



DeYoung Natural Area

Floristic Quality Assessment Results

A Floristic Quality Assessment of DeYoung Natural Area was conducted by Liana May during the summer of 2017.

Floristic quality assessments (FQAs) are a useful tool to measure a plant community's conservation value. To perform an FQA, all vascular plant species in a community are quantified and an index representing the rarity of these species is summed to give a ranking that can be compared across different ecosystem types. This information can then be used to identify high-quality species and groupings of species in order to prioritize conservation and management efforts. At DeYoung Natural Area the total number of species and native species are:

Native Species	Total Species
242	332

The coefficient of conservation (C) is a value between 0 and 10 assigned to each species, representing the species likelihood to occur in an unaltered, pre-European settlement landscape in the state of Michigan (Herman et al 2001). A C-value of 0 is assigned to species with low fidelity to their natural habitat and the ability to persist in numerous habitat conditions. A C-value of 10 is assigned to invasive species, also called adventives. At DeYoung Natural Area the mean C-values are:

Native Mean C	Mean C w/ Adventives
3.8	2.8

The coefficient of wetness (W) is assigned to each species depending on their probability to occur in wetlands, where species with a W-value of -5 are obligatory wetland species, and those with a W-value of +5 are upland species. At DeYoung Natural Area the mean coefficients of wetness are:

Native Mean W	Mean W w/ Adventives
-0.7	0.3

FQIs less than 20 have minimal significance, while FQIs greater than 35 represent areas of conservation importance and are floristically significant on a statewide level. Areas with FQIs greater than 50 are extremely rare and represent areas of significant native biodiversity (Herman et al 2001). At DeYoung Natural Area the FQI's are:

Native FQI	FQI w/ Adventives
59.1	32.4

May, L. 2017. Floristic Quality Assessment and Habitat Mapping of DeYoung Natural Area.

Herman, K. D., L. A. Masters, M. R. Penskar, A. A. Reznicek, G. S. Wilhelm, W. W. Brodovich, and K. P. Gardiner. 2001. Floristic Quality Assessment with Wetland Categories and Examples of Computer Applications for the State of Michigan – Revised, 2nd Edition. Michigan Department of Natural Resources, Wildlife, Natural Heritage Program. Lansing, MI. 19 pp. + Appendices.



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High Quality Plant Species

This list represents the most ecologically significant and high quality plants found at the DeYoung Natural Area during a 2017 Floristic Quality Assessment conducted by Liana May. These plants are the highest quality species found on the property and therefore may be rare, difficult to find, or not be blooming depending on the season.

Please remember to practice Leave No Trace techniques; picking flowers may not seem like a big deal, but it means others won't have a chance to enjoy them. With thousands of people visiting Conservancy properties, the less impact we each make, the longer we will enjoy what we have. If you are interested in conducting a scientific study on the property please contact the Conservancy for written permission.

C	Scientific Name	Common Name
7	<i>Actaea pachypoda</i>	Ranunculaceae
7	<i>Betula alleghaniensis</i>	Betulaceae
7	<i>Geum rivale</i>	Rosaceae
7	<i>Nuphar variegata</i>	Nymphaeaceae
7	<i>Stuckenia filiformis</i>	Potamogetonaceae
8	<i>Aralia racemose</i>	Araliaceae
8	<i>Carex laevivaginata</i>	Cyperaceae
8	<i>Carex lasiocarpa</i>	Cyperaceae
8	<i>Equisetum palustre</i>	Equisetaceae
8	<i>Milium effusum</i>	Poaceae
8	<i>Rhamnus alnifolia</i>	Rhamnaceae
8	<i>Schoenoplectus subterminalis</i>	Cyperaceae
9	<i>Rumex orbiculatus</i>	Polygonaceae
9	<i>Tiarella cordifolia</i>	Saxifragaceae
10	<i>Cladium mariscoides</i>	Cyperaceae
10	<i>Eleocharis quinqueflora</i>	Cyperaceae
10	<i>Juniperus horizontalis</i>	Cupressaceae
10	<i>Lobelia kalmia</i>	Campanulaceae
10	<i>Potamogeton alpinus</i>	Potamogetonaceae
10	<i>Utricularia cornuta</i>	Lentibulariaceae
10	<i>Veronica beccabunga</i> var. <i>americana</i>	Plantaginaceae

To see pictures or learn more about the plants listed above please visit the Michigan Natural Features Inventory website at <http://mnfi.anr.msu.edu/data/specialplants.cfm> or consult Newcomb's Wildflower Guide by Lawrence Newcomb.

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DeYoung NA
 Grielickville
 Leelanau
 MI
 USA

FQA DB Region:

Michigan

FQA DB Publication Year:

2014

FQA DB Description:

Reznicek, A.A., M.R. Penskar, B.S. Walters, and B.S. Slaughter. 2014. Michigan Floristic Quality Assessment Database. Herbarium, University of Michigan, Ann Arbor, MI and Michigan Natural Features Inventory, Michigan State University, Lansing, MI. <http://michiganflora.net>
 Liana May (2017), Greg LaCross (2006)

Practitioner:

Latitude:

Longitude:

Weather Notes:

Duration Notes:

Growing season 2006 (LaCross, original parcel) and 2017 (May, Corrigan addition, Cedar Lake shoreline)

Community Type Notes:

Other Notes:

Private/Public:

Public

Conservatism-Based Metrics:

Total Mean C:	2.8
Native Mean C:	3.8
Total FQI:	51
Native FQI:	59.1
Adjusted FQI:	32.4
% C value 0:	30.7
% C value 1-3:	31.3
% C value 4-6:	31.6
% C value 7-10:	6.3
Native Tree Mean C:	4
Native Shrub Mean C:	3.5
Native Herbaceous Mean C:	3.8

Species Richness:

Total Species:	332
Native Species:	242 72.90%
Non-native Species:	90 27.10%

Species Wetness:

