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*NOTE – This document contains botanical information based on field work done by Albert Dugal in 2005, 2003, 2002 and 2001, and concerns the land in and around the proposed Lester site.*

**A note from Mr. Albert Dugal, regarding the wetlands:**

According to Surficial Geology Map 1506A, OTTAWA, Ontario - Quebec, 1982, the proposed Lester Road site for the LRT is covered with "Fine-to medium- grained sand, calcareous and commonly fossiliferous; The map also indicates abandoned river channels in the area, dating back to the time when the Ottawa River was much larger than today - due to the melting ice sheets from the last glaciation. The map also indicates three organic deposits; two east of the old CPR tracks (now greatly reduced in size due to peat wastage initiated by drainage for housing developments) and one to the west of the tracks, beyond the proposed LRT yards. These are excellent indicators of wetlands.

As indicated in topographic map 31 G/5, Ottawa, the land is sloping eastward from relatively flat area to the west. The small stream that begins south of Windsor Park Village also flows to the east, eventually joining Sawmill Creek. There should be fish in this stream - if it can accommodate turtles it should have fish.

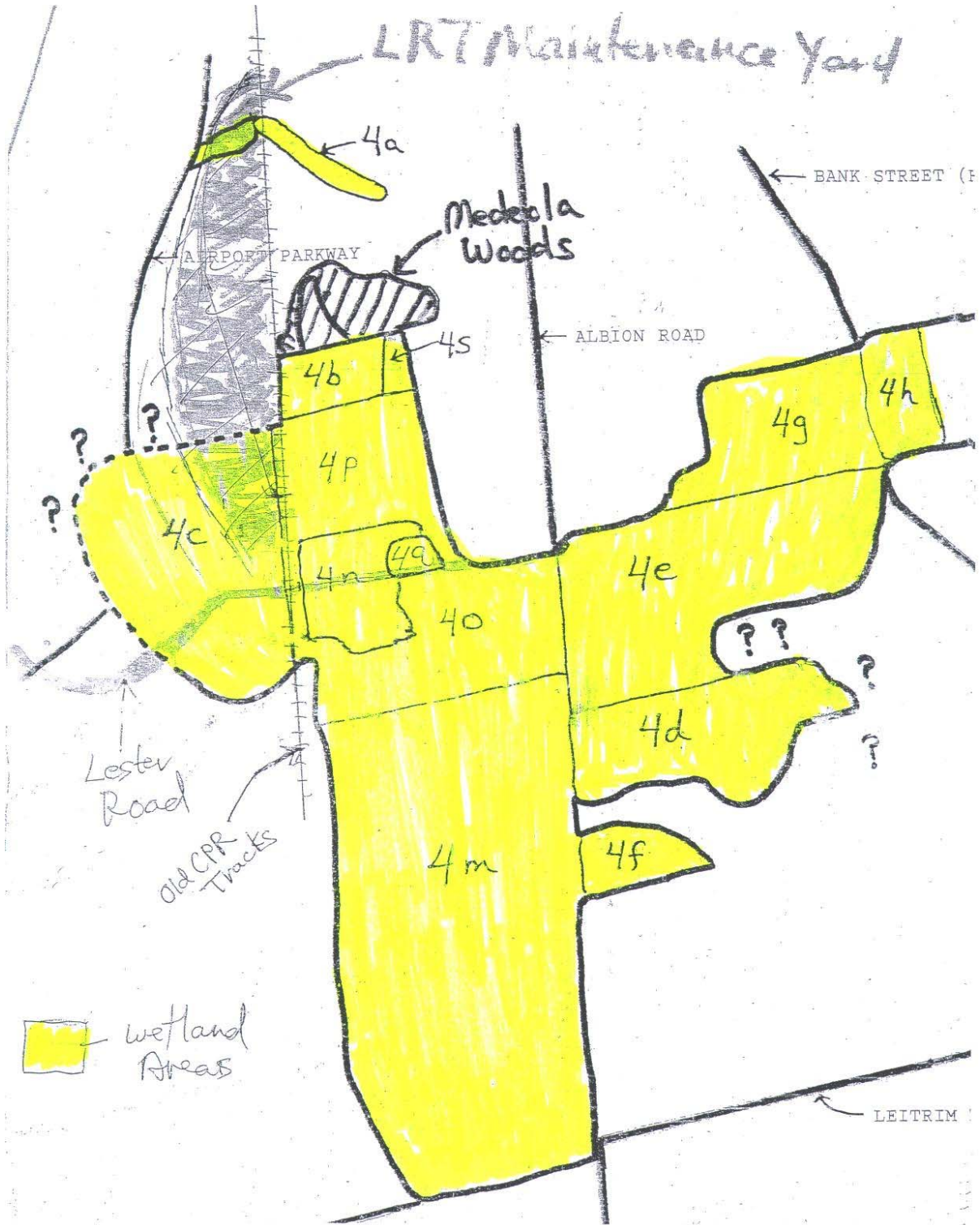
The groundwater probably moves in an easterly direction also. If there were any chemical spills, the toxic materials could get into the wetlands or ultimately into Sawmill Creek.

