

Appendix 1. List of plant and lichen species noted in the Marcuse Preserve. (Species noted outside the Preserve but expected to occur in similar habitats within the preserve are bracketed.)

Appendix 1.1. Vascular plants of the Marcuse Preserve.

For each species, the table indicates by an “N” or “I” whether the plant is native or introduced. The numerical codes for Upland, Wetland, and Roadside are estimates of the abundance of each species in the habitat type. The codes, modified from Table 3, Palmer et al. 1995), are as follows:

Density	Code	Description
Abundant	5	Dominant or codominant within the relevant stratum.
Frequent	4	Easily found.
Occasional	3	Widely scattered but not difficult to find.
Infrequent	2	Difficult to find with few individuals but found in several locations.
Rare	1	Very difficult to find and limited to one or very few locations.

Appendix 1.2. Mosses of the Marcuse Preserve.

Presence in Upland, Wetland, or Stream habitat is indicated by an X. It was judged impracticable to estimate abundance. All species are native to North America.

Appendix 1.3. Liverworts of the Marcuse Preserve.

Presence in Upland, Wetland, or Stream habitat is indicated by an X. It was judged impracticable to estimate abundance. All species are native to North America.

Appendix 1.4. Lichens of the Marcuse Preserve.

Presence in Upland or Wetland habitat is indicated by an X. It was judged impracticable to estimate abundance. All species are native to North America. Common names are according to Hinds and Hinds (2007).

APPENDIX 1.1. VASCULAR PLANTS OF THE MARCUSE PRESERVE		NATIVE/INTRODUCED	UPLAND	WETLAND	ROADSIDE
PTERIDOPHYTES					
Isoetaceae	Quillwort Family				
<i>Isoetes</i> sp.	quillwort	N		1	
Lycopodiaceae	Clubmoss Family				
<i>Lycopodium annotinum</i>	stiff clubmoss	N		1	
<i>Lycopodium dendroideum</i>	prickly tree clubmoss	N		1	
Osmundaceae	Royal Fern Family				
<i>Osmunda cinnamomea</i>	cinnamon fern	N	5		
<i>Osmunda claytoniana</i>	interrupted fern	N	3		
Polypodiaceae	Polypody Family				
<i>Dennstaedtia punctilobula</i>	hay-scented fern	N	4	2	
<i>Dryopteris carthusiana</i>	spinulose wood fern	N	3		
<i>Onoclea sensibilis</i>	sensitive fern	N	3	2	
<i>Phegopteris connectilis</i>	beech fern	N	3		
<i>Polypodium appalachianum</i>	polypody	N	2	1	
<i>Pteridium aquilinum</i> var. <i>latiusculum</i>	bracken	N	3		2
<i>Thelypteris noveboracensis</i>	New York Fern	N	3	3	
<i>Thelypteris palustris</i> var. <i>pubescens</i>	marsh fern	N		3	
CONIFERS					
Cupressaceae	Cypress Family				
<i>Juniperus communis</i>	common juniper	N	3		2
Pinaceae	Pine Family				
<i>Picea rubens</i>	red spruce	N	5	3	2
<i>Picea glauca</i>	white spruce	N	2		2
<i>Picea mariana</i>	black spruce	N		4	
<i>Picea mariana</i> X <i>rubens</i>	black spruce - red spruce hybrids	N		4	
<i>Abies balsamea</i>	balsam fir	N	4	3	
<i>Pinus strobus</i>	white pine	N	2		
<i>Larix laricina</i>	larch	N	3	4	
MONOCOTS					
Araceae	Aroid Family				
<i>Arisaema triphyllum</i>	Jack in the pulpit	N	3	2	
<i>Calla palustris</i>	Common calla	N		4	
<i>Symplocarpus foetidus</i>	Skunk cabbage	N		5	

