Richness:	
Dominant Species:	
Estimated %	
Image of Plot	



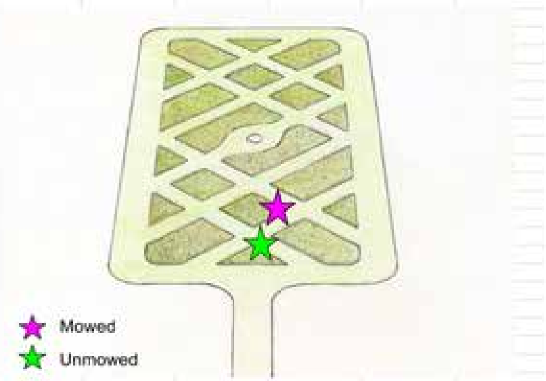
Unmowed - U10	
Scientific Name	Common Name
Plantago lanceolata	Ribwhort Plantain
Solidago Rugosa	Wrinkle-leaf Golden Rod
Prunella Vulgaris	Heal-all
Corylus Americana	American Hazelnut? (green textured leaves)
Species Richness:	
Dominant Species:	
Estimated %	
Image of Plot	



Mowed - M11	
Scientific Name	Common Name
Festuca rubra	Creeping Red Fescue Grass
Polytrichum commune	Haircap Moss
Aster Amellus	Wild Aster
Oxalis Acetosella	Woodsorrel
Trifolium dubium	Clover
Species Richness:	
Dominant Species:	
Estimated %	
Image of Plot	

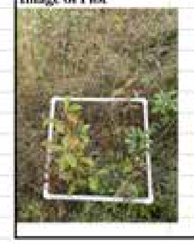


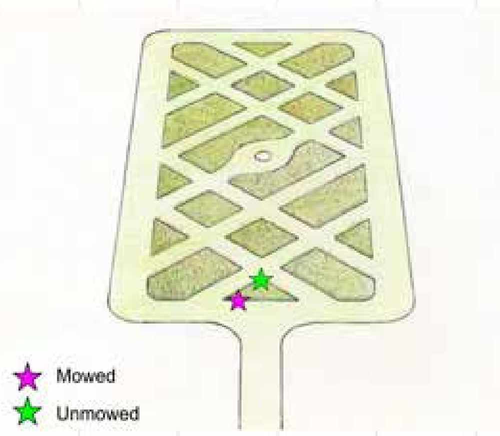
Unmowed - U11	
Scientific Name	Common Name
Solidago Rugosa	Wrinkle-leaf Golden Rod
Rhamnus Frangula	Alder Buckthorn
Plantago Lanceolata	Ribwhort Plantain
Rhamnus Frangula	Alder Buckthorn
Rubus rRecurvicaulis	Arching Blackberry
Species Richness:	
Dominant Species:	
Estimated %	
Image of Plot	



Mowed - M12	
Scientific Name	Common Name
Prunella vulgaris	Common Self-heal
Trifolium	Clover
Symphyotrichum	Asters
Pteridophytes	Allies
Unknown	Frilly long leaf
Mentha	Mint
Oxalis corniculata	Corniculatae
	Wild Carrot
Species Richness:	8
Dominant Species:	
Estimated %	
Image of Plot	

Unmowed - U12	
Scientific Name	Common Name
Symphyotrichum	American Asters
Swida racemosa	Grey Dogwood
Rubus Recurvicaulis	Arching Blackberry Brambles
Species Richness:	3
Dominant Species:	
Estimated %	
Image of Plot	

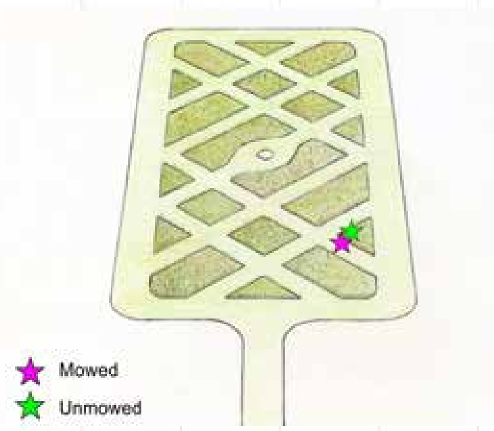




Plot #3

Mowed - M13	
Scientific Name	Common Name
Trifolium	Clover
Potentilla	Cinquefoils
Polytrichum commune	Common Haircap moss
Species Richness:	3
Dominant Species:	
Estimated %	
Image of Plot	

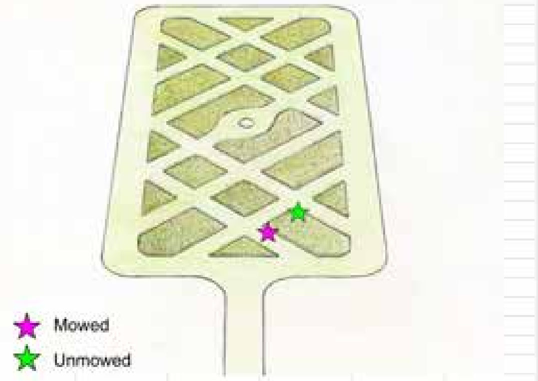
Unmowed - U13	
Scientific Name	Common Name
Rubus Recurvicaulis	Arching Blackberry Brambles
Solidago rugosa	Common wrinkle-leaved Golden Rod
Species Richness:	2
Dominant Species:	
Estimated %	
Image of Plot	



Plot #1

Mowed - M14	
Scientific Name	Common Name
Polytrichum commune	Common haircap moss
Trifolium	Clovers
Symphyotrichum	American Asters
Rubus Recurvicaulis	Arching Blackberry Brambles
Pteridophytes	Allies
Species Richness:	5
Dominant Species:	
Estimated %	
Image of Plot	

