



# Palmer Woods Forest Reserve Floristic Quality Assessment Results

A Floristic Quality Assessment of Swanson Preserve was conducted by Liana May during the summer of 2012.

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 Palmer Woods Forest Reserve the total number of species and native species are:

Native Species	Total Species
203	309

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 0 is assigned to invasive species, also called adventives. At Palmer Woods Forest Reserve the mean C-values are:

Native Mean C	Mean C w/ Adventives
4.1	3.1

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 Palmer Woods Forest Reserve the mean coefficients of wetness are:

Native Mean W	Mean W w/ Adventives
1.3	1.9

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 Palmer Woods Forest Reserve the FQI's are:

Native FQI	FQI w/ Adventives
62.2	54.5

May, L. 2012. Floristic Quality Assessment and Habitat Mapping of Belanger Creek Preserve

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.

Palmer Woods Forest Reserve  
 Glen Arbor  
 Leelanau  
 MI  
 USA

FQA DB Region:  
 FQA DB Publication Year:  
 FQA DB Description:

Michigan  
 2014

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>  
 Ben Connor Barrie, Liana May

Practitioner:  
 Latitude:  
 Longitude:  
 Weather Notes:  
 Duration Notes:  
 Community Type Notes:

Early June, Mid July, Late August-early Sept Surveys, 2015  
 Mesic and Dry-mesic Northern Forest with seeps and permanent streams

Conservatism-Based Metrics:

Total Mean C: 3.1  
 Native Mean C: 4.1  
 Total FQI: 54.5  
 Native FQI: 62.2  
 Adjusted FQI: 35.4  
 % C value 0: 30.4  
 % C value 1-3: 24.3  
 % C value 4-6: 35.9  
 % C value 7-10: 9.4  
 Native Tree Mean C: 4  
 Native Shrub Mean C: 3.5  
 Native Herbaceous Mean C: 4.2

Species Richness:

Total Species: 309  
 Native Species: 230 74.40%  
 Non-native Species: 79 25.60%

Species Wetness:

Mean Wetness: 1.9  
 Native Mean Wetness: 1.3

Physiognomy Metrics:

Tree: 34 11%  
 Shrub: 20 6.50%  
 Vine: 4 1.30%  
 Forb: 159 51.50%  
 Grass: 29 9.40%  
 Sedge: 29 9.40%  
 Rush: 0 0%  
 Fern: 34 11%  
 Bryophyte: 0 0%

Duration Metrics:

Annual: 39 12.60%  
 Perennial: 252 81.60%  
 Biennial: 18 5.80%  
 Native Annual: 17 5.50%  
 Native Perennial: 204 66%  
 Native Biennial: 9 2.90%

Species:

Scientific Name	Family	Acronym	Native?	C	W	Physiognomy	Duration	Common Name
<i>Abies balsamea</i>	Pinaceae	ABIBAL	native	3	0	tree	perennial	balsam fir
<i>Acer pensylvanicum</i>	Sapindaceae	ACEPEN	native	5	3	tree	perennial	striped maple
<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	AGRIGI	non-native	0	-3	grass	perennial	redtop
<i>Ailanthus altissima</i>	Simaroubaceae	AILALT	non-native	0	5	tree	perennial	tree-of-heaven
<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>Ambrosia artemisiifolia</i>	Asteraceae	AMBART	native	0	3	forb	annual	common ragweed
<i>Amelanchier arborea</i>	Rosaceae	AMEARB	native	4	3	tree	perennial	juneberry
<i>Anaphalis margaritacea</i>	Asteraceae	ANAMAR	native	3	5	forb	perennial	pearly everlasting
<i>Apocynum androsaemifolium</i>	Apocynaceae	APOAND	native	3	5	forb	perennial	spreading dogbane
<i>Aquilegia canadensis</i>	Ranunculaceae	AQUCAN	native	5	3	forb	perennial	wild columbine
<i>Arabidopsis thaliana</i>	Brassicaceae	ARATHA	non-native	0	5	forb	annual	mouse-ear cress
<i>Aralia hispida</i>	Araliaceae	ARAHIS	native	3	5	shrub	perennial	bristly sarsaparilla
<i>Aralia nudicaulis</i>	Araliaceae	ARANUD	native	5	3	forb	perennial	wild sarsaparilla
<i>Aralia racemosa</i>	Araliaceae	ARARAC	native	8	3	forb	perennial	spikenard

