

33 - Bowman's Woods (West)




 Polygon Within the Site
Full Site Boundary
Ortho Image ca 2013

Table 33- Bowman's Woods West

Site 33 Bowman's Woods West

General Description

This is a large woodlot north of Sherk Rd and west of Willoughby Rd in Willoughby Township. The Bowman's Archery Club has leased the property from the city for over 30 years and maintains a trail through the property, with targets located along the trail. A locked gate leads into a gravel roadway and parking area. A storage shed, picnic area and target range exist within a well-maintained clearing.

The woodlot map reveals a number of separate rectangular blocks divided by closed road allowances.

Polygon 1

To the west of the clearing is an old growth swamp forest which is rich in a diverse selection of wetland species. The Archery Club at one time had a trail and boardwalk through this area, but it has not been maintained in about 20 years. Some of the old targets and trail markers still remain.

A series of vernal pools run north-south through the forest. Dominated by old red maples, pin oak and swamp white oak, this forest also contains a large concentration of black gum trees. During this survey, close to 20 black gum trees were noted of various ages. Round-leaved greenbrier, a species at risk, was also noted.

The Old Growth Forest Survey of the Niagara Peninsula, conducted by the Bert Miller Nature Club in October 2003 describes this area as the "oldest known hardwood forest in the Niagara Peninsula," with black gum trees between 300 and 500 years old.

See: <http://www.bertmillernatureclub.org/assets/docs/library/OLD%20GROWTH%20FOREST%20SURVEY%20OCTOBER%202003.pdf>

Bowmans Archery Club Black Gum Woods

This forest is extremely unusual because it contains the oldest population of broadleaf (hardwood) trees known in the Niagara Peninsula. Ancient black gums (tupelos) attain ages of 250 to as much as 450 years old, possibly older. The lot covers 6 acres and contains an original old growth forest mixed with mature second growth forest. The forest type is: Lowland Swamp Oak-Red Maple-Black Gum Forest.

There are 4 dozen 250-450 year old black gums, which are 18-24 inches in diameter. Growth rings are 60 per inch. They exhibit charismatic or bizarre growth forms:

- Stag-headed crowns with weird thick, curling, gnarled boughs with right angle bends

- Knobby, gnarly, burly, stocky trunks that narrow little as they go up
- Old growth ("antique") bark comes in 5 types. Black gum has more bark variability than any other species of tree.
 - Deeply corrugated and ridged (indicator of 150-250 year age)
 - Chunky "alligator-skin" pattern (indicator of 200-300 year age)
 - Balding bark (indicator of 300-500 year age)
 - Large rough flakes (indicator of 400-550 year age)
 - Non-old growth mature bark has narrow, shallow ridge-furrow pattern
- Old growth bark here exhibits five colors: rusty, orange, blonde, charcoal or brown
- Other old growth trees: 10 white oaks and several swamp oaks, both 160-210 years; 130-180 year red maples, some with bizarre growth forms.
- Forest history: Cutting in the early 1900s left many old trees uncut. Relatively little disturbance has occurred since then. Younger red oak, beech, white ash, pin oak, silver maple and elm have grown up between the old trees.
 - Black gum wasn't cut because it has no value or use to farmer/loggers
 - Surrounding woods are 70 year old second growth wet woods of same makeup
 - Old woods are on the southwest part of the property. The east section is used for archery target practice
- Nothing is known about the club's plans regarding timber cutting or protection of this forest.
- Protection for this site should be a high priority

Polygon 2

The area east of the archery club clearing is a much younger second-growth forest with many of the same species as in the old growth area. Significant parts of this polygon were replanted with spruce and pine species. The archery club has a well maintained trail system winding through this area, with a number of targets set up for archery practice.

In the eastern part of the polygon, a small overgrown trail leads into the woods from Willoughby Drive. Small clearings exist along this trail, which scout groups reportedly once used for camping. These woods were in excellent condition, free of trash or other human disturbances. A significant amount of invasive glossy buckthorn was noted in this area.

Recommendations

1. The archery club has done an excellent job of maintaining the portion of the property which they use. Their stewardship of the property has undoubtedly contributed to the overall excellent condition of the property.

2. The city has title to some blocks of land within these woods, while ownership of other blocks is in question. Parts of the old growth black gum may be outside of the city-owned section. The city needs to clarify ownership issues, and attempt to consolidate the property it owns into one large block.
3. Since the old growth forest in Polygon 1 is the oldest in Niagara, it needs to be recognized and protected. Currently the entire woodlot is designated as an environmental conservation area (ECA) which places some restrictions on development of the property. Since the old growth section has considerable vernal pools, it should qualify for the more stringent designation of environmental protection area (EPA). This would help protect sensitive areas that the city does not currently own.