Mean Wetness:	0.3
Native Mean Wetness:	-0.7

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Physiognomy Metrics:

Tree:	36	10.80%
Shrub:	38	11.40%
Vine:	9	2.70%
Forb:	168	50.60%
Grass:	27	8.10%
Sedge:	32	9.60%
Rush:	7	2.10%
Fern:	15	4.50%
Bryophyte:	0	0%

Duration Metrics:

Annual:	18	5.40%
Perennial:	293	88.30%
Biennial:	21	6.30%
Native Annual:	11	3.30%
Native Perennial:	224	67.50%
Native Biennial:	7	2.10%

Species:

Scientific Name	Family	Acronym	Native?	C	W	Physiognomy	Duration	Common Name
<i>Acer negundo</i>	Sapindaceae	ACENEG	native	0	0	tree	perennial	box-elder
<i>Acer rubrum</i>	Sapindaceae	ACERUB	native	1	0	tree	perennial	red maple
<i>Acer saccharum</i>	Sapindaceae	ACESAU	native	5	3	tree	perennial	sugar maple
<i>Achillea millefolium</i>	Asteraceae	ACHMIL	native	1	3	forb	perennial	yarrow
<i>Actaea pachypoda</i>	Ranunculaceae	ACTPAC	native	7	5	forb	perennial	dolls-eyes
<i>Adiantum pedatum</i>	Pteridaceae	ADIPED	native	6	3	fern	perennial	maidenhair fern
<i>Agrimonia gryposepala</i>	Rosaceae	AGRGRY	native	2	3	forb	perennial	tall agrimony
<i>Agrostis gigantea</i>	Poaceae	AGRGIG	non-native	0	-3	grass	perennial	redtop
<i>Alliaria petiolata</i>	Brassicaceae	ALLPET	non-native	0	3	forb	biennial	garlic mustard
<i>Allium tricoccum</i>	Alliaceae	ALLTRI	native	5	3	forb	perennial	wild leek
<i>Allium vineale</i>	Alliaceae	ALLVIN	non-native	0	3	forb	perennial	field garlic
<i>Alnus incana; a. rugosa</i>	Betulaceae	ALNINC	native	5	-3	shrub	perennial	speckled alder
<i>Ambrosia artemisiifolia</i>	Asteraceae	AMBART	native	0	3	forb	annual	common ragweed
<i>Amelanchier interior</i>	Rosaceae	AMEINT	native	4	5	shrub	perennial	serviceberry
<i>Anemone canadensis</i>	Ranunculaceae	ANECAN	native	4	-3	forb	perennial	canada anemone
<i>Anemone cylindrica</i>	Ranunculaceae	ANECYL	native	6	5	forb	perennial	thimbleweed
<i>Anemone quinquefolia</i>	Ranunculaceae	ANEQUI	native	5	3	forb	perennial	wood anemone
<i>Antennaria howellii</i>	Asteraceae	ANTHOW	native	2	5	forb	perennial	small pussytoes
<i>Apocynum androsaemifolium</i>	Apocynaceae	APOAND	native	3	5	forb	perennial	spreading dogbane
<i>Apocynum cannabinum; a. sibiricum</i>	Apocynaceae	APOCAN	native	3	0	forb	perennial	indian-hemp
<i>Aralia racemosa</i>	Araliaceae	ARARAC	native	8	3	forb	perennial	spikenard
<i>Arctium minus</i>	Asteraceae	ARCMIN	non-native	0	3	forb	biennial	common burdock
<i>Arisaema triphyllum</i>	Araceae	ARITRI	native	5	0	forb	perennial	jack-in-the-pulpit