There are large areas of old open meadows, prime habitat for many meadow birds such as Meadow Larks, Bobolinks ,etc. These fields are probably good hunting areas for hawks.

One thing that I and others have noticed on our way to visit the Medeola Woods, is the apparently fairly high water table. Although the surface of the old fields can be quite dry, the presence of Common Rush and Spiraea (wetland plants) in slight depressions indicate a fairly high water table.

Construction of the LRT yard could affect the water table, which in turn, negatively impact plant communities east of the old CPR tracks.

### MAP – Proposed Lester Site and significant Wetland and Woodlots



## **Area 4A - Description**

This northernmost sliver of wetland is all that remains after urban development in the 1980's destroyed over one half of the original wetland area. It is a mixed woodland underlain by organic soil, about eight inches of which has been lost due to peat wastage caused by drainage for the encroaching subdivision. (another example of the negative impacts engendered by building in wetlands!). Red maple, red ash, hemlock, yellow birch and cedar are the most abundant trees. Some of the cedars, hemlocks and red maples are about a century old. Other trees noted were balsam fir, basswood, trembling aspen, black ash, white pine and bur oak mountain maple and the invasive black buckthorn are plentiful in the shrub layer. The most noticeable herbaceous plants were the ferns, which covered a significant portion of the forest floor.

**SEE APPENDIX A - AREA 4A – VASCULAR PLANT LIST**

## **Area 4b - Description**

This large woodland south of the Medeola Woods and bordering the old CPR right-of-way is primarily wetland. The driest part is next to the CPR right-of-way. The dominant tree species are Red Ash and Red Maple. Most of these trees are over 80 years old and there appears to be many in the 100 or more year range, indicating that there was very little tree cutting since 1945. (See the aerial photo of the area). Sensitive Fern is abundant in these swampy woods. In places, there is some rolling topography giving rise to better drained sites. The land rises near the CPR right-of-way and becomes more mesic (as indicated by Sugar Maples in this vicinity). An old farm lane forms the southern boundary of this section of wetland.

Although the plant inventory to date can be described as preliminary, 3 Regionally Significant plant species have been recorded. Much of this woodland has yet to be explored.

**See Appendix B - VASCULAR PLANT LIST AREA 4b**

## **Area 4c - Description**

This area includes all the wetland west of the CPR right-of-way - both north and south of Lester Road and probably west of the Airport Parkway.

According to the aerial photos, in 1945, there were two main wooded wetland areas, a large expanse of abandoned agricultural land and a lesser amount of land that was still in agricultural use. A massive drainage ditch cuts across the area. This has been blocked up at Lester Road and provides habitat for waterfowl. The land south of Lester Road has been flooded by beavers and supports an abundance of cattails and hybrid willow (*Salix x rubens*). This wet terrain is bordered by a Balsam Poplar woodland. North of Lester, near the CPR right-of-way, a large willow swale and beaver pond can be observed. These are bounded by an extensive poplar woodland consisting primarily of Trembling Aspen, Balsam Poplar, Red Ash and Elm. The terrain is undulating in places, allowing for mesic areas in an otherwise wetland situation. The dominant understory shrub is Black Buckthorn. Large patches of Sensitive Fern cover much of the woodland floor.