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Convallariaceae	Convallaria Family				
<i>Maianthemum canadense</i>	Canada mayflower	N	4	1	
Cyperaceae	Sedge Family				
<i>Carex albicans</i> var. <i>emmonsii</i>	Emmons' sedge	N	2	3	
<i>Carex arctata</i>	drooping wood sedge	N	2		2
<i>Carex atlantica</i> ssp. <i>capillacea</i>	eastern sedge	N		2	2
<i>Carex canescens</i>	silvery sedge	N		3	
<i>Carex cephaloidea</i>	thin-leaved sedge	N	2	3	
<i>Carex lurida</i>	sallow sedge	N		4	
<i>Carex pseudocyperus</i>	cyperus-like sedge	N		2	
<i>Carex scoparia</i>	pointed broom sedge	N	2	3	
<i>Carex trisperma</i>	three-seeded sedge	N		5	
<i>Dulichium arundinaceum</i>	three-way sedge	N		2	
<i>Eleocharis elliptica</i>	spike-rush	N		4	
<i>Eleocharis tenuis</i>	slender spike-rush	N		4	
<i>Eriophorum virginicum</i>	tawny cotton-grass	N		2	
<i>Rhynchospora alba</i>	white beak-rush	N		2	
<i>Scirpus cyperinus</i>	wool-grass	N		4	
Droseraceae	Sundew Family				
<i>Drosera rotundifolia</i>	round-leaved sundew	N		2	
Hydrocharitaceae	Frog's Bit Family				
[<i>Vallisneria americana</i>]	tapegrass	N		1	
Iridaceae	Iris Family				
<i>Iris versicolor</i>	blue flag	N		2	
Juncaceae	Rush Family				
<i>Juncus brevicaudatus</i>	short-tailed rush	N		3	
<i>Juncus canadensis</i>	Canada rush	N		3	
<i>Juncus effusus</i>	common rush	N		4	
<i>Juncus pelocarpus</i>	brown-fruited rush	N		2	
<i>Juncus tenuis</i>	path rush	N		2	3
<i>Luzula multiflora</i>	common woodrush	N	3		
Orchidaceae	Orchid Family				
[<i>Platanthera clavellata</i>]	green woodland orchid	N		1	
[<i>Pogonia ophioglossoides</i>]	rose pogonia	N		1	

APPENDIX 1.1. VASCULAR PLANTS OF THE MARCUSE PRESERVE		NATIVE/INTRODUCED	UPLAND	WETLAND	ROADSIDE
Poaceae	Grass Family				
<i>Agrostis scabra</i>	ticklegrass	N		2	2
<i>Agrostis stolonifera</i>	creeping bentgrass	I			2
<i>Anthoxanthum odoratum</i>	sweet vernal grass	I	2		2
<i>Calamagrostis canadensis</i>	Canada bluejoint	N		3	
<i>Dactylis glomerata</i>	orchard grass	I			3
<i>Danthonia spicata</i>	poverty oatgrass	N	2		3
<i>Festuca nigrescens</i>	chrewings fescue	I			3
<i>Festuca rubra</i>	red fescue	N	2		3
<i>Glyceria striata</i>	owl mannagrass	N	2	3	
<i>Panicum acuminatum</i> ssp. <i>implicatum</i>	wooly panic grass	N	1	1	2
<i>Phleum pratense</i>	timothy	I			3
<i>Poa compressa</i>	Canada bluegrass	I			3
<i>Poa pratensis</i>	Kentucky bluegrass	I			2
Typhaceae	Cattail Family				
<i>Sparganium americanum</i>	American bur-reed	N		2	
<i>Typha latifolia</i>	broad-leaved cattail	N		2	
DICOTS					
Adoxaceae	Moschatel Family				
<i>Viburnum nudum</i> var. <i>cassinoides</i>	wild-raisin	N	3	4	
Anacardiaceae	Cashew Family				
<i>Rhus hirta</i>	staghorn sumac	N			4
<i>Toxicodendron radicans</i>	poison-ivy	N		3	
Araliaceae	Ginseng Family				
<i>Aralia nudicaulis</i>	wild-sarsaparilla	N	4		
Apiaceae	Carrot Family				
<i>Daucus carota</i>	Queen Anne's lace	I			4
Aquifoliaceae	Holly Family				
<i>Ilex verticillata</i>	winterberry	N		4	
<i>Nemopanthus mucronatus</i>	mountain holly	N		4	
Asteraceae	Sunflower Family				
<i>Achillea millefolium</i>	millfoil	N			3
<i>Anaphalis margaritacea</i>	pearly everlasting	I			3
<i>Cirsium arvense</i>	Canada thistle	I			3
<i>Cirsium vulgare</i>	bull thistle	I			3