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<i>Asclepias incarnata</i>	Apocynaceae	ASCINC	native	6	-5	forb	perennial	swamp milkweed
<i>Asclepias syriaca</i>	Apocynaceae	ASCSYR	native	1	5	forb	perennial	common milkweed
<i>Asparagus officinalis</i>	Asparagaceae	ASPOFF	non-native	0	3	forb	perennial	garden asparagus
<i>Athyrium filix-femina</i>	Athyriaceae	ATHFIL	native	4	0	fern	perennial	lady fern
<i>Barbarea vulgaris</i>	Brassicaceae	BARVUL	non-native	0	0	forb	biennial	yellow rocket
<i>Berberis thunbergii</i>	Berberidaceae	BERTHU	non-native	0	3	shrub	perennial	japanese barberry
<i>Berberis vulgaris</i>	Berberidaceae	BERVUL	non-native	0	3	shrub	perennial	common barberry
<i>Berteroa incana</i>	Brassicaceae	BERINC	non-native	0	5	forb	annual	hoary alyssum
<i>Betula alleghaniensis</i>	Betulaceae	BETALL	native	7	0	tree	perennial	yellow birch
<i>Betula papyrifera</i>	Betulaceae	BETPAP	native	2	3	tree	perennial	paper birch
<i>Bidens cernua</i>	Asteraceae	BIDCER	native	3	-5	forb	annual	nodding beggar-ticks
<i>Bidens frondosa</i>	Asteraceae	BIDFRO	native	1	-3	forb	annual	common beggar-ticks
<i>Bromus inermis</i>	Poaceae	BROINE	non-native	0	5	grass	perennial	smooth brome
<i>Calamagrostis canadensis</i>	Poaceae	CALCAN	native	3	-5	grass	perennial	blue-joint
<i>Caltha palustris</i>	Ranunculaceae	CALPAR	native	6	-5	forb	perennial	marsh-marigold
<i>Calystegia sepium</i>	Convolvulaceae	CALSEP	native	2	0	vine	perennial	hedge bindweed
<i>Cardamine diphylla; dentaria d.</i>	Brassicaceae	CARDIP	native	5	3	forb	perennial	two-leaved toothwort
<i>Cardamine pensylvanica</i>	Brassicaceae	CARPEN	native	1	-3	forb	biennial	pennsylvania bitter cress
<i>Carex arctata</i>	Cyperaceae	CXARTT	native	3	5	sedge	perennial	sedge
<i>Carex aurea</i>	Cyperaceae	CXAURE	native	3	-3	sedge	perennial	sedge
<i>Carex crinita</i>	Cyperaceae	CXCRIN	native	4	-5	sedge	perennial	sedge
<i>Carex deweyana</i>	Cyperaceae	CXDEWE	native	3	3	sedge	perennial	sedge
<i>Carex flava</i>	Cyperaceae	CXFLAV	native	4	-5	sedge	perennial	sedge
<i>Carex gracillima</i>	Cyperaceae	CXGRAA	native	4	3	sedge	perennial	sedge
<i>Carex granularis</i>	Cyperaceae	CXGRAN	native	2	-3	sedge	perennial	sedge
<i>Carex hystericina</i>	Cyperaceae	CXHYST	native	2	-5	sedge	perennial	sedge
<i>Carex interior</i>	Cyperaceae	CXINTE	native	3	-5	sedge	perennial	sedge
<i>Carex intumescens</i>	Cyperaceae	CXINTU	native	3	-3	sedge	perennial	sedge
<i>Carex laevivaginata</i>	Cyperaceae	CXLAEV	native	8	-5	sedge	perennial	sedge
<i>Carex lasiocarpa</i>	Cyperaceae	CXLASI	native	8	-5	sedge	perennial	sedge
<i>Carex leptalea</i>	Cyperaceae	CXLEPA	native	5	-5	sedge	perennial	sedge
<i>Carex pedunculata</i>	Cyperaceae	CXPEDU	native	5	3	sedge	perennial	sedge
<i>Carex pellita; c. lanuginosa</i>	Cyperaceae	CXPELL	native	2	-5	sedge	perennial	sedge
<i>Carex projecta</i>	Cyperaceae	CXPROJ	native	3	-3	sedge	perennial	sedge
<i>Carex retrorsa</i>	Cyperaceae	CXRETS	native	3	-5	sedge	perennial	sedge
<i>Carex rosea; c. convoluta</i>	Cyperaceae	CXROSE	native	2	5	sedge	perennial	curly-styled wood sedge
<i>Carex scabrata</i>	Cyperaceae	CXSCAB	native	4	-5	sedge	perennial	sedge
<i>Carex stipata</i>	Cyperaceae	CXSTIP	native	1	-5	sedge	perennial	sedge
<i>Carex stricta</i>	Cyperaceae	CXSTRI	native	4	-5	sedge	perennial	sedge
<i>Carex utriculata; c. rostrata</i>	Cyperaceae	CXUTRI	native	5	-5	sedge	perennial	sedge
<i>Carex vulpinoidea</i>	Cyperaceae	CXVULP	native	1	-5	sedge	perennial	sedge
<i>Caulophyllum thalictroides</i>	Berberidaceae	CAUTHA	native	5	5	forb	perennial	blue cohosh
<i>Celastrus orbiculatus</i>	Celastraceae	CELORB	non-native	0	5	vine	perennial	oriental bittersweet
<i>Centaurea stoebe; c. maculosa</i>	Asteraceae	CENSTO	non-native	0	5	forb	biennial	spotted knapweed

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Cerastium fontanum	Caryophyllaceae	CERFON	non-native	0	3	forb	perennial	mouse-ear chickweed
Ceratophyllum demersum	Ceratophyllaceae	CERDEM	native	1	-5	forb	perennial	coontail
Cichorium intybus	Asteraceae	CICINT	non-native	0	3	forb	perennial	chicory
Cicuta bulbifera	Apiaceae	CICBUL	native	5	-5	forb	perennial	water hemlock
Circaea canadensis; c. lutetiana	Onagraceae	CIRCAN	native	2	3	forb	perennial	enchanters-nightshade
Cirsium arvense	Asteraceae	CIRARV	non-native	0	3	forb	perennial	canada thistle
Cirsium vulgare	Asteraceae	CIRVUL	non-native	0	3	forb	biennial	bull thistle
Cladium mariscoides	Cyperaceae	CLAMAR	native	10	-5	sedge	perennial	twig-rush
Clematis virginiana	Ranunculaceae	CLEVIR	native	4	0	vine	perennial	virgins bower
Clinopodium vulgare	Lamiaceae	CLIVUL	native	3	5	forb	perennial	wild-basil
Convallaria majalis	Convallariaceae	CONMAJ	non-native	0	5	forb	perennial	lily-of-the-valley
Conyza canadensis	Asteraceae	CONCAN	native	0	3	forb	annual	horseweed
Cornus alternifolia	Cornaceae	CORALT	native	5	3	tree	perennial	alternate-leaved dogwood
Cornus amomum	Cornaceae	CORAMO	native	2	-3	shrub	perennial	silky dogwood
Cornus rugosa	Cornaceae	CORRUG	native	6	5	shrub	perennial	round-leaved dogwood
Cornus sericea; c. stolonifera	Cornaceae	CORSER	native	2	-3	shrub	perennial	red-osier
Crataegus monogyna	Rosaceae	CRAMON	non-native	0	3	tree	perennial	english hawthorn
Cynoglossum officinale	Boraginaceae	CYNOFF	non-native	0	5	forb	biennial	hounds-tongue
Dactylis glomerata	Poaceae	DACGLO	non-native	0	3	grass	perennial	orchard grass
Danthonia spicata	Poaceae	DANSPI	native	4	5	grass	perennial	poverty grass; oatgrass
Daucus carota	Apiaceae	DAUCAR	non-native	0	5	forb	biennial	queen-annes-lace
Dianthus armeria	Caryophyllaceae	DIAARM	non-native	0	5	forb	annual	deptford pink
Dichanthelium depauperatum; panicum d.	Poaceae	DICDEP	native	4	5	grass	perennial	panic grass
Dichanthelium implicatum; panicum i.	Poaceae	DICIMP	native	3	0	grass	perennial	panic grass
Digitaria cognata; leptoloma c.	Poaceae	DIGCOG	native	3	5	grass	perennial	fall witch grass
Digitaria ischaemum	Poaceae	DIGISC	non-native	0	3	grass	annual	smooth crab grass
Digitaria sanguinalis	Poaceae	DIGSAN	non-native	0	3	grass	annual	hairy crab grass
Dryopteris carthusiana	Dryopteridaceae	DRYCAR	native	5	-3	fern	perennial	spinulose woodfern
Dryopteris cristata	Dryopteridaceae	DRYCRI	native	6	-5	fern	perennial	crested shield fern
Dryopteris intermedia	Dryopteridaceae	DRYINT	native	5	0	fern	perennial	evergreen woodfern
Echinochloa muricata	Poaceae	ECHMUR	native	1	-5	grass	annual	barnyard grass
Elaeagnus angustifolia	Elaeagnaceae	ELAANG	non-native	0	3	tree	perennial	russian-olive
Elaeagnus umbellata	Elaeagnaceae	ELAUMB	non-native	0	3	shrub	perennial	autumn-olive
Eleocharis erythropoda	Cyperaceae	ELEERY	native	4	-5	sedge	perennial	spike-rush
Eleocharis quinqueflora; e. pauciflora	Cyperaceae	ELEQUI	native	10	-5	sedge	perennial	spike-rush
Elymus repens; agropyron r.	Poaceae	ELYREP	non-native	0	3	grass	perennial	quack grass
Epilobium ciliatum	Onagraceae	EPICIL	native	3	-3	forb	perennial	willow-herb
Epilobium coloratum	Onagraceae	EPICOL	native	3	-5	forb	perennial	cinnamon willow-herb
Epilobium hirsutum	Onagraceae	EPIHIR	non-native	0	-3	forb	perennial	great hairy willow-herb
Epilobium parviflorum	Onagraceae	EPIPAR	non-native	0	-5	forb	perennial	willow-herb
Epipactis helleborine	Orchidaceae	EPIHEL	non-native	0	0	forb	perennial	helleborine
Equisetum arvense	Equisetaceae	EQUARV	native	0	0	fern	perennial	common horsetail
Equisetum hyemale	Equisetaceae	EQUHYE	native	2	0	fern	perennial	scouring rush
Equisetum palustre	Equisetaceae	EQUPAL	native	8	-3	fern	perennial	marsh horsetail