**See APPENDIX C - VASCULAR PLANT LIST**

### **Area 4p - Description**

In 1945, according to aerial photos, essentially all of this area was under cultivation. The only trees were restricted to the edges of farm lanes and fences. Much of the area is covered in willow thickets. There are pockets of old, moist meadow where Reed Canary Grass is a significant component of the herbaceous layer. Unfortunately, patches of Black Buckthorn can also be found in this area. Small clumps of Speckled Alder were observed in various parts of Area 4p. Young woodland, dominated by Red Ash and /or Trembling Aspen, is most abundant in the northern parts. However, there is pure stand of hybrid willow (*Salix x rubens*) due east of Area 4q. Other trees noted in this area include Cottonwood, Gray Birch White Birch and Elm.

### **Area 4n - Description**

In 1945, according to aerial photos, this area consisted predominantly of abandoned fields with a strip cultivated land due south of the present day Lester Road. Today most of this area is covered by a dense thicket of Black Buckthorn. Scattered throughout this invasive shrub layer are young trees - Red Ash, Elm, White Spruce, hybrid willow (*Salix x rubens*), Balsam Poplar, and Trembling Aspen. There are a couple of patches of poplar woodland, mostly near the edges of the Black Buckthorn thicket.

### **Area 4q - Description**

This small, mixed wetland woods is quite noticeable in the 1945 aerial photos. It was probably not cleared for agricultural purposes due to the wetness of the terrain. Cedar, Red Maple and White Birch are the predominant tree species.

### **Area 4o - Description**

The 1945 aerial photographs indicate that over half of this area was in agricultural use. The remainder was woodland – either old or regenerating- and scrub (shrubby, abandoned farmland). Today, this area is a veritable hodge-podge of plant communities. In the northwest corner is an almost pure stand of White Birch. Adjacent to this community is a mixed woodland of Red Maple, Red ash, White Birch and Cedar. The eastern portion of the area contains plantations of White Spruce, Cedar, Larch and hybrid poplar. There are several patches of Balsam Poplar – hybrid willow (*Salix x rubens*) woodland. There are small areas of old, moist meadow scattered about the previously cultivated portion of Area 4o. There are dense growths of Black Buckthorn, willow thickets and patches of Trembling Aspen-primarily in the eastern portion of this area.

## **Medeola Woods - Description**

The Medeola Woods (so called because of the presence of large amounts of Indian Cucumber-root, *Medeola virginiana*), is Ottawa's largest stand of old growth trees, many of which are about 200 years old. This woodland encompasses about 20 acres and its type is very rare.

It is a climax Red Maple- Beech- Hemlock forest rather than the usual Sugar Maple-Beech-Hemlock climax formation. Never seen before, the woods astonished the members of the Ontario Field Botanists that visited those woods last summer.

**See APPENDIX D - MEDEOLA WOODS VASCULAR PLANT CHECKLIST**



## **APPENDIX A - AREA 4A – VASCULAR PLANT LIST**

### **Polypodiaceae**

Dryopteris clintoniana  
Dryopteris intermedia  
Dryopteris spinulosa  
Dryopteris x boottii  
Athyrium filix-femina  
Matteucia struthiopteris  
Onoclea sensibilis

