

UNA 144: McCarthy Woods and Southern Corridor

DESCRIPTION:

- large mature deciduous forest and associated regenerating thickets and fields in Riverside Park.

SITE DETAILS

a) Size:

78.2 ha.

b) Ownership:

- National Capital Commission

EVALUATION SUMMARY

Area Evaluation Summary					
Urban Natural Area 144: McCarthy Woods and Southern Corridor					
Criteria	Rating Assigned				
	1	2	3	4	5
Connectivity					X
Regeneration				X	
Disturbance			X		
Size and Shape					X
Habitat Maturity					X
Natural Communities		X			
Representative Flora					X
Significant Flora and Fauna			X		
Wildlife Habitat					X
Overall Rating for Site	High				

ECOLOGICAL FUNCTIONS :

a) Connectivity:

- UNA 146 (CNR Line) adjacent to east; UNA 145 (Uplands Park Woodlot) 200 m to south; Rideau River and UNA 140 (Leopold Woodlot) ca. 350 m northwest.

b) Interior habitat:

ca. 19 ha

c) Disturbance and condition:

- High native flora Co-efficient of Conservation rating (4.28), with 31 high-rated Coefficient of Conservation species;
- active railway line transects northern edge of woodland;
- extensive regeneration of abandoned agricultural development areas in western portion of site;
- extensive thinning of undergrowth trees (ice-storm damage remediation ?);
- negative impact of non-native vegetation predominantly at margins (reducing with forest vegetation maturation ?);
- extensive internal informal pathway system with localized impact at wet spots.

d) Adjacent land use:

- residential area development adjacent to natural area on all sides; school grounds to south.

e) Invasive plants:

- Four species with moderate impact to date:

Glossy Buckthorn (*Rhamnus frangula*) (3) - northern portion

Black Buckthorn (*Rhamnus cathartica*) (4) - predominantly at edges

Tartarian Honeysuckle (*Lonicera tatarica*) (2)

Garlic-mustard (*Alliaria petiolaris*) (1)

NATIVE BIODIVERSITY:**a) Habitats (type and dominants):**

- mature Upland Deciduous Forest (Sugar Maple) across eastern half of the area with natural subcanopy tree and shrub growth and with diverse natural ground vegetation in till substrate over locally outcropping limestone bedrock;
- young to submature Upland Mixed Forest (White Cedar, Trembling Aspen, White Elm) in lower, wetter areas in southwestern portion of the area;
- extensive Cultural Upland Field and Thicket (hawthorn (*Crataegus* spp., White Elm, Sumac, pasture grasses) in regenerating abandoned pasture across western half of the area.

b) Representative flora/ fauna:

- High native biodiversity (essentially intact native ground vegetation) with 204 native plant species reported from extensive, homogenous habitat areas);
- faunal representation of both common and uncommon urban breeding birds and mammals (NOSS 1998);
- see *Appendix* for list of native flora observed.

c) Significant features and species:

- Two (2) Regionally Rare species (*Cardamine concatenata*, *Galium boreale*) and five (5) Regionally Uncommon plant species in woodland and regenerating field habitats;
- largest, most natural example of mature maple forest in urban Ottawa;
- exceptionally large urban area of continuous natural habitat;
- exceptionally high native plant diversity (over 200 species) for area with limited habitat variation;
- largest remaining (formally dominant) till based natural habitat in City of Ottawa;
- major wildlife corridor component between Rideau River corridor, Sawmill Creek and eastern NC Greenbelt areas;
- interior forest faunal indicator species for relatively high ecological integrity levels (e.g. Black-throated Green Warbler, Pileated Woodpecker, Star-nosed Mole) present in woodland habitat;
- complex of intact woodland hydrological features (seepages, spring pools) throughout forest area;
- prime feeding habitat for urban woodland raptors (Screech Owl, Cooper's Hawk, Merlin, etc.) represented in regenerating scrub and meadow in western half of the site.

ECOLOGICAL COMMENTS:**a) Management:**

- maintenance of natural forest canopy required to suppress development of additional invasive plant species and arrest present invasive weed development;
- reduction in buckthorn along northern edge required to accelerate natural forest habitat regeneration in this portion of the area;
- vegetated buffer between adjacent development and woodland areas required to minimize edge effect.

b) Recommendations:Research:

- clarification of ecological relationship between woodland habitat and adjacent regenerating field and thicket habitat is required, particularly in regards to the diversity and population of urban raptor species present and both the extent and nature of use of regenerating Cultural habitats for wildlife corridor.