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<i>Equisetum sylvaticum</i>	Equisetaceae	EQU SYL	native	5	-3 fern	perennial	woodland horsetail
<i>Eragrostis spectabilis</i>	Poaceae	ERASPE	native	3	5 grass	perennial	purple love grass
<i>Erigeron annuus</i>	Asteraceae	ERIANN	native	0	3 forb	biennial	daisy fleabane
<i>Erigeron philadelphicus</i>	Asteraceae	ERIPHI	native	2	0 forb	perennial	philadelphia fleabane
<i>Erigeron strigosus</i>	Asteraceae	ERISTR	native	4	3 forb	perennial	daisy fleabane
<i>Erythronium americanum</i>	Liliaceae	ERYAME	native	5	5 forb	perennial	yellow trout lily
<i>Eupatorium perfoliatum</i>	Asteraceae	EUPPER	native	4	-3 forb	perennial	boneset
<i>Euphorbia virgata</i> ; <i>e. esula</i>	Euphorbiaceae	EUPVIR	non-native	0	5 forb	perennial	leafy spurge
<i>Euthamia graminifolia</i>	Asteraceae	EUTGRA	native	3	0 forb	perennial	grass-leaved goldenrod
<i>Eutrochium maculatum</i> ; <i>eupatorium m.</i>	Asteraceae	EUTMAC	native	4	-5 forb	perennial	joe-pye-weed
<i>Fagus grandifolia</i>	Fagaceae	FAGGRA	native	6	3 tree	perennial	american beech
<i>Festuca rubra</i>	Poaceae	FESRUB	non-native	0	3 grass	perennial	red fescue
<i>Fragaria virginiana</i>	Rosaceae	FRAVIR	native	2	3 forb	perennial	wild strawberry
<i>Frangula alnus</i> ; <i>rhamnus frangula</i>	Rhamnaceae	FRAALN	non-native	0	0 shrub	perennial	glossy buckthorn
<i>Fraxinus americana</i>	Oleaceae	FRAAME	native	5	3 tree	perennial	white ash
<i>Fraxinus nigra</i>	Oleaceae	FRANIG	native	6	-3 tree	perennial	black ash
<i>Galium aparine</i>	Rubiaceae	GALAPA	native	0	3 forb	annual	annual bedstraw
<i>Galium tinctorium</i>	Rubiaceae	GALTIN	native	5	-5 forb	perennial	stiff bedstraw
<i>Geranium robertianum</i>	Geraniaceae	GERROB	native	3	3 forb	annual	herb robert
<i>Geum aleppicum</i>	Rosaceae	GEUALE	native	3	0 forb	perennial	yellow avens
<i>Geum canadense</i>	Rosaceae	GEUCAN	native	1	0 forb	perennial	white avens
<i>Geum rivale</i>	Rosaceae	GEURIV	native	7	-5 forb	perennial	purple avens
<i>Glyceria striata</i>	Poaceae	GLYSTR	native	4	-5 grass	perennial	fowl manna grass
<i>Hackelia deflexa</i>	Boraginaceae	HACDEF	native	2	5 forb	biennial	stickseed
<i>Hackelia virginiana</i>	Boraginaceae	HACVIR	native	1	3 forb	biennial	beggars lice
<i>Hamamelis virginiana</i>	Hamamelidaceae	HAMVIR	native	5	3 shrub	perennial	witch-hazel
<i>Hieracium aurantiacum</i>	Asteraceae	HIEAUR	non-native	0	5 forb	perennial	orange hawkweed
<i>Hieracium caespitosum</i>	Asteraceae	HIECAE	non-native	0	5 forb	perennial	king devil
<i>Hieracium scabrum</i>	Asteraceae	HIESCA	native	3	5 forb	perennial	rough hawkweed
<i>Hieracium venosum</i>	Asteraceae	HIEVEN	native	6	5 forb	perennial	rattlesnake-weed
<i>Hypericum perforatum</i>	Hypericaceae	HYPPER	non-native	0	5 forb	perennial	common st. johns-wort
<i>Hypochaeris radicata</i>	Asteraceae	HYPRAD	non-native	0	3 forb	perennial	cats-ear
<i>Impatiens capensis</i>	Balsaminaceae	IMPCAP	native	2	-3 forb	annual	spotted touch-me-not
<i>Iris germanica</i>	Iridaceae	IRIGER	non-native	0	5 forb	perennial	fleur-de-lys
<i>Iris versicolor</i>	Iridaceae	IRIVER	native	5	-5 forb	perennial	wild blue flag
<i>Juglans nigra</i>	Juglandaceae	JUGNIG	native	5	3 tree	perennial	black walnut
<i>Juncus articulatus</i>	Juncaceae	JUNART	native	3	-5 rush	perennial	jointed rush
<i>Juncus dudleyi</i>	Juncaceae	JUNDUD	native	1	-3 rush	perennial	dudleys rush
<i>Juncus effusus</i>	Juncaceae	JUNEFF	native	3	-5 rush	perennial	soft-stemmed rush
<i>Juncus nodosus</i>	Juncaceae	JUNNOD	native	5	-5 rush	perennial	joint rush
<i>Juncus pylaei</i> ; <i>j. effusus</i>	Juncaceae	JUNPLA	native	3	-5 rush	perennial	pylaies soft rush
<i>Juncus tenuis</i>	Juncaceae	JUNTEN	native	1	0 rush	perennial	path rush
<i>Juniperus communis</i>	Cupressaceae	JUNCOI	native	4	3 shrub	perennial	common or ground juniper
<i>Juniperus horizontalis</i>	Cupressaceae	JUNHOR	native	10	3 shrub	perennial	creeping juniper