### **Pinaceae**

Abies balsama  
Pinus strobus  
Tsuga canadensis

### **Cupressaceae**

Thuja occidentalis

### **Taxaceae**

Taxus canadensis

### **Cyperaceae**

Carex species

### **Salicaceae**

Populus tremuloides

### **Betulaceae**

Betula alleghaniensis

### **Fagaceae**

Quercus macrocarpa

### **Ulmaceae**

Ulmus Americana

### **Saxifragaceae**

Ribes cynosbati

Tiarella cordifolia

**Rosaceae**

Geum canadense

Rubus strigosus

**Aceraceae**

Acer rubrum

Acer spicatum

**Balsaminaceae**

Impatiens capensis

**Rhamnaceae**

Rhamnus cathartica

Rhamnus frangula

**Tiliaceae**

Tilia americana

**Onograceae**

Circaea lutetiana

**Cornaceae**

Cornus alternifolia

**Pyrolaceae**

Pyrola elliptica

**Oleaceae**

Fraxinus nigra

Fraxinus pennsylvanica

**Caprifoliaceae**

Sambucus Canadensis

**APPENDIX B - VASCULAR PLANT LIST AREA 4b**  
**LEITRIM WETLANDS COMPLEX (2005 Update)**

**OSMUNDACEA**

*Osmunda cinnamomea*  
*Osmunda claytoniana*  
*Osmunda regalis*

**POLYPODIACEAE**

*Athyrium filix-femina*  
*Dryopteris intermedia*  
*Dryopteris spinulosa*  
*Onoclea sensibilis*  
*Thelypteris palustris*

**TAXACEAE**

*Taxus canadensis*

**PINACEAE**

*Abies balsamifera*  
*Pinus strobus*

**CUPRESSACEAE**

*Thuja occidentalis*

**GRAMINEAE**

*Glyceria canadensis* Regionally Significant  
*Glyceria grandis*  
*Glyceria striata*  
*Leersia virginica*  
*Phalaris arundinacea*

**CYPERACEAE**

*Carex cristatella*  
*Carex crinita*  
*Carex intumescens*  
*Carex lupulina*  
*Carex projecta*  
*Carex retrorsa*  
*Carex rosea*  
*Carex species*

**ARACEAE**

*Arisaema atrorubens*

**JUNCACEAE**

*Juncus effusus*

**LILIACEAE**

*Hemerocallis fulva* (dumped daylily, along old farm lane)

*Smilacina racemosa*

**SALICACEAE**

*Populus deltoides*

*Populus tremuloides*

*Salix x rubens*

**BETULACEAE**

*Alnus rugosa*

*Betula papyrifera*

**FAGACEAE**

*Fagus grandifolia* ( on hummock)

*Quercus macrocarpa*

**ULMACEAE**

*Ulmus americana*

**URTICACEAE**

*Boehmeria cylindrica* ( incredibly abundant)

*Laportea canadensis*

*Pilea pumila*

*Urtica dioica*

**RANUNCULACEAE**

*Clematis virginiana*

*Ranunculus abortivus*

*Ranunculus pensylvanicus* Regionally Significant

**PAPAVERACEAE**

*Chelidonium majus* ( horticultural escape, along old farm lane)

**SAXIFRAGACEAE**

*Ribes americanum*

*Ribes cynosbati*

*Tiarella cordifolia*

**ROSACEAE**

*Agrimonia gryposopela*

*Fragaria virginiana*

*Geum canadense*

*Geum laciniatum*

*Prunus serotina*

*Prunus virginiana*  
*Rubus pubescens*  
*Rubus strigosus*  
*Spiraea alba*

**AQUIFOLIACEAE**

*Ilex verticillata*

**ANACARDIACEAE**

*Rhus radicans*

**ACERACEAE**

*Acer negundo*  
*Acer rubrum*  
*Acer rubrum* x *saccharinum*  
*Acer saccharum* ( on hummock )

**BALSAMINACEAE**

*Impatiens capensis*

**RHAMNACEAE**

*Rhamnus cathartica*  
*Rhamnus frangula*

**VITACEAE**

*Parthenocissus vitacea*

**TILIACEAE**

*Tilia americana*

**VIOLACEAE**

*Viola* sp.