Scientific Name	Family	Acronym	Native?	C	W	Physiognomy	Duration	Common Name
Arctium minus	Asteraceae	ARCMIN	non-native	0	3	forb	biennial	common burdock
Arenaria serpyllifolia	Caryophyllaceae	ARESER	non-native	0	0	forb	annual	thyme-leaved sandwort
Arisaema triphyllum	Araceae	ARITRI	native	5	0	forb	perennial	jack-in-the-pulpit
Asclepias syriaca	Apocynaceae	ASCSYR	native	1	5	forb	perennial	common milkweed
Asparagus officinalis	Asparagaceae	ASPOFF	non-native	0	3	forb	perennial	garden asparagus
Athyrium filix-femina	Athyriaceae	ATHFIL	native	4	0	fern	perennial	lady fern
Barbarea vulgaris	Brassicaceae	BARVUL	non-native	0	0	forb	biennial	yellow rocket
Berteroa incana	Brassicaceae	BERINC	non-native	0	5	forb	annual	hoary alyssum
Betula alleghaniensis	Betulaceae	BETALL	native	7	0	tree	perennial	yellow birch
Betula papyrifera	Betulaceae	BETPAP	native	2	3	tree	perennial	paper birch
Bidens frondosa	Asteraceae	BIDFRO	native	1	-3	forb	annual	common beggar-ticks
Boechera stricta; arabis drummondii	Brassicaceae	BOESTR	native	6	3	forb	biennial	drummond rock cress
Botrychium matricariifolium	Ophioglossaceae	BOTMAT	native	5	3	fern	perennial	daisy-leaved moonwort
Botrypus virginianus	Ophioglossaceae	BOTVIR	native	5	3	fern	perennial	rattlesnake fern
Capsella bursa-pastoris	Brassicaceae	CAPBUR	non-native	0	3	forb	annual	shepherds-purse
Cardamine diphylla; dentaria d.	Brassicaceae	CARDIP	native	5	3	forb	perennial	two-leaved toothwort
Cardamine pensylvanica	Brassicaceae	CARPEN	native	1	-3	forb	biennial	pennsylvania bitter cress
Carex adusta	Cyperaceae	CXADUS	native	4	5	sedge	perennial	sedge
Carex albursina	Cyperaceae	CXALBU	native	5	5	sedge	perennial	sedge
Carex arctata	Cyperaceae	CXARTT	native	3	5	sedge	perennial	sedge
Carex brunnescens	Cyperaceae	CXBRUN	native	5	-3	sedge	perennial	sedge
Carex communis	Cyperaceae	CXCOMM	native	2	5	sedge	perennial	sedge
Carex crinita	Cyperaceae	CXCRIN	native	4	-5	sedge	perennial	sedge
Carex cristatella	Cyperaceae	CXCRI	native	3	-3	sedge	perennial	sedge
Carex deweyana	Cyperaceae	CXDWE	native	3	3	sedge	perennial	sedge
Carex festucacea	Cyperaceae	CXFEST	native	8	0	sedge	perennial	fescue sedge
Carex foenea; c. aenea	Cyperaceae	CXFOEN	native	3	5	sedge	perennial	sedge
Carex gracillima	Cyperaceae	CXGRAA	native	4	3	sedge	perennial	sedge
Carex hitchcockiana	Cyperaceae	CXHITC	native	5	5	sedge	perennial	sedge
Carex interior	Cyperaceae	CXINTE	native	3	-5	sedge	perennial	sedge
Carex intumescens	Cyperaceae	CXINTU	native	3	-3	sedge	perennial	sedge
Carex laxiflora	Cyperaceae	CXLAXF	native	8	0	sedge	perennial	sedge
Carex leptoneura	Cyperaceae	CXLEPO	native	3	0	sedge	perennial	sedge
Carex normalis	Cyperaceae	CXNORM	native	5	-3	sedge	perennial	sedge
Carex ormostachya	Cyperaceae	CXORMO	native	5	5	sedge	perennial	sedge
Carex pedunculata	Cyperaceae	CXPEDU	native	5	3	sedge	perennial	sedge
Carex pensylvanica	Cyperaceae	CXPENS	native	4	5	sedge	perennial	sedge
Carex plantaginea	Cyperaceae	CXPLAN	native	8	5	sedge	perennial	sedge
Carex prasina	Cyperaceae	CXPRAS	native	10	-5	sedge	perennial	sedge
Carex projecta	Cyperaceae	CXPROJ	native	3	-3	sedge	perennial	sedge