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Leersia oryzoides	Poaceae	LEEORY	native	3	-5	grass	perennial	cut grass
Lemna turionifera; l. minor	Araceae	LEMTUR	native	5	-5	forb	perennial	red duckweed
Leonurus cardiaca	Lamiaceae	LEOCAR	non-native	0	5	forb	perennial	motherwort
Lepidium campestre	Brassicaceae	LEPCAM	non-native	0	5	forb	biennial	field cress
Leucanthemum vulgare; chrysanthemum leucanthemum	Asteraceae	LEUVUL	non-native	0	5	forb	perennial	ox-eye daisy
Ligustrum vulgare	Oleaceae	LIGVUL	non-native	0	3	shrub	perennial	common privet
Lithospermum officinale	Boraginaceae	LITOFF	non-native	0	5	forb	perennial	gromwell
Lobelia kalmii	Campanulaceae	LOBKAL	native	10	-5	forb	perennial	bog lobelia
Lonicera dioica	Caprifoliaceae	LONDIO	native	5	3	vine	perennial	red honeysuckle
Lonicera morrowii	Caprifoliaceae	LONMOR	non-native	0	3	shrub	perennial	morrow honeysuckle
Lonicera √óbella	Caprifoliaceae	LONBEL	non-native	0	3	shrub	perennial	hybrid honeysuckle
Luzula multiflora	Juncaceae	LUZMUL	native	5	3	rush	perennial	common wood rush
Lycopus americanus	Lamiaceae	LYCAME	native	2	-5	forb	perennial	common water horehound
Lycopus uniflorus	Lamiaceae	LYCUNI	native	2	-5	forb	perennial	northern bugle weed
Lysimachia ciliata	Myrsinaceae	LYSCIL	native	4	-3	forb	perennial	fringed loosestrife
Lysimachia thyrsoiflora	Myrsinaceae	LYSTHY	native	6	-5	forb	perennial	tufted loosestrife
Maianthemum canadense	Convallariaceae	MAICAN	native	4	3	forb	perennial	canada mayflower
Maianthemum stellatum; smilacina s.	Convallariaceae	MAISTE	native	5	0	forb	perennial	starry false solomon-seal
Malus pumila	Rosaceae	MALPUM	non-native	0	5	tree	perennial	apple
Matteuccia struthiopteris	Onocleaceae	MATSTR	native	3	0	fern	perennial	ostrich fern
Medicago lupulina	Fabaceae	MEDLUP	non-native	0	3	forb	annual	black medick
Medicago sativa	Fabaceae	MEDSAT	non-native	0	5	forb	perennial	alfalfa
Melilotus albus	Fabaceae	MELALB	non-native	0	3	forb	biennial	white sweet-clover
Melilotus officinalis	Fabaceae	MELLOF	non-native	0	3	forb	biennial	yellow sweet-clover
Mentha canadensis; m. arvensis	Lamiaceae	MENCAS	native	3	-3	forb	perennial	wild mint
Mentha spicata	Lamiaceae	MENSPI	non-native	0	-3	forb	perennial	spearmint
Mentha √ópiperita	Lamiaceae	MENPIP	non-native	0	-5	forb	perennial	peppermint
Milium effusum	Poaceae	MILEFF	native	8	3	grass	perennial	wood millet
Monotropa uniflora	Ericaceae	MONOUN	native	5	3	forb	perennial	indian-pipe
Morus alba	Moraceae	MORALB	non-native	0	3	tree	perennial	white mulberry
Myosotis scorpioides	Boraginaceae	MYOSCO	non-native	0	-5	forb	perennial	forget-me-not
Myriophyllum heterophyllum	Haloragaceae	MYRHET	native	6	-5	forb	perennial	various-leaved water-milfoil
Nasturtium officinale	Brassicaceae	NASOFF	native	4	-5	forb	perennial	watercress
Nuphar variegata	Nymphaeaceae	NUPVAR	native	7	-5	forb	perennial	yellow pond-lily
Nymphaea odorata	Nymphaeaceae	NYMODO	native	6	-5	forb	perennial	sweet-scented waterlily
Oenothera biennis	Onagraceae	OENBIE	native	2	3	forb	biennial	common evening-primrose
Oenothera parviflora	Onagraceae	OENPAR	native	2	3	forb	biennial	evening-primrose
Oenothera perennis	Onagraceae	OENPER	native	5	0	forb	perennial	small sundrops
Onoclea sensibilis	Onocleaceae	ONOSEN	native	2	-3	fern	perennial	sensitive fern
Origanum vulgare	Lamiaceae	ORIVUL	non-native	0	5	forb	perennial	wild-marjoram
Osmorhiza claytonii	Apiaceae	OSMCLI	native	4	3	forb	perennial	hairy sweet-cicely
Osmunda claytoniana	Osmundaceae	OSMCLN	native	6	0	fern	perennial	interrupted fern
Osmunda regalis	Osmundaceae	OSMREG	native	5	-5	fern	perennial	royal fern
Ostrya virginiana	Betulaceae	OSTVIR	native	5	3	tree	perennial	ironwood; hop-hornbeam