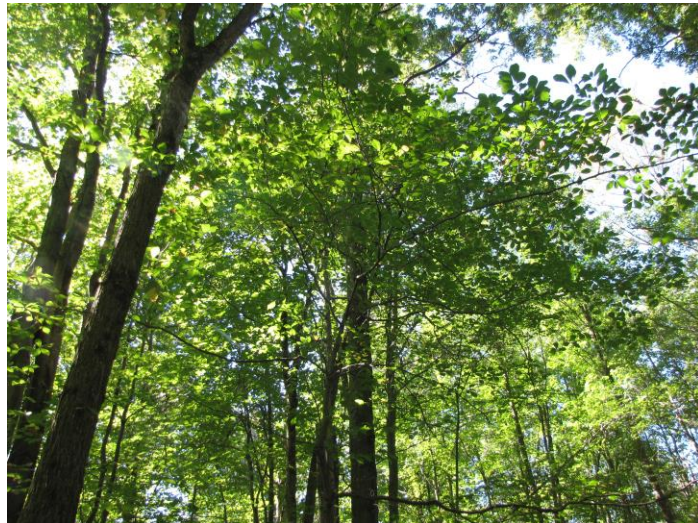


Figure 1-Black Gum. Credit: NF Nature Club



Figure 2- Credit: NF Nature Club

Bowman's Woods West Plant Species Inventory

Legend:

Layer: 1=Canopy(>10M), 2=Sub-Canopy, 3=Understory, 4=Ground Layer

Abundance: r=Rare, o=Occasional, a=Abundant, d=Dominant

Invasive Species: ai=Aggressive Invasive Species, i=Invasive Species

Old Growth: og=Old Growth

Plantation: p=Plantation Species

Federal Status: t=Threatened, v=Vulnerable, sp=Special Concern

Provincial Status: e=Endangered, t=Threatened, v=Vulnerable

Site Number	Site Name	Polygon	Layer	Species	Abundance	Invasive	Old Growth	Plantation	Federal	Provincial
33	Bowman's Woods West	1	1	Acer rubrum	a					
33	Bowman's Woods West	1	1	Acer saccharum	o					
33	Bowman's Woods West	2	1	Acer x freemanii	a					
33	Bowman's Woods West	1	1	Acer x freemanii	a					
33	Bowman's Woods West	1	1	Carya ovata	r					
33	Bowman's Woods West	1	1	Fagus grandifolia	a					
33	Bowman's Woods West	2	1	Fraxinus pennsylvanica	a					
33	Bowman's Woods West	2	1	Nyssa sylvatica	r					
33	Bowman's Woods West	1	1	Nyssa sylvatica	a					
33	Bowman's Woods West	1	1	Nyssa sylvatica	o		og			
33	Bowman's Woods West	2	1	Picea sp.	a					
33	Bowman's Woods West	2	1	Pinus sp.	o					
33	Bowman's Woods West	2	1	Pinus strobus	o					
33	Bowman's Woods West	1	1	Prunus serotina	o					
33	Bowman's Woods West	1	1	Quercus bicolor	o					
33	Bowman's Woods West	2	1	Quercus macrocarpa	o					
33	Bowman's Woods West	1	1	Quercus macrocarpa	r					
33	Bowman's Woods West	2	1	Quercus palustris	a					
33	Bowman's Woods West	1	1	Quercus palustris	a					
33	Bowman's Woods West	1	1	Quercus palustris	o		og			
33	Bowman's Woods West	1	1	Quercus rubra	o					
33	Bowman's Woods West	2	1	Ulmus americana	o					
33	Bowman's Woods West	1	1	Ulmus rebra	o					
33	Bowman's Woods West	1	2	Amelanchier	o					
33	Bowman's Woods West	2	2	Betula pendula	r					