Passive recreation opportunities:

- formalization of single rock-crush trail across the site would provide significant recreational and interpretive potential (urban woodland values, ecological connectivity, ground water protection) and reduce site impact.

SITE INVESTIGATION DETAILS:

Date(s) and conditions: 18 November 2003 (clear and cool - tree leaves down); examined for ecological Condition Only

Investigator(s): Daniel F. Brunton

OTHER COMMENTS: (field conditions, photographs taken, etc.)

- most ecologically superior maple forest in urban Ottawa, with exceptional native biodiversity and with direct, functional connection with adjacent, regenerating field and scrub habitat

REFERENCES:

Billington, C. and E. W. Tozer. 1977. *Ecological inventory of NCC Urban Corridors*. National Capital Commission, Ottawa.

Brunton, D. F. 1993. *Ecologically Significant Areas (ESAs) Within the City of Ottawa*. [Report for Environmental Management Branch, City of Ottawa], Daniel Brunton Consulting Services, Ottawa.

Environmental Management Branch. 1998. *Natural and Open Space overview report*, Department of Urban Planning and Public Works, City of Ottawa, Ottawa.

Gore & Storrie. 1994. *Sawmill Creek Watershed Study*. [Unpublished report for Rideau Valley CA et al.], Gore & Storrie Ltd., Ottawa.

UNA Site 144 *Appendix*: Native biodiversity

a) Vascular flora observed:

[from field reconnaissance 18 Nov 2003 and modified NOSS (1998) data]

Species	Sites/ status in Ottawa	Co-efficient of Conservation
<i>Acer nigrum</i> Michx. f.	Uncommon	
<i>Acer saccharinum</i> L.	Common	5
<i>Achillea millefolium</i> L.	Common	0
<i>Actaea pachypoda</i> Ell.	Common	5
<i>Actaea rubra</i> (Ait.) Willd.	Common	5
<i>Adiantum pedatum</i> L.	Uncommon	
<i>Agrimonia gryposepala</i> Wallr.	Common	2
<i>Allium tricoccum</i> Ait.	Uncommon	
<i>Alnus incana</i> (L.) Moench ssp. <i>rugosa</i> (Duroi) Clausen (<i>A. rugosa</i> (Du Roi) Spreng.)	Common	6
<i>Ambrosia artemisiifolia</i> L.	Common	0
<i>Amelanchier arborea</i> (Michx. f.) Fern. ssp. <i>laevis</i> (Wieg.) McKay (<i>A. laevis</i> Wieg.)	Common	5
<i>Amelanchier spicata</i> K. Koch (<i>s.str.</i>)	Uncommon	
<i>Amphicarpaea bracteata</i> (L.) Fern.	Common	4
<i>Anemone acutiloba</i> (DC) Lawson (<i>Hepatica acutiloba</i> DC)	Common	6
<i>Anemone canadensis</i> L.	Common	3
<i>Anemone cylindrica</i> A. Gray	Common	
<i>Anemone virginiana</i> L. (<i>s.l.</i>) (incl. <i>A. riparia</i> auct., non Fern.; <i>A. virginica</i> L. var. <i>cylindroidea</i> Boivin)	Common	4
<i>Antennaria neglecta</i> Greene	Common	3
<i>Apocynum androsaemifolium</i> L.	Common	3
<i>Apocynum cannabinum</i> L. [#] (<i>A. sibiricum</i> Jacq.)	Uncommon	3
<i>Aralia nudicaulis</i> L.	Common	4
<i>Aralia racemosa</i> L.	Uncommon	
<i>Arisaema triphyllum</i> (L.) Schott	Common	5
<i>Asarum canadense</i> L.	Common	6