**ONAGRACEAE**

*Circaea lutetiana*  
*Epilobium coloratum*

**ARALIACEAE**

*Aralia nudicaulis*

**UMBELLIFERAE**

*Osmorhiza claytonii* ( along old farm lane)

**CORNACEAE**

*Cornus alternifolia*  
*Cornus stolonifera*

**PYROLACEAE**

*Pyrola elliptica*

**OLEACEAE**

*Fraxinus nigra*

*Fraxinus pennsylvanica*

**ASCLEPIADACEAE**

*Asclepias incarnata*

**LABIATAE**

*Scutellaria galericulata*

*Scutellaria lateriflora*

**SOLANACEAE**

*Solanum dulcamara*

**RUBIACEAE**

*Galium palustre*

*Galium triflorum*

**CAPRIFOLIACEAE**

*Lonicera tatarica*

*Sambucus canadensis*

*Viburnum trilobum*

**CUCURBITACEAE**

*Echinocystis lobata*

**COMPOSITAE**

*Arctium minus*

*Aster cordifolius* ( on hummock )

*Aster lateriflorus*

*Aster ontarionis* Regionally Significant

*Aster puniceus*

*Bidens frondosa*

*Eupatorium rugosum*

*Solidago rugosa*

*Taraxacum officinale*

**APPENDIX C - VASCULAR PLANT LIST**  
**AREA 4c**

Penstemon digitalis  
Caprifoliaceae  
Diervilla lonicera  
Lonicera tatarica  
Viburnum lentago  
Compositae  
Solidago rugosa Equisetaceae  
Equisetum arvense  
Polypodiaceae  
Athyrium filix-femina  
Dryopteris intermedia  
Dryopteris spinulosa (austriaca)  
Onoclea sensibilis  
Pteridium aquilinum  
Pinaceae  
Pinus strobus  
Cupressaceae  
Juniperus communis  
Thuja occidentalis  
Gramineae  
Glyceria striata  
Cyperaceae  
Carex species  
Scirpus sp.  
Orchidaceae  
Epipactis helleborine  
Salacaceae  
Populus balsamifera  
Populus grandidentata  
Populus tremuloides  
Salix bebbiana  
Salix discolor  
Salix lucida  
Salix petiolaris  
Salix x rubens  
Betulaceae  
Alnus rugosa  
Corylus cornuta  
Betula papyrifera  
Ulmaceae  
Ulmus Americana  
Urticaceae  
Urtica dioica

Ranunculaceae

*Clematis virginiana*

*Ranunculus abortivus*

Saxifragaceae

*Ribes americana*

*Tiarella cordifolia*

Rosaceae

*Fragaria virginiana*

*Geum canadense*

*Prunus serotina*

*Rubus alleghaniensis*

*Rubus odoratus*

*Rubus strigosus*

*Spiraea alba*

Aceraceae

*Acer negundo*

*Acer rubrum*

Rhamnaceae

*Rhamnus frangula*

Vitaceae

*Vitis riparia*

Lythraceae

*Lythrum salicaria*

Cornaceae

*Cornus stolonifera*

Pyrolaceae

*Pyrola elliptica*

Oleaceae

*Fraxinus pennsylvanica*

Scrophulariaceae



## **APPENDIX D - MEDEOLA WOODS VASCULAR PLANT CHECKLIST**

### **Lycopodiaceae**

Lycopodium clavatum  
Lycopodium dendroideum  
Lycopodium flabelliforme  
Lycopodium lucidulum

### **Equisetaceae**

Equisetum sylvaticum

### **Osmundaceae**

Osmunda cinnamomea  
Osmunda regalis

### **Polypodiaceae**

Athyrium felix-femina  
Dennstaedtia punctilobula  
Dryopteris x boottii?  
Dryopteris intermedia  
Dryopteris marginalis  
Dryopteris spinulosa  
Gymnocarpium dryopteris  
Onoclea sensibilis  
Pteridium aquilinum  
Thelypteris palustris  
Thelypteris phegopteris