Carex rosea; c. convoluta	Cyperaceae	CXROSE	native	2	5	sedge	perennial	curly-styled wood sedge
Carex scabrata	Cyperaceae	CXSCAB	native	4	-5	sedge	perennial	sedge
Carex sparganioides	Cyperaceae	CXSPAR	native	5	3	sedge	perennial	sedge
Carex stipata	Cyperaceae	CXSTIP	native	1	-5	sedge	perennial	sedge
Carex vulpinoidea	Cyperaceae	CXVULP	native	1	-5	sedge	perennial	sedge
Caulophyllum thalictroides	Berberidaceae	CAUTHA	native	5	5	forb	perennial	blue cohosh
Centauria stoebe; c. maculosa	Asteraceae	CENSTO	non-native	0	5	forb	biennial	spotted knapweed
Cerastium arvense	Caryophyllaceae	CERARV	native	6	3	forb	perennial	field chickweed
Cerastium fontanum	Caryophyllaceae	CERFON	non-native	0	3	forb	perennial	mouse-ear chickweed
Chenopodium album	Amaranthaceae	CHEALB	non-native	0	3	forb	annual	lamb's-quarters
Chenopodium capitatum	Amaranthaceae	CHECAP	native	5	5	forb	annual	strawberry blite
Chrysosplenium americanum	Saxifragaceae	CHRAME	native	6	-5	forb	perennial	golden saxifrage
Circaea alpina	Onagraceae	CIRALP	native	4	-3	forb	perennial	small enchanters-nightshade
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
Claytonia caroliniana	Montiaceae	CLACAR	native	6	3	forb	perennial	carolina spring-beauty
Clinopodium vulgare	Lamiaceae	CLIVUL	native	3	5	forb	perennial	wild-basil
Comarum palustre; potentilla p.	Rosaceae	COMPAL	native	7	-5	forb	perennial	marsh cinquefoil
Conopholis americana	Orobanchaceae	CONAME	native	10	5	forb	perennial	squaw-root
Conyza canadensis	Asteraceae	CONCAN	native	0	3	forb	annual	horseweed
Coptis trifolia	Ranunculaceae	COPTRI	native	5	-3	forb	perennial	goldthread
Corallorhiza maculata	Orchidaceae	CORMAC	native	5	3	forb	perennial	spotted coral-root
Corallorhiza odontorhiza	Orchidaceae	CORODO	native	8	5	forb	perennial	fall coral-root
Cornus alternifolia	Cornaceae	CORALT	native	5	3	tree	perennial	alternate-leaved dogwood
Cryptotaenia canadensis	Apiaceae	CRYCAN	native	2	0	forb	perennial	honestwort
Cynoglossum officinale	Boraginaceae	CYNOFF	non-native	0	5	forb	biennial	hounds-tongue
Cypripedium acaule	Orchidaceae	CYPACA	native	5	-3	forb	perennial	pink lady-slipper; moccasin flower
Cystopteris bulbifera	Cystopteridaceae	CYSBUL	native	5	-3	fern	perennial	bulblet fern
Cystopteris fragilis	Cystopteridaceae	CYSFRA	native	4	3	fern	perennial	fragile fern
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
Dendrolycopodium dendroideum; lycopodium d.	Lycopodiaceae	DENDEN	native	5	3	fern	perennial	tree clubmoss
Dendrolycopodium obscurum; lycopodium o.	Lycopodiaceae	DENOBS	native	5	3	fern	perennial	ground-pine
Deparia acrostichoides	Athyriaceae	DEPACR	native	6	0	fern	perennial	silvery spleenwort
Dianthus armeria	Caryophyllaceae	DIAARM	non-native	0	5	forb	annual	deptford pink
Dicentra canadensis	Papaveraceae	DICCAN	native	7	5	forb	perennial	squirrel-corn
Dicentra cucullaria	Papaveraceae	DICCUC	native	7	5	forb	perennial	dutchmans-breeches
Dichanthelium columbianum; panicum c.	Poaceae	DICCOL	native	5	3	grass	perennial	panic grass
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
Diphysastrum digitatum; lycopodium d.	Lycopodiaceae	DIPDIG	native	3	5	fern	perennial	ground-cedar