<i>Asclepias incarnata</i> L.	Common	6
<i>Asclepias syriaca</i> L.	Common	0
<i>Aster cordifolius</i> L. (<i>Symphotrichum cordifolium</i> (L.) Nesom.)	Common	5
<i>Aster lanceolatus</i> Willd. (s.str.) (<i>A. simplex</i> Willd.; <i>Symphotrichum lanceolatum</i> (Willd.) Nesom.)	Common	3
<i>Aster lateriflorus</i> (L.) Britt. (<i>Symphotrichum lateriflorum</i> (L.) A. & D. Love)	Common	3
<i>Aster macrophyllus</i> L. (<i>Eurybia macrophylla</i> (L.) Cass.)	Common	5
<i>Aster novae-angliae</i> L. (<i>Virgulus novae-angliae</i> (L.) Rev. & Keen)	Common	2
<i>Athyrium filix-femina</i> (L.) Roth var. <i>angustum</i> (Willd.) Lawson	Common	4
<i>Betula alleghaniensis</i> Britt.	Common	6
<i>Betula papyrifera</i> Marsh.	Common	2
<i>Bidens frondosus</i> L.	Common	3
<i>Boehmeria cylindrica</i> (L.) Sw.	Uncommon	4
<i>Botrychium virginianum</i> (L.) Sw.	Common	5
<i>Calamagrostis canadensis</i> (Michx.) Beauv.	Common	4
<i>Cardamine concatenata</i> (Michx.) Schwein. (<i>Dentaria laciniata</i> Muhl.)	RS (8+): Antrim Black Maple ANSI; Stony Swamp CA (3 populations); South March Highlands; Montfort Woods; Airbase Woods; McCarthy Road ESA; South Gloucester; Vanier.	6
<i>Cardamine diphylla</i> (Michx.) Wood (<i>Dentaria diphylla</i> Michx.)	Uncommon	
<i>Carex arctata</i> Boott	Common	5
<i>Carex aurea</i> Nutt.	Uncommon (locally abundant)	4
<i>Carex blanda</i> Dew.	Common	3
<i>Carex comosa</i> Boott	Uncommon	5
<i>Carex crinita</i> Lam.	Common	6
<i>Carex deweyana</i> Schw.	Common	6
<i>Carex gracillima</i> Schw.	Common	4
<i>Carex hystericina</i> Willd.	Common	4
<i>Carex intumescens</i> Rudge	Common	6
<i>Carex peckii</i> Howe	Common	6
<i>Carex pensylvanica</i> Lam.	Common	5
<i>Carex plantaginea</i> Lam.	Uncommon	
<i>Carex radiata</i> (Wahl.) Small (<i>C. rosea</i> , auct., non Willd.)	Common	4
<i>Carex rosea</i> Schkuhr ex Willd. (<i>C. convoluta</i> Mack.)	Common	5
<i>Carex sprengelii</i> Dew. ex Sprengel	Common	6
<i>Carex stipata</i> Willd.	Common	3

<i>Carpinus caroliniana</i> Walt.	Common (local)	6
<i>Carya cordiformis</i> (Wang) K. Koch	Common (local)	6
<i>Caulophyllum giganteum</i> (Farw.) Loc. & Black. (<i>C. thalictroides</i> var. <i>giganteum</i> Farw.)	Common	6
<i>Celastrus scandens</i> L.	Common	3
<i>Cinna latifolia</i> (Trev. ex Goepp.) Griseb.	Uncommon [17]	
<i>Circaea lutetiana</i> L. ssp. <i>canadensis</i> (L.) Asch. & Magnus	Common	3
<i>Claytonia caroliniana</i> Michx.	Common	
<i>Clematis virginiana</i> L.	Common	5
<i>Clintonia borealis</i> (Ait.) Raf.	Common	
<i>Conyza canadensis</i> (L.) Cronq.	Common	0
<i>Cornus alternifolia</i> L.f.	Common	6
<i>Cornus sericea</i> L. (<i>C. stolonifera</i> Michx.)	Common	2
<i>Crataegus chrysocarpa</i> Ashe (s.str.) (incl. <i>C. aboriginum</i> Sarg)	Common	4
<i>Cystopteris bulbifera</i> (L.) Bernh.	Common	5
<i>Deparia acrostichoides</i> (Sw.) Kato (<i>Athyrium thelypteroides</i> (Michx.) Desv.)	Uncommon	
<i>Desmodium glutinosum</i> (Muhl.) Wood	Uncommon [12]	6
<i>Dicentra canadensis</i> (Goldie) Walp.	Common	
<i>Dryopteris carthusiana</i> (Vill.) Fuchs (<i>D. spinulosa</i> (Muell.) Watt)	Common	5
<i>Dryopteris intermedia</i> (Muhl.) A. Gray	Common	5
<i>Dryopteris marginalis</i> (L.) A. Gray	Common	5
<i>Echinocystis lobata</i> (Michx.) T.& G.	Common	5
<i>Eleocharis erythropoda</i> Steudel (<i>E. calva</i> Torr.)	Uncommon	4
<i>Epifagus virginiana</i> (L.) Bart.	Common	6
<i>Equisetum arvense</i> L.	Common	0
<i>Equisetum hyemale</i> L.	Common	2
<i>Equisetum scirpoides</i> Michx.	Common	
<i>Erigeron annuus</i> (L.) Pers.	Common	0
<i>Erigeron philadelphicus</i> L.	Common	1
<i>Erythronium americanum</i> Ker.	Common	5
<i>Eupatorium maculatum</i> L.	Common	3
<i>Eupatorium perfoliatum</i> L.	Common	2
<i>Euthamia graminifolia</i> (L.) Nutt. (<i>Solidago graminifolia</i> (L.) Salisb.)	Common	2