### **Pinaceae**

Abies balsamea  
Pinus strobus  
Tsuga Canadensis

### **Cupressaceae**

Thuja occidentalis

### **Taxaceae**

Taxus Canadensis

### **Gramineae**

Glyceria striata

### **Club-moss Family**

Staghorn Club-moss  
Ground Pine

Fan-shaped Club-moss  
Shining club-moss

**Horsetail Family**

Wood Horsetail

**Flowering Fern Family**

Cinnamon Fern  
Royal Fern

**Fern Family**

Lady Fern  
Hay-scented Fern  
Boot's Shield Fern  
Intermediate Fern  
Marginal Shield Fern  
Spinulose Shield Fern  
Oak Fern  
Sensitive Fern  
Bracken  
Marsh Fern  
Northern Beech Fern

**Pine Family**

Balsam Fir  
White Pine  
Hemlock

**Cypress Family**

Eastern White Cedar

**Yew Family**

Canada Yew

**Grass Family**

Fowl Manna Grass

**Cyperaceae**

Carex arctata  
Carex crinita  
Carex deweyana  
Carex intumescens  
Carex lupulina  
Carex stipata  
Carex spp.

**Araceae**

*Arisaema triphyllum*

**Lillaceae**

*Clintonia borealis*  
*Erthronium americanum*  
*Maianthemum canadense*  
*Medeola virginiana*  
*Polygonatum pubescens*  
*Smilacina racemosa*  
*Streptopus roseus*  
*Trillium erectum*  
*Trillium undulatum*

**Juglandaceae**

*Juglans cinerea*

**Betulaceae**

*Betula alleghaniensis*  
*Betula papyrifera*

**Fragaceae**

*Fagus grandifolius*  
*Quercus macrocarpus*

**Ulmaceae**

*Ulmus Americana*

**Urticaceae**

*Boeheria cylindrica*  
*Laportea Canadensis*  
*Pilea pumila*

**Polygonaceae**

*Polygonum cilinode*  
*Polygonum sp.*

**Sedge Family**

Compressed Sedge  
Fringed Sedge  
Dewey's Sedge  
Bladder sedge  
Hop Sedge  
Awl-fruited Sedge  
Sedges

**Arum Family**

Jack-in-the-pulpit

**Lily Family**

Bluebead-lily  
Dog's-tooth-violet  
Wild Lily-of-the-valley  
Indian Cucumber-root  
Hairy Solomon's Seal  
False Solomon's Seal  
Rose Twistedstalk  
Red Trillium  
Painted Trillium

**Walnut Family**

Butternut

**Birch Family**

Yellow Birch  
Paper birch

**Beech Family**

Beech  
Bur Oak

**Elm Family**

American Elm

**Nettle Family**

False Nettle  
Wood Nettle  
Clearweed

**Buckwheat Family**

Fringed Bindweed  
Knotweed

**Ranunculaceae**

Actaea rubra  
Clematis virginiana  
Coptis trifolia  
Ranunculus abortivus  
Ranunculus acris  
Ranunculus recurvatus

**Cruciferae**

Cardamine pensylvanica

Hesperis matronalis

**Saxifragaceae**

Ribes cynosbati  
Ribes glandulosum  
Tiarella cordifolia

**Rosaceae**

Amelanchier sp.  
Fragaria virginiana  
Geum aepicium  
Geum canadense  
Prunus pensylvanica  
Prunus serotina  
Prunus virginiana  
Rubus alleghaniensis  
Ribes occidentalis  
Rubus pubescens  
Rubus strigosus  
Sorbus sp.

**Geraniaceae**

Geranium robertianum

**Oxalidaceae**

Oxalis acetosella  
Oxalis sp.