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<i>Euthamia graminifolia</i>	grass-leaved goldenrod	N			3
<i>Hieracium aurantiacum</i>	orange hawkweed	I			4
<i>Hieracium caespitosum</i>	yellow kingdevil	I			4
<i>Leucanthemum vulgare</i>	oxeye daisy	I			3
<i>Oclemena acuminata</i>	whorled aster	N	3		
<i>Prenanthes trifoliata</i>	gall of the earth	N	3		
<i>Solidago canadensis</i>	Canada goldenrod	N			4
<i>Solidago gigantea</i>	smooth goldenrod	N			4
<i>Solidago rugosa</i>	rough-stemmed goldenrod	N			3
<i>Symphytotrichum lateriflorus</i>	calico aster	N			4
<i>Symphytotrichum novi-belgii</i>	New York aster	N			4
<i>Tanacetum vulgare</i>	common tansy	N			4
<i>Taraxacum officinale</i>	dandelion	N			3
<i>Tussilago farfara</i>	colt's foot	I	1		
Balsaminaceae	Touch-me-not Family				
<i>Impatiens capensis</i>	jewelweed	N	2	3	
Betulaceae	Birch Family				
<i>Alnus incana</i>	speckled alder	N			
<i>Betula alleghaniensis</i>	yellow birch	N		4	
<i>Betula papyrifera</i>	paper birch	N	4		
<i>Betula populifolia</i>	gray birch	N			2
Caprifoliaceae	Honeysuckle Family				
<i>Linnaea borealis</i> ssp. <i>longiflora</i>	twinflor	N	3		
<i>Sambucus canadensis</i>	common elder	N			3
Clusiaceae	Mangosteen Family				
<i>Hypericum canadense</i>	Canada St. Johnswort				
<i>Hypericum punctatum</i>	spotted St. Johnswort	I			3
<i>Triadenum fraseri</i>	marsh St. Johnswort	N		3	
Cornaceae	Dogwood Family				
<i>Cornus canadensis</i>	bunchberry	N	4		
Ericaceae	Heath Family				
<i>Gaylussacia baccata</i>	huckleberry	N	4	4	
<i>Gaultheria hispidula</i>	creeping snowberry	N		3	
<i>Kalmia angustifolia</i>	sheep laurel	N		3	
<i>Monotropa uniflora</i>	Indian pipe	N	1	2	

APPENDIX 1.1. VASCULAR PLANTS OF THE MARCUSE PRESERVE		NATIVE/INTRODUCED	UPLAND	WETLAND	ROADSIDE
Ericaceae (contd.)					
<i>Rhododendron groenlandicum</i>	Labrador-tea	N		3	
<i>Vaccinium angustifolium</i>	lowbush blueberry	N	4		
<i>Vaccinium vitis-idaea</i> ssp. <i>minus</i>	mountain cranberry	N	3		
Fabaceae	Pea Family				
<i>Trifolium arvense</i>	rabbit-foot clover	I			3
<i>Trifolium campestre</i>	low hop clover	I			3
Fabaceae (contd.)					
<i>Trifolium pratense</i>	red clover	I			3
<i>Vicia cracca</i>	cow vetch	I			2
Fagaceae	Oak Family				
<i>Quercus rubra</i>	red oak	N	2		
Lamiaceae	Mint Family				
<i>Galeopsis bifida</i>	splitlip hempnettle	I	2		
<i>Lycopus americanus</i>	American water-horehound	N		3	
<i>Lycopus uniflorus</i>	northern water-horehound	N		3	
Myricaceae	Myrtle Family				
<i>Comptonia peregrina</i>	sweet-fern	N	4		
<i>Myrica pensylvanica</i>	bayberry	N	2	2	
Onagraceae	Evening Primrose Family				
<i>Circaea alpina</i>	alpine enchanter's-nightshade	N	2		
<i>Epilobium ciliatum</i>	American willow-herb	N	2		
<i>Oenothera biennis</i>	common evening primrose	I			3
Orobanchaceae	Broom-rape Family				
<i>Euphrasia stricta</i>	eyebright	I			3
<i>Melampyrum lineare</i>	cowwheat	N	2		
Oxalidaceae	Sorrel Family				
<i>Oxalis stricta</i>	common yellow wood-sorrel	N	2		
Polygonaceae	Smartweed Family				
<i>Persicaria sagittata</i>	arrow-leaved cutthumb	N		3	
Primulaceae	Primula Famila				
<i>Trientalis borealis</i>	starflower	N	4		
<i>Lysimachia terrestris</i>	swamp candles	N		1	