<i>Fagus grandifolia</i> Ehrh.	Common	6
<i>Fragaria virginiana</i> Duchesne	Common	2
<i>Fraxinus americana</i> L.	Common	4
<i>Fraxinus pennsylvanica</i> Marsh.	Common	3
<i>Galium boreale</i> L.		7
<i>Galium circaezans</i> Michx. (incl. <i>G. lanceolatum</i> Torr.)	Uncommon [18]	
<i>Galium triflorum</i> Michx.	Common	4
<i>Geum aleppicum</i> Jacq.	Common	2
<i>Geum canadense</i> Jacq.	Common	3
<i>Glyceria grandis</i> S. Wats.	Common	5
<i>Glyceria striata</i> (Lam.) A. Hitchc.	Common	3
<i>Gymnocarpium dryopteris</i> (L.) Newm.	Common	
<i>Impatiens capensis</i> Meerb.	Common	4
<i>Iris versicolor</i> L.	Common	5
<i>Juglans cinerea</i> L.	Common	6
<i>Juncus bufonius</i> L.	Common	1
<i>Juncus dudleyi</i> Wieg.	Uncommon	1
<i>Juncus tenuis</i> Willd.	Common	0
<i>Juniperus communis</i> L.	Common	4
<i>Lactuca canadensis</i> L.	Common	3
<i>Lemna minor</i> L.	Common	2
<i>Lonicera canadensis</i> Bart. ex Marsh.	Common	6
<i>Lycopus americanus</i> Muhl.	Common	4
<i>Lysimachia ciliata</i> L.	Common	4
<i>Maianthemum canadense</i> Desf. (<i>s.str.</i>)	Common	5
<i>Maianthemum racemosum</i> (L.) Link (<i>Smilacina racemosa</i> (L.) Desf.)	Common	4
<i>Maianthemum stellatum</i> (L.) Link (<i>Smilacina stellata</i> (L.) Desf.)	Common (local)	6
<i>Matteuccia struthiopteris</i> (L.) Todaro	Common	5
<i>Monotropa uniflora</i> L.	Common	6
<i>Muhlenbergia mexicana</i> (L.) Trin.	Common	1
<i>Oenothera biennis</i> L.	Common ? [taxonomic problem]	0
<i>Onoclea sensibilis</i> L.	Common	4
<i>Oryzopsis asperifolia</i> Michx.	Common	6
<i>Oryzopsis racemosa</i> (Sm.) Ricker ex Hitchc.	Uncommon [17]	

<i>Osmorhiza claytonii</i> (Michx.) Clarke	Common	5
<i>Osmunda cinnamomea</i> L.	Common	
<i>Ostrya virginiana</i> (Mill.) K. Koch	Common	4
<i>Oxalis stricta</i> L. (<i>O. europea</i> Jord.; <i>O. fontana</i> Bunge)	Common	0
<i>Panicum capillare</i> L.	Common	0
<i>Parthenocissus vitacea</i> (Knerr) Hitchc.	Common	3
<i>Phryma leptostachya</i> L.	Uncommon	6
<i>Physalis heterophylla</i> Nees	Common	3
<i>Picea glauca</i> (Moench) Voss	Common	6
<i>Pilea pumila</i> (L.) A. Gray	Uncommon	5
<i>Pinus strobus</i> L.	Common	4
<i>Plantago rugelii</i> Ducne.	Common	1
<i>Platanthera aquilonis</i> Sheviak (<i>P. hyperborea</i> (L.) Lindl.)	Common	5
<i>Platanthera hookeri</i> (Torr.) Lindl.	Uncommon [12]	
<i>Poa palustris</i> L.	Common	5
<i>Polygonatum pubescens</i> (Willd.) Pursh	Common	5
<i>Polystichum acrostichoides</i> (Michx.) Schott	Uncommon	5
<i>Populus balsamifera</i> L.	Common	4
<i>Populus grandidentata</i> Michx.	Common	5
<i>Populus tremuloides</i> Michx.	Common	2
<i>Prenanthes altissima</i> L.	Common	5
<i>Prunus pensylvanica</i> L.f.	Common	3
<i>Prunus serotina</i> Ehrh.	Common	3
<i>Prunus virginiana</i> L.	Common	2
<i>Pteridium aquilinum</i> (L.) Kuhn var. <i>latiusculum</i> (Desv.) Underw.	Common	2
<i>Pyrola elliptica</i> Nutt.	Common	5
<i>Quercus macrocarpa</i> Michx.	Common	5
<i>Quercus rubra</i> L.	Common	6
<i>Ranunculus abortivus</i> L.	Common	2
<i>Rhamnus alnifolia</i> L'Her	Uncommon	
<i>Rhus hirta</i> (L.) Sudworth (<i>R. typhina</i> L.)	Common	1
<i>Ribes cynosbati</i> L.	Common	4
<i>Ribes triste</i> Pall.	Uncommon	6
<i>Rubus allegheniensis</i> Porter	Common	2