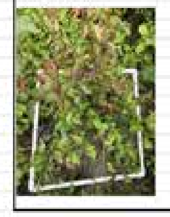
Unmowed - U14	
Scientific Name	Common Name
Rhamnus frangula	Alder Buckthorn
Malus domestica	Apple tree
Solidago rugosa	Common wrinkle-leaved Golden Rod
Species Richness:	3
Dominant Species:	
Estimated %	
Image of Plot	

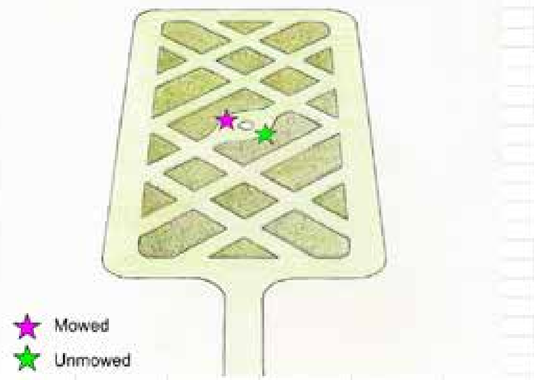


Plot #2

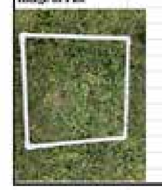
Mowed - M15	
Scientific Name	Common Name
Trifolium	Clover
Eurybia macrophylla	Large leaved wood aster
	Tiny Leafed-Herb (big spikey plant)
Prunella vulgaris	Common self-heal herb
Festuca rubra	Creeping Red Fescue Grass
	Spinach Grass (unknown)
	Cilantro grass (unknown)
	Ruffled leaf (unknown)
Species Richness:	8
Dominant Species:	
Estimated %	
Image of Plot	

Unmowed - U15	
Scientific Name	Common Name
Solidago canadensis	Goldenrod
Rubus recurvicaulis	Arching blackberry
Festuca arundinacea	tall fescue
Festuca rubra	Creeping Red Fescue Grass
Prunus serotina	blackcherry
Cornus racemosa	Grey dogwood
Species Richness:	6
Dominant Species:	
Estimated %	
Image of Plot	

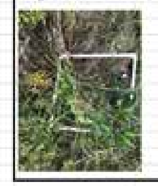


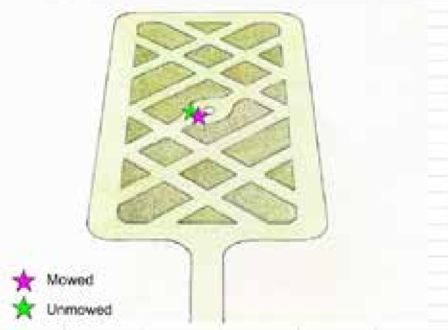


Mowed - M16	
Scientific Name	Common Name
Solidago canadensis	Canada goldenrod
Eurybia macrophylla	Large leaved wood aster
Galium	Bedstraw
Prunella vulgaris	Common self-heal herb
Festuca arundinacea	Festuca arundinacea
Festuca rubra	Creeping Red Fescue Grass
	Spinach Grass (unknown)
	Cilantro grass (unknown)
Species Richness:	8
Dominant Species:	
Estimated %	
Image of Plot	

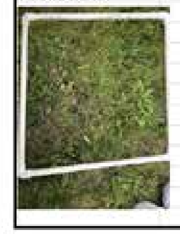


Unmowed - U16	
Scientific Name	Common Name
Eurybia macrophylla	Large-leaved wood aster
Apocynum cannabinum	Hemp dogbane
Cornus racemosa	Grey dogwood
Polytrichum commune	Haircap moss
	tall fescue
Festuca rubra	Creeping Red Fescue Grass
Prunus serotina	blackcherry
	Cilantro grass (unknown)
	Wispy plant (unknown)
Species Richness:	9
Dominant Species:	
Estimated %	
Image of Plot	

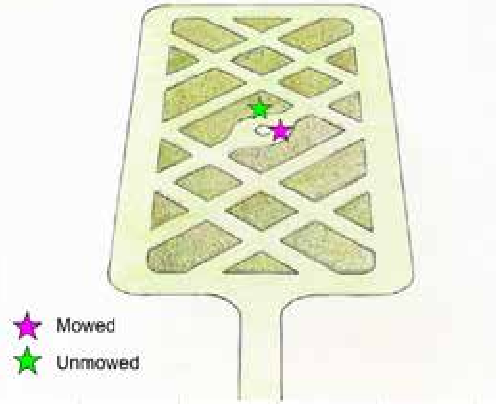




Mowed - M17	
Scientific Name	Common Name
Polytrichum commune	Haircap moss
Prunella vulgaris	Common self-heal herb
Festuca arundinacea	tall fescue
Festuca rubra	Creeping Red Fescue Grass
	Spinach Grass (unknown)
	Cilantro grass (unknown)
	Fuzzy plant (unknown)
Species Richness:	7
Dominant Species:	
Estimated %	
Image of Plot	



Unmowed - U17	
Scientific Name	Common Name
Polytrichum commune	Haircap moss
Apocynum cannabinum	Hemp dogbane
Rubus recurvicaulis	Arching blackberry
Potentilla	Cinquefoil
Festuca rubra	Creeping Red Fescue Grass
Prunus serotina	blackcherry
Fraxinus americana	white ash
	Spinach Grass (unknown)
Species Richness:	8
Dominant Species:	
Estimated %	
Image of Plot	



Spinach Grass (Unknown)