Scientific Name	Family	Acronym	Native?	C	W	Physiognomy	Duration	Common Name
Dryopteris carthusiana	Dryopteridaceae	DRYCAR	native	5	-3	fern	perennial	spinulose woodfern
Dryopteris celsa	Dryopteridaceae	DRYCEL	native	10	-5	fern	perennial	log fern
Dryopteris cristata	Dryopteridaceae	DRYCRI	native	6	-5	fern	perennial	crested shield fern
Dryopteris goldiana	Dryopteridaceae	DRYGOL	native	10	0	fern	perennial	goldies woodfern
Dryopteris intermedia	Dryopteridaceae	DRYINT	native	5	0	fern	perennial	evergreen woodfern
Dryopteris marginalis	Dryopteridaceae	DRYMAR	native	5	3	fern	perennial	marginal woodfern
Echinochloa muricata	Poaceae	ECHMUR	native	1	-5	grass	annual	barnyard grass
Elaeagnus umbellata	Elaeagnaceae	ELAUMB	non-native	0	3	shrub	perennial	autumn-olive
Elymus canadensis	Poaceae	ELYCAN	native	5	3	grass	perennial	canada wild rye
Elymus repens; agropyron r.	Poaceae	ELYREP	non-native	0	3	grass	perennial	quack grass
Elymus trachycaulus; agropyron t.	Poaceae	ELYTRA	native	8	3	grass	perennial	slender wheatgrass
Epifagus virginiana	Orobanchaceae	EPIVIR	native	10	5	forb	annual	beech-drops
Epilobium coloratum	Onagraceae	EPICOL	native	3	-5	forb	perennial	cinnamon 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 scirpoides	Equisetaceae	EQUSCI	native	7	0	fern	perennial	dwarf scouring rush
Equisetum sylvaticum	Equisetaceae	EQUSYL	native	5	-3	fern	perennial	woodland horsetail
Erechtites hieraciifolius	Asteraceae	EREHIE	native	2	3	forb	annual	fireweed
Erigeron annuus	Asteraceae	ERIANN	native	0	3	forb	biennial	daisy fleabane
Erigeron strigosus	Asteraceae	ERISTR	native	4	3	forb	perennial	daisy fleabane
Erucastrum gallicum	Brassicaceae	ERUGAL	non-native	0	3	forb	annual	dog mustard
Erythronium americanum	Liliaceae	ERYAME	native	5	5	flower	perennial	yellow trout lily
Eupatorium perfoliatum	Asteraceae	EUPPER	native	4	-3	forb	perennial	boneset
Euphorbia virgata; e. esula	Euphorbiaceae	EUPVIR	non-native	0	5	forb	perennial	leafy spurge
Fagus grandifolia	Fagaceae	FAGGRA	native	6	3	tree	perennial	american beech
Fallopia convolvulus; polygonum c.	Polygonaceae	FALCON	non-native	0	3	vine	annual	false buckwheat
Festuca subverticillata; f. obtusa	Poaceae	FESSUB	native	5	3	grass	perennial	nodding fescue
Festuca trachyphylla; f. ovina	Poaceae	FESTRA	non-native	0	5	grass	perennial	sheep fescue
Fragaria virginiana	Rosaceae	FRAVIR	native	2	3	forb	perennial	wild strawberry
Fraxinus americana	Oleaceae	FRAAME	native	5	3	tree	perennial	white ash
Galeopsis tetrahit	Lamiaceae	GALTET	non-native	0	3	forb	annual	hemp-nettle
Galium aparine	Rubiaceae	GALAPA	native	0	3	forb	annual	annual bedstraw
Galium circaezans	Rubiaceae	GALCIR	native	4	3	forb	perennial	white wild licorice
Galium lanceolatum	Rubiaceae	GALLAN	native	4	5	forb	perennial	yellow wild licorice
Galium triflorum	Rubiaceae	GALTRR	native	4	3	forb	perennial	fragrant bedstraw
Geranium pusillum	Geraniaceae	GERPUS	non-native	0	5	forb	annual	small geranium
Geranium robertianum	Geraniaceae	GERROB	native	3	3	forb	annual	herb robert
Geum aleppicum	Rosaceae	GEUALE	native	3	0	forb	perennial	yellow avens
Geum macrophyllum	Rosaceae	GEUMAC	native	5	-3	forb	perennial	large-leaved avens
Glechoma hederacea	Lamiaceae	GLEHED	non-native	0	3	forb	perennial	ground-ivy
Glyceria striata	Poaceae	GLYSTR	native	4	-5	grass	perennial	fowl manna grass
Gymnocarpium dryopteris	Cystopteridaceae	GYMDRY	native	5	3	fern	perennial	oak fern
Hackelia deflexa	Boraginaceae	HACDEF	native	2	5	forb	biennial	stickseed
Hackelia virginiana	Boraginaceae	HACVIR	native	1	3	forb	biennial	beggars lice
Hamamelis virginiana	Hamamelidaceae	HAMVIR	native	5	3	shrub	perennial	witch-hazel
Hieracium aurantiacum	Asteraceae	HIEAUR	non-native	0	5	forb	perennial	orange hawkweed
Hieracium caespitosum	Asteraceae	HIECAE	non-native	0	5	forb	perennial	king devil
Hieracium piloselloides	Asteraceae	HIEPIS	non-native	0	5	forb	perennial	king devil
Homalosorus pycnocarpus	Diplaziopsidaceae	HOMPYC	native	10	0	fern	perennial	narrow-leaved spleenwort
Humulus lupulus	Cannabaceae	HUMLUP	native	3	3	vine	perennial	common hops
Huperzia lucidula	Lycopodiaceae	HUPLUC	native	5	0	fern	perennial	shining clubmoss
Hypericum perforatum	Hypericaceae	HYPPER	non-native	0	5	forb	perennial	common st. johns-wort
Hypochaeris radicata	Asteraceae	HYPRAD	non-native	0	3	forb	perennial	cats-ear
Impatiens capensis	Balsaminaceae	IMPCAP	native	