<i>Rubus odoratus</i> L.	Common	3
<i>Rubus pubescens</i> Raf.	Common	4
<i>Rubus strigosus</i> Michx. (<i>R. idaeus</i> L. var. <i>strigosus</i> (Michx.) Max.)	Common	0
<i>Rudbeckia hirta</i> L.	Common	0
<i>Salix bebbiana</i> Sarg.	Common	4
<i>Salix discolor</i> L.	Common	3
<i>Salix petiolaris</i> Sm.	Common	3
<i>Sambucus canadensis</i> L.	Uncommon	5
<i>Sambucus racemosa</i> L. ssp. <i>pubens</i> (Michx.) House (<i>S. pubens</i> Michx.)	Common	5
<i>Sanguinaria canadensis</i> L.	Common	5
<i>Schizachne purpurascens</i> (Torr.) Swallen	Common	6
<i>Scirpus atrovirens</i> Willd.	Common	3
<i>Scirpus cyperinus</i> (L.) Kunth (<i>S. atrocinctus</i> Fern.)	Common	4
<i>Sisyrinchium montanum</i> Greene	Common	4
<i>Smilax herbacea</i> L.	Uncommon	5
<i>Solidago altissima</i> L. (<i>S. canadensis</i> L. var. <i>scabra</i> (Muhl.) T. & G.)	Common	1
<i>Solidago canadensis</i> L.	Common	1
<i>Solidago flexicaulis</i> L.	Uncommon	6
<i>Solidago juncea</i> Ait.	Common	3
<i>Solidago nemoralis</i> Ait.	Common	2
<i>Solidago rugosa</i> Mill.	Common	4
<i>Spiraea alba</i> Du Roi (<i>s.str.</i>)	Common	3
<i>Taxus canadensis</i> Marsh.	Common	
<i>Thalictrum dioicum</i> L.	Common	5
<i>Thelypteris palustris</i> (Salisb.) Schott	Common	5
<i>Thuja occidentalis</i> L.	Common	4
<i>Tiarella cordifolia</i> L.	Common	6
<i>Tilia americana</i> L.	Common	4
<i>Toxicodendron rydbergii</i> (Rydb.) Greene (<i>Rhus radicans</i> L. var. <i>rydbergii</i> (Sm.) McNeill)	Common	0
<i>Trientalis borealis</i> Raf.	Common	6
<i>Trillium grandiflorum</i> (Michx.) Salisb.	Common	5
<i>Tsuga canadensis</i> L.	Common	
<i>Typha angustifolia</i> L.	Common	3

<i>Typha latifolia</i> L.	Common	3
<i>Ulmus americana</i> L.	Common	3
<i>Ulmus thomasi</i> Sarg.	Common (local)	6
<i>Urtica dioica</i> L. ssp. <i>gracilis</i> (Ait.) Selander	Common	2
<i>Uvularia grandiflora</i> Sm.	Common (local)	6
<i>Viburnum acerifolium</i> L.	Common	6
<i>Viburnum lantanoides</i> Michx. (<i>V. alnifolium</i> Marsh.)	Uncommon	
<i>Viburnum lentago</i> L.	Common	4
<i>Viburnum trilobum</i> Marsh. (<i>V. opulus</i> L. var. <i>americanum</i> (Mill.) Ait.)	Uncommon	5
<i>Viola pubescens</i> Ait. (incl. <i>V. eriocarpa</i> Schwein.)	Common	5
<i>Vitis riparia</i> Michx.	Common	0
<i>Waldsteinia fragarioides</i> (Michx.) Tratt.	Common	5
CC Aggregate:		868

Total Species	Regionally Significant (incl. Regionally uncommon)	High CC (>6)	Co-efficient of Conservation (average)	EI rating
204	8	31	4.28	High

b) Fauna observed:

n/a