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Ranunculaceae	Buttercup Family				
<i>Coptis trifolia</i>	goldthread	N	3		
<i>Ranunculus acris</i>	common buttercup	I			4
Rosaceae	Rose Family				
<i>Fragaria virginiana</i>	wild strawberry	N	3		
<i>Potentilla simplex</i>	old-field cinquefoil	I			3
<i>Prunus pensylvanica</i>	pin cherry	N	3		
<i>Rosa virginiana</i>	Virginia rose	N			3
<i>Rosa nitida</i>	bristly rose	N		2	
<i>Rubus allegheniensis</i>	common blackberry	N	3		4
<i>Rubus hispidus</i>	swamp dewberry	N		4	
Rosaceae (contd.)					
<i>Rubus idaeus</i>	red raspberry	N	3		4
<i>Spiraea alba</i> var. <i>latifolia</i>	meadowsweet	N	3		
<i>Spiraea tomentosa</i>	hardhack	N	3		
Rubiaceae	Madder Family				
<i>Galium trifidum</i>	northern three-lobed bedstraw	N		2	
<i>Houstonia caerulea</i>	bluets	N	3		
Salicaceae	Willow Family				
<i>Populus tremuloides</i>	quacking aspen	N	3		
<i>Salix bebbiana</i>	long-beaked willow	N	2		
Sapindaceae	Soapberry Family				
<i>Acer rubrum</i>	red maple	N	4		
Sarraceniaceae	Pitcher Plant Family				
[<i>Sarracenia purpurea</i>]	pitcher plant	N		1	
Scrophulariaceae	Figwort Family				
<i>Rhinanthus minor</i>	yellow rattle	I			3
Urticaaceae	Nettle Family				
<i>Urtica dioica</i>	stinging nettle	I			3
Violaceae	Violet Family				
<i>Viola cucullata</i>	blue marsh violet	N		3	
<i>Viola mackloskeyi</i> ssp. <i>pallens</i>	wild white violet	N		3	
<i>Viola sororia</i>	dooryard violet	N	3		

APPENDIX 1.2. MOSSES OF THE MARCUSE PRESERVE	UPLAND	WETLAND	STREAMS
<i>Andraea rupestris</i>			x
<i>Atrichum undulatum</i>	x		
<i>Aulacomnium palustre</i>		x	
<i>Brachythecium campestre</i>	x		
<i>Ceratodon purpureus</i>	x		
<i>Dicranum ontariense</i>	x		
<i>Dicranum polysetum</i>	x		
<i>Dicranum scoparium</i>	x	x	
<i>Fontinalis novi-angliae</i>			x
<i>Funaria hygrometrica</i>	x		
<i>Hylocomium splendens</i>	x		
<i>Hypnum cupressiforme</i>	x		
<i>Hypnum faurei</i>	x		
<i>Hypnum imponens</i>	x	x	
<i>Hypnum pallescens</i>	x		
<i>Leucobryum albidum</i>	x		
<i>Mnium hornum</i>	x	x	x
<i>Mnium spinulosum</i>			x
<i>Orthodicranum flagellare</i>	x		
<i>Orthodicranum montanum</i>	x		x
<i>Plagiomnium drummondii</i>	x	x	x
<i>Plagiothecium laetum</i>	x		
<i>Pleurozium schreberi</i>	x		
<i>Pogonatum pensilvanicum</i>	x		
<i>Pohlia nutans</i>	x		
<i>Polytrichastrum pallidisetum</i>	x	x	
<i>Polytrichum commune</i>	x	x	
<i>Polytrichum juniperinum</i>	x	x	
<i>Polytrichum strictum</i>		x	
<i>Pseudobryum cinclidioides</i>			x
<i>Ptilium crista-castrensis</i>	x		
<i>Rhytiadelphus triquetrus</i>	x		
<i>Sanionia uncinata</i>	x		
<i>Sematophyllum marylandicum</i>			x
<i>Sphagnum affine</i>		x	
<i>Sphagnum capillifolium</i>	x	x	
<i>Sphagnum centrale</i>		x	
<i>Sphagnum cuspidatum</i>		x	
<i>Sphagnum fallax</i>		x	
<i>Sphagnum flavicomans</i>		x	