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Oxalis dillenii; o. stricta	Oxalidaceae	OXADIL	native	0	3	forb	perennial	common yellow wood-sorrel
Panicum capillare	Poaceae	PANCAP	native	0	0	grass	annual	witch grass
Panicum virgatum	Poaceae	PANVIR	native	4	0	grass	perennial	switch grass
Papaver orientale	Papaveraceae	PAPORI	non-native	0	5	forb	perennial	oriental poppy
Parthenocissus quinquefolia	Vitaceae	PARQUI	native	5	3	vine	perennial	virginia creeper
Pastinaca sativa	Apiaceae	PASSAT	non-native	0	5	forb	biennial	wild parsnip
Persicaria hydropiper; polygonum h.	Polygonaceae	PERHYR	native	1	-5	forb	annual	water-pepper
Phalaris arundinacea	Poaceae	PHAARU	native	0	-3	grass	perennial	reed canary grass
Phleum pratense	Poaceae	PHLPRA	non-native	0	3	grass	perennial	timothy
Physalis heterophylla	Solanaceae	PHYHET	native	3	5	forb	perennial	clammy ground-cherry
Physocarpus opulifolius	Rosaceae	PHYOPU	native	4	-3	shrub	perennial	ninebark
Picea glauca	Pinaceae	PICGLA	native	3	3	tree	perennial	white spruce
Pilea fontana	Urticaceae	PILFON	native	5	-3	forb	annual	bog clearweed
Pinus resinosa	Pinaceae	PINRES	native	6	3	tree	perennial	red pine
Pinus strobus	Pinaceae	PINSTR	native	3	3	tree	perennial	white pine
Pinus sylvestris	Pinaceae	PINSYL	non-native	0	3	tree	perennial	scotch pine
Plantago lanceolata	Plantaginaceae	PLALAN	non-native	0	3	forb	perennial	english plantain
Plantago rugelii	Plantaginaceae	PLARUG	native	0	0	forb	perennial	red-stalked plantain
Poa compressa	Poaceae	POACOM	non-native	0	3	grass	perennial	canada bluegrass
Poa palustris	Poaceae	POAPAS	native	3	-3	grass	perennial	fowl meadow grass
Poa pratensis	Poaceae	POAPRA	non-native	0	3	grass	perennial	kentucky bluegrass
Populus balsamifera	Salicaceae	POPBAL	native	2	-3	tree	perennial	balsam poplar
Populus grandidentata	Salicaceae	POPGRA	native	4	3	tree	perennial	big-tooth aspen
Populus tremuloides	Salicaceae	POPTRE	native	1	0	tree	perennial	quaking aspen
Potamogeton alpinus	Potamogetonaceae	POTALP	native	10	-5	forb	perennial	pondweed
Potamogeton natans	Potamogetonaceae	POTNAT	native	5	-5	forb	perennial	pondweed
Potentilla recta	Rosaceae	POTREC	non-native	0	5	forb	perennial	rough-fruited cinquefoil
Potentilla simplex	Rosaceae	POTSIM	native	2	3	forb	perennial	old-field cinquefoil
Poterium sanguisorba; sanguisorba minor	Rosaceae	POTSAN	non-native	0	0	forb	perennial	garden or salad burnet
Prunella vulgaris	Lamiaceae	PRUVUL	native	0	0	forb	perennial	self-heal
Prunus mahaleb	Rosaceae	PRUMAH	non-native	0	5	tree	perennial	perfumed cherry
Prunus pensylvanica	Rosaceae	PRUPEN	native	3	3	tree	perennial	pin cherry
Prunus serotina	Rosaceae	PRUSER	native	2	3	tree	perennial	wild black cherry
Prunus virginiana	Rosaceae	PRUVIR	native	2	3	shrub	perennial	choke cherry
Pteridium aquilinum	Dennstaedtiaceae	PTEAQU	native	0	3	fern	perennial	bracken fern
Pyrola elliptica	Ericaceae	PYRELL	native	6	3	forb	perennial	large-leaved shinleaf
Pyrus communis	Rosaceae	PYRCOM	non-native	0	5	tree	perennial	common pear
Quercus alba	Fagaceae	QUEALB	native	5	3	tree	perennial	white oak
Quercus rubra	Fagaceae	QUERUB	native	5	3	tree	perennial	red oak
Quercus velutina	Fagaceae	QUEVEL	native	6	5	tree	perennial	black oak
Ranunculus acris	Ranunculaceae	RANACR	non-native	0	0	forb	perennial	tall or common buttercup
Ranunculus bulbosus	Ranunculaceae	RANBUL	non-native	0	-3	forb	perennial	bulbous buttercup
Ranunculus hispidus	Ranunculaceae	RANHIS	native	5	0	forb	perennial	swamp buttercup
Ranunculus recurvatus	Ranunculaceae	RANREC	native	5	-3	forb	perennial	hooked crowfoot