**Anacardiaceae**

Rhus radicans

**Crowfoot Family**

Red Baneberry  
Virgin's Bower  
Goldthread  
Kidneyleaf Buttercup  
Buttercup  
Hooked Crowfoot

**Mustard Family**

Pennsylvania Bitter-cress  
Dames's Rocket

**Saxifrage Family**

Wild Gooseberry  
Skunk Currant  
Foamflower

**Rose Family**

Serviceberry  
Common Strawberry  
Yellow Avens  
White Avens  
Pin Cherry  
Black Cherry  
Choke Cherry  
Blackberry  
Black Raspberry  
Dwarf Raspberry  
Red Raspberry  
Mountain Ash

**Geranium Family**

Herb Robert

**Wood-sorrel Family**

Wood-sorrel  
Yellow Wood-sorrel

**Cashew Family**

Poison Ivy

**Aquifoliaceae**

Ilex verticillata

**Aceraceae**

Acer pensylvanicum  
Acer rubrum  
Acer spicatum  
Acer saccharum

**Balsaminaceae**

Impatiens capensis

**Rhamnaceae**

Rhamnus cathartica  
Rhamnus frangula

**Vitaceae**

Parthenocissus vitacea  
Vitis riparia

**Tillaceae**

Tilia Americana

**Violaceae**

Viola soraria  
Viola sp.

**Onagraceae**

Circaea alpina  
Circaea lutetiana  
Epilobium sp.

**Araliaceae**

Arilia nudicaulis  
Aralis racemosa

**Umbelliferae**

Osmorhiza claytonii

**Cornaceae**

Cornus alternifolia

**Holly Family**

Winterberry

**Maple Family**

Striped Maple  
Red Maple  
Mountain Maple  
Sugar Maple

**Touch-me-not Family**

Touch-me-not

**Buckthorn Family**

Common Buckthorn  
Black Buckthorn

**Grape Family**

Virginia Creeper  
Wild Grape

**Linden Family**

Basswood

**Violet Family**

Blue Violet  
Violet

**Evening-primrose Family**

Alpine Enchanter's Nightshade  
Enchanter's Nightshade  
Willowherb

**Ginseng Family**

Wild Sarsaparilla  
Spikenard

**Parsley Family**

Hairy Sweet Cicely

**Dogwood Family**

Alternate-leaved Dogwood

**Pyrolaceae**

Chimaphila umbellata  
Pyrola elliptica

**Primulaceae**

Trientalis borealis

**Oleaceae**

Fraxinus Americana  
Fraxinus nigra  
Fraxinus pennsylvanica  
Syringa vulgaris

**Asclepiadaceae**

Asclepias syriaca

**Labiatae**

Lycopus uniflorus  
Prunella vulgaris  
Scuterraria lateriflora

**Solanaceae**

Solanum dulcamara

**Scrophulariaceae**

Veronica officinalis



**Orobanchaceae**

Epifagus virginiana

**Plantaginaceae**

Plantago sp.

**Rubiaceae**

Galium palustre  
Galium triflorum  
Mitchella repens

**Wintergreen Family**

Prince's Pine  
Shinleaf

**Primrose Family**

Starflower

**Olive Family**

White Ash  
Black Ash  
Red Ash  
Common Lilac

**Milkweed Family**

Common Milkweed

**Mint Family**

Northern Bugleweed  
Heal-all  
Mad Dog Skullcap

**Nightshade Family**

Climbing Nightshade

**Figwort Family**

Common Speedwell

**Broomrape Family**

Beech-drops

**Plantain Family**

Plantain

**Madder Family**

Marsh Bedstraw  
Fragrant Bedstraw  
Partridge-berry

**Caprifoliaceae**

Lonicera Canadensis  
Sambucus pubens  
Viburnum alnifolium

**Composite**

Ambrosia artemisiifolia  
Aster acuminatus  
Aster ciliolatus  
Aster cordifolius  
Aster lateriflorus  
Bidens frondosa  
Eupatorium rugosum  
Hieracium sp.  
Solidago rugosa  
Taraxacum officinale

**Honeysuckle Family**

Canada Fly-honeysuckle  
Red-berried Elder  
Hobblebush

**Composite Family**

Ragweed  
Whorled Wood Aster  
Ciliolate Aster  
Heart-leaved Aster  
Calico Aster  
Large-leaved Beggarticks  
White-snakeroot  
Hawkweed  
Rough Goldenrod  
Common Dandelion