<i>Sphagnum girgensohnii</i>	x	x	x
<i>Sphagnum lescurii</i>		x	
<i>Sphagnum magellanicum</i>		x	
<i>Sphagnum palustre</i>		x	
<i>Sphagnum papillosum</i>		x	
<i>Sphagnum recurvum</i>		x	
<i>Sphagnum subsecundum</i>		x	
<i>Sphagnum subtile</i>		x	
<i>Tetraphis pellucida</i>	x		
<i>Thuidium deliculatum</i>	x	x	
<i>Ulota crispa</i>	x		
<i>Ulota hutchinsiae</i>	x		

APPENDIX 1.3. LIVERWORTS OF THE MARCUSE PRESERVE	UPLAND	WETLAND	STREAM
<i>Bazzania trilobata</i>	x	x	
<i>Cephalozia sp.</i>		x	
<i>Frullania asagrayana</i>		x	
<i>Gymnoclea inflata</i>			x
<i>Lepidozia reptans</i>	x	x	
<i>Marsupella emarginata</i>			x
<i>Nowellia curvifolia</i>	x		
<i>Pallavicinia lyellii</i>		x	
<i>Pellia epiphylla</i>		x	
<i>Ptilidium ciliare</i>	x	x	
<i>Ptilidium pulcherrimum</i>	x		
<i>Scapania irrigua</i>	x		
<i>Scapania nemorea</i>	x		

APPENDIX 1.4. LICHENS OF THE MARCUSE PRESERVE

SCIENTIFIC NAME	COMMON NAME	UPLAND	WETLAND
<i>Cladonia chlorophaea</i>	mealy pixie-cup		x
<i>Cladonia cristatella</i>	British soldiers	x	x
<i>Cladonia fimbriata</i>	trumpet lichen	x	
<i>Cladonia floerkeana</i>	gritty british soldiers	x	
<i>Cladonia furcata</i>	many-forked cladonia	x	
<i>Cladonia incrassata</i>	powder-foot British soldiers	x	
<i>Cladonia macilenta</i>	scarlet pin lichen	x	
<i>Cladonia maxima</i>	giant cladonia	x	
<i>Cladonia rangiferina</i>	gray reindeer lichen	x	
<i>Cladonia squamosa</i>	dragon cladonia	x	x
<i>Cladonia stellaris</i>	star-tipped reindeer lichen	x	
[<i>Cladonia uncialis</i>]	thorn cladonia	x	
<i>Flavoparmelia caperata</i>	common greenshield	x	
<i>Hypogymnia krogiae</i>	freckled tube lichen	x	
<i>Hypogymnia physodes</i>	monk's hood lichen	x	
<i>Imshaugia aleurites</i>	salted starburst lichen	x	
<i>Lasallia papulosa</i>	common toadskin	x	
<i>Parmelia squarrosa</i>	bottlebrush shield lichen	x	
<i>Parmelia sulcata</i>	hammered shield	x	x
<i>Platismatia glauca</i>	varied rag lichen	x	
<i>Punctelia rudecta</i>	rough speckled shield	x	
<i>Umbilicaria mammulata</i>	smooth rock tripe	x	
[<i>Umbilicaria muhlenbergii</i>]	plated rock tripe	x	
<i>Usnea cornuta</i>	wart beard lichen	x	
<i>Usnea filipendula</i>	fishbone beard lichen		x
<i>Usnea schadenbergiana</i>	silken beard lichen	x	
<i>Xanthoria parietina</i>	wall lichen	x	