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Rhamnus alnifolia	Rhamnaceae	RHAALN	native	8	-5	shrub	perennial	alder-leaved buckthorn
Rhamnus cathartica	Rhamnaceae	RHACAT	non-native	0	0	tree	perennial	common buckthorn
Rhus typhina	Anacardiaceae	RHUTYP	native	2	3	shrub	perennial	staghorn sumac
Ribes americanum	Grossulariaceae	RIBAME	native	6	-3	shrub	perennial	wild black currant
Ribes cynosbati	Grossulariaceae	RIBCYN	native	4	3	shrub	perennial	prickly or wild gooseberry
Ribes triste	Grossulariaceae	RIBTRI	native	6	-5	shrub	perennial	swamp red currant
Rosa multiflora	Rosaceae	ROSMUL	non-native	0	3	shrub	perennial	multiflora rose
Rosa palustris	Rosaceae	ROSPAL	native	5	-5	shrub	perennial	swamp rose
Rubus allegheniensis	Rosaceae	RUBALL	native	1	3	shrub	perennial	common blackberry
Rubus flagellaris	Rosaceae	RUBFLA	native	1	3	shrub	perennial	northern dewberry
Rubus hispidus	Rosaceae	RUBHIS	native	4	-3	shrub	perennial	swamp dewberry
Rubus occidentalis	Rosaceae	RUBOCC	native	1	5	shrub	perennial	black raspberry
Rubus pubescens	Rosaceae	RUBPUB	native	4	-3	shrub	perennial	dwarf raspberry
Rubus strigosus	Rosaceae	RUBSTR	native	2	0	shrub	perennial	wild red raspberry
Rudbeckia hirta	Asteraceae	RUDHIR	native	1	3	forb	perennial	black-eyed susan
Rumex acetosella	Polygonaceae	RUMACL	non-native	0	3	forb	perennial	sheep sorrel
Rumex crispus	Polygonaceae	RUMCRI	non-native	0	0	forb	perennial	curly dock
Rumex obtusifolius	Polygonaceae	RUMOBT	non-native	0	0	forb	perennial	bitter dock
Rumex orbiculatus	Polygonaceae	RUMORB	native	9	-5	forb	perennial	great water dock
Sagittaria cuneata	Alismataceae	SAGCUN	native	6	-5	forb	perennial	arum-leaved arrowhead
Sagittaria latifolia	Alismataceae	SAGLAT	native	4	-5	forb	perennial	common arrowhead
Salix bebbiana	Salicaceae	SALBEB	native	1	-3	shrub	perennial	bebbs willow
Salix discolor	Salicaceae	SALDIS	native	1	-3	shrub	perennial	pussy willow
Salix eriocephala	Salicaceae	SALERI	native	2	-3	shrub	perennial	willow
Salix exigua	Salicaceae	SALEXI	native	1	-3	shrub	perennial	sandbar willow
Salix nigra	Salicaceae	SALNIG	native	5	-5	tree	perennial	black willow
Salix petiolaris	Salicaceae	SALPET	native	1	-3	shrub	perennial	slender willow
Sambucus canadensis	Adoxaceae	SAMCAN	native	3	-3	shrub	perennial	elderberry
Schedonorus pratensis; festuca p.	Poaceae	SCHPRA	non-native	0	3	grass	perennial	meadow fescue
Schizachyrium scoparium; andropogon s.	Poaceae	SCHSCO	native	5	3	grass	perennial	little bluestem
Schoenoplectus acutus; scirpus a.	Cyperaceae	SCHACU	native	5	-5	sedge	perennial	hardstem bulrush
Schoenoplectus subterminalis; scirpus s.	Cyperaceae	SCHSUB	native	8	-5	sedge	perennial	bulrush
Schoenoplectus tabernaemontani; scirpus validus	Cyperaceae	SCHTAB	native	4	-5	sedge	perennial	softstem bulrush
Scirpus atrovirens	Cyperaceae	SCIATV	native	3	-5	sedge	perennial	bulrush
Scirpus pedicellatus; s. cyperinus	Cyperaceae	SCIPED	native	5	-5	sedge	perennial	wool-grass
Scirpus pendulus	Cyperaceae	SCIPEN	native	3	-5	sedge	perennial	bulrush
Scutellaria galericulata	Lamiaceae	SCUGAL	native	5	-5	forb	perennial	marsh skullcap
Sedum acre	Crassulaceae	SEDACR	non-native	0	5	forb	perennial	mossy stonecrop
Silene vulgaris	Caryophyllaceae	SILVUL	non-native	0	5	forb	perennial	bladder campion
Sinapis arvensis; brassica kaber	Brassicaceae	SINARV	non-native	0	5	forb	annual	wild mustard
Sium suave	Apiaceae	SIUSUA	native	5	-5	forb	perennial	water-parsnip
Solanum dulcamara	Solanaceae	SOLDUL	non-native	0	0	vine	perennial	bittersweet nightshade
Solidago altissima	Asteraceae	SOLALT	native	1	3	forb	perennial	tall goldenrod
Solidago caesia	Asteraceae	SOLCAE	native	6	3	forb	perennial	bluestem goldenrod