Site Number	Site Name	Polygon	Layer	Species	Abundance	Invasive	Old Growth	Plantation	Federal	Provincial
33	Bowman's Woods West	1	2	Carpinus caroliniana	r					
33	Bowman's Woods West	2	2	Malus coronaria	o					
33	Bowman's Woods West	1	2	Ostrya virginiana	r					
33	Bowman's Woods West	2	2	Populus tremuloides	o					
33	Bowman's Woods West	1	2	Rhamnus cathartica	a	ai				
33	Bowman's Woods West	2	2	Rhamnus cathartica	a	ai				
33	Bowman's Woods West	2	2	Salix sp.	o					
33	Bowman's Woods West	1	3	Aronia sp.	o					
33	Bowman's Woods West	2	3	Aronia sp.	r					
33	Bowman's Woods West	1	3	Berberis thunbergii	r	i				
33	Bowman's Woods West	1	3	Cephalanthus occidentalis	o					
33	Bowman's Woods West	1	3	Cornus racemosa	o					
33	Bowman's Woods West	2	3	Crataegus sp.	o					
33	Bowman's Woods West	2	3	Frangula alnus	a	ai				
33	Bowman's Woods West	1	3	Ilex verticillata	r					
33	Bowman's Woods West	1	3	Lindera benzoin	o					
33	Bowman's Woods West	1	3	Ribes sp.	o					
33	Bowman's Woods West	2	3	Rosa multiflora	o	i				
33	Bowman's Woods West	1	3	Rubus hispidus	a					
33	Bowman's Woods West	2	3	Rubus hispidus	a					
33	Bowman's Woods West	1	3	Rubus idaeus	a					
33	Bowman's Woods West	1	3	Rubus occidentalis	o					
33	Bowman's Woods West	2	3	Spiraea alba	a					
33	Bowman's Woods West	1	3	Viburnum recognitum	o					
33	Bowman's Woods West	2	3	Viburnum recognitum	o					
33	Bowman's Woods West	2	4	Achillea millefolium	o					
33	Bowman's Woods West	1	4	Agrimonia gryposepala	o					
33	Bowman's Woods West	2	4	Apocynum cannabinum	o					
33	Bowman's Woods West	1	4	Aster lateriflorus	a					
33	Bowman's Woods West	2	4	Aster lateriflorus	a					
33	Bowman's Woods West	1	4	Aster macrophyllus	a					
33	Bowman's Woods West	2	4	Aster macrophyllus	a					
33	Bowman's Woods West	2	4	Aster novae-angliae	a					

Site Number	Site Name	Polygon	Layer	Species	Abundance	Invasive	Old Growth	Plantation	Federal	Provincial
33	Bowman's Woods West	1	4	Aster pilosus	a					
33	Bowman's Woods West	2	4	Aster pilosus	o					
33	Bowman's Woods West	1	4	Bidens frondosa	a					
33	Bowman's Woods West	2	4	Bidens frondosa	a					
33	Bowman's Woods West	1	4	Boehmeria cylindrica	a					
33	Bowman's Woods West	1	4	Carex crinita	o					
33	Bowman's Woods West	1	4	Carex intumescens	r					
33	Bowman's Woods West	1	4	Carex lupulina	o					
33	Bowman's Woods West	2	4	Centaurea sp.	o					
33	Bowman's Woods West	1	4	Chelone glabra	o					
33	Bowman's Woods West	2	4	Daucus carota	o					
33	Bowman's Woods West	1	4	Dryopteris spinulosa	o					
33	Bowman's Woods West	2	4	Echinochloa	o					
33	Bowman's Woods West	1	4	Fragaria sp.	a					
33	Bowman's Woods West	2	4	Fragaria sp.	a					
33	Bowman's Woods West	1	4	Geum sp.	a					
33	Bowman's Woods West	1	4	Lycopus uniflorus	o					
33	Bowman's Woods West	2	4	Lycopus uniflorus	o					
33	Bowman's Woods West	1	4	Maianthemum canadense	a					
33	Bowman's Woods West	1	4	Mitchella repens	o					
33	Bowman's Woods West	1	4	Onclea sensibilis	a					
33	Bowman's Woods West	1	4	Parthenocissus sp.	o					
33	Bowman's Woods West	2	4	Phalaris arundinacea	o	ai				
33	Bowman's Woods West	2	4	Phragmites	o	ai				
33	Bowman's Woods West	1	4	Pilea pumila	o					
33	Bowman's Woods West	2	4	Podophyllum peltatum	o					
33	Bowman's Woods West	2	4	Polygonum pensylvanicum	a					
33	Bowman's Woods West	2	4	Prunella vulgaris	o					
33	Bowman's Woods West	1	4	Rhus radicans	a					
33	Bowman's Woods West	2	4	Rhus radicans	a					
33	Bowman's Woods West	2	4	Rumex crispus	o					
33	Bowman's Woods West	2	4	Scirpus atrovirens	o					
33	Bowman's Woods West	1	4	Sium suave	o					