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<i>Solidago canadensis</i>	Asteraceae	SOLCAN	native	1	3	forb	perennial	canada goldenrod
<i>Solidago gigantea</i>	Asteraceae	SOLGIG	native	3	-3	forb	perennial	late goldenrod
<i>Solidago juncea</i>	Asteraceae	SOLJUN	native	3	5	forb	perennial	early goldenrod
<i>Solidago nemoralis</i>	Asteraceae	SOLNEM	native	2	5	forb	perennial	old-field goldenrod
<i>Solidago rugosa</i>	Asteraceae	SOLRUG	native	3	0	forb	perennial	rough-leaved goldenrod
<i>Sparganium eurycarpum</i>	Typhaceae	SPAEUR	native	5	-5	forb	perennial	common bur-reed
<i>Sporobolus cryptandrus</i>	Poaceae	SPOCRY	native	3	3	grass	perennial	sand dropseed
<i>Stuckenia filiformis</i> ; <i>potamogeton</i> f.; <i>p. vaginatus</i>	Potamogetonaceae	STUFIL	native	7	-5	forb	perennial	narrow-leaved pondweed
<i>Symphotrichum firmum</i> ; <i>aster puniceus</i>	Asteraceae	SYMFIR	native	4	-3	forb	perennial	smooth swamp aster
<i>Symphotrichum lanceolatum</i> ; <i>aster l.</i>	Asteraceae	SYMLAN	native	2	-3	forb	perennial	panicked aster
<i>Symphotrichum lateriflorum</i> ; <i>aster l.</i>	Asteraceae	SYMLAT	native	2	0	forb	perennial	calico aster
<i>Symphotrichum novae-angliae</i> ; <i>aster n.</i>	Asteraceae	SYMNOV	native	3	-3	forb	perennial	new england aster
<i>Symphotrichum ontarionis</i> ; <i>aster o.</i>	Asteraceae	SYMONT	native	6	0	forb	perennial	lake ontario aster
<i>Symphotrichum puniceum</i> ; <i>aster p.</i>	Asteraceae	SYMPUN	native	5	-5	forb	perennial	swamp aster
<i>Symphotrichum urophyllum</i> ; <i>aster sagittifolius</i>	Asteraceae	SYMURO	native	2	5	forb	perennial	arrow-leaved aster
<i>Taraxacum officinale</i>	Asteraceae	TAROFF	non-native	0	3	forb	perennial	common dandelion
<i>Thalictrum dioicum</i>	Ranunculaceae	THADIO	native	6	3	forb	perennial	early meadow-rue
<i>Thelypteris palustris</i>	Thelypteridaceae	THEPAL	native	2	-3	fern	perennial	marsh fern
<i>Thuja occidentalis</i>	Cupressaceae	THUOCC	native	4	-3	tree	perennial	arbor vitae
<i>Tiarella cordifolia</i>	Saxifragaceae	TIACOR	native	9	3	forb	perennial	foamflower
<i>Tilia americana</i>	Malvaceae	TILAME	native	5	3	tree	perennial	basswood
<i>Toxicodendron radicans</i>	Anacardiaceae	TOXRAD	native	2	0	vine	perennial	poison-ivy
<i>Tragopogon dubius</i>	Asteraceae	TRADUB	non-native	0	5	forb	biennial	goats beard
<i>Tragopogon pratensis</i>	Asteraceae	TRAPRA	non-native	0	5	forb	biennial	common goats beard
<i>Trifolium pratense</i>	Fabaceae	TRIPRA	non-native	0	3	forb	perennial	red clover
<i>Trifolium repens</i>	Fabaceae	TRIREP	non-native	0	3	forb	perennial	white clover
<i>Tsuga canadensis</i>	Pinaceae	TSUCAN	native	5	3	tree	perennial	hemlock
<i>Turritis glabra</i> ; <i>arabis</i> g.	Brassicaceae	TURGLA	native	3	5	forb	biennial	tower mustard
<i>Typha latifolia</i>	Typhaceae	TYPLAT	native	1	-5	forb	perennial	broad-leaved cat-tail
<i>Ulmus americana</i>	Ulmaceae	ULMAME	native	1	-3	tree	perennial	american elm
<i>Ulmus pumila</i>	Ulmaceae	ULMPUM	non-native	0	3	tree	perennial	siberian elm
<i>Utricularia cornuta</i>	Lentibulariaceae	UTRCOR	native	10	-5	forb	perennial	horned bladderwort
<i>Valeriana officinalis</i>	Valerianaceae	VALOFF	non-native	0	3	forb	perennial	garden-heliotrope
<i>Verbascum thapsus</i>	Scrophulariaceae	VERTHA	non-native	0	5	forb	biennial	common mullein
<i>Verbena hastata</i>	Verbenaceae	VERHAS	native	4	-3	forb	perennial	blue vervain
<i>Veronica beccabunga</i> var. <i>americana</i>	Plantaginaceae	VERBEA	native	10	-5	forb	perennial	american brooklime
<i>Veronica officinalis</i>	Plantaginaceae	VEROOF	non-native	0	3	forb	perennial	common speedwell
<i>Veronica serpyllifolia</i>	Plantaginaceae	VERSER	non-native	0	0	forb	perennial	thyme-leaved speedwell
<i>Viburnum lentago</i>	Adoxaceae	VIBLEN	native	4	0	shrub	perennial	nannyberry
<i>Viburnum opulus</i>	Adoxaceae	VIBOPU	non-native	0	-3	shrub	perennial	european highbush-cranberry
<i>Vicia villosa</i>	Fabaceae	VICVIL	non-native	0	5	vine	annual	hairy vetch
<i>Viola cucullata</i>	Violaceae	VIOCUC	native	5	-5	forb	perennial	marsh violet
<i>Viola labradorica</i> ; <i>v. conspersa</i>	Violaceae	VIOLAB	native	3	0	forb	perennial	dog violet
<i>Viola pubescens</i>	Violaceae	VIOPUB	native	4	3	forb	perennial	yellow violet

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Vitis riparia

Vitaceae

VITRIP

native

3 0 vine

perennial river-bank grape