Site Number	Site Name	Polygon	Layer	Species	Abundance	Invasive	Old Growth	Plantation	Federal	Provincial
33	Bowman's Woods West	1	4	Smilax herbacea	o					
33	Bowman's Woods West	1	4	Smilax rotundifolia	r				t	v
33	Bowman's Woods West	1	4	Solidago canadensis	a					
33	Bowman's Woods West	2	4	Solidago canadensis	a					
33	Bowman's Woods West	1	4	Solidago graminifolia	o					
33	Bowman's Woods West	2	4	Solidago graminifolia	a					
33	Bowman's Woods West	1	4	Tovara virginiana	a					
33	Bowman's Woods West	2	4	Tovara virginiana	a					
33	Bowman's Woods West	1	4	Tussilago farfara	o					
33	Bowman's Woods West	2	4	Typha sp.	a					
33	Bowman's Woods West	1	4	Uvularia sp.	r					

Bowman's Woods West Disturbance Report

Site	Polygon	Disturbance / Extent	Total Score
33 Bowman's Woods West	1	Alien Species / Extent Of Alien Species	1
33 Bowman's Woods West	1	Beaver Activity / Extent Of Beaver Activity	0
33 Bowman's Woods West	1	Browse (e.g. Deer) / Extent Of Browse	0
33 Bowman's Woods West	1	Disease/Death Of Trees / Extent Of Disease/Death	1
33 Bowman's Woods West	1	Dumping (rubbish) / Extent Of Dumping	0
33 Bowman's Woods West	1	Earth Displacement / Extent Of Displacement	0
33 Bowman's Woods West	1	Fire / Extent Of Fire	0
33 Bowman's Woods West	1	Flooding (Pools & Puddling) / Extent Of Flooding	0
33 Bowman's Woods West	1	Gaps In Forest Canopy / Extent Of Gaps	1
33 Bowman's Woods West	1	Ice Damage / Extent Of Ice Damage	0
33 Bowman's Woods West	1	Intensity / Extent Of Logging	0
33 Bowman's Woods West	1	Livestock (Grazing) / Extent Of Livestock	0
33 Bowman's Woods West	1	Noise / Extent Of Noise	1
33 Bowman's Woods West	1	Planting (plantation) / Extent Of Planting	0
33 Bowman's Woods West	1	Recreational Use / Extent Of Recr. Use	1
33 Bowman's Woods West	1	Sugar Bush Operations / Extent Of Operations	0
33 Bowman's Woods West	1	Time Since Logging	0
33 Bowman's Woods West	1	Tracks And Trails / Extent Of Tracks/Trails	4
33 Bowman's Woods West	1	Wind Throw (blow Down) / Extent Of Wind Throw	0
33 Bowman's Woods West	2	Alien Species / Extent Of Alien Species	4
33 Bowman's Woods West	2	Beaver Activity / Extent Of Beaver Activity	0
33 Bowman's Woods West	2	Browse (e.g. Deer) / Extent Of Browse	1
33 Bowman's Woods West	2	Disease/Death Of Trees / Extent Of Disease/Death	0
33 Bowman's Woods West	2	Dumping (rubbish) / Extent Of Dumping	0
33 Bowman's Woods West	2	Earth Displacement / Extent Of Displacement	0
33 Bowman's Woods West	2	Fire / Extent Of Fire	0
33 Bowman's Woods West	2	Flooding (Pools & Puddling) / Extent Of Flooding	0
33 Bowman's Woods West	2	Gaps In Forest Canopy / Extent Of Gaps	0
33 Bowman's Woods West	2	Ice Damage / Extent Of Ice Damage	0
33 Bowman's Woods West	2	Intensity / Extent Of Logging	0
33 Bowman's Woods West	2	Livestock (Grazing) / Extent Of Livestock	0
33 Bowman's Woods West	2	Noise / Extent Of Noise	0
33 Bowman's Woods West	2	Planting (plantation) / Extent Of Planting	4
33 Bowman's Woods West	2	Recreational Use / Extent Of Recr. Use	1
33 Bowman's Woods West	2	Sugar Bush Operations / Extent Of Operations	0
33 Bowman's Woods West	2	Time Since Logging	0
33 Bowman's Woods West	2	Tracks And Trails / Extent Of Tracks/Trails	4
33 Bowman's Woods West	2	Wind Throw (blow Down) / Extent Of Wind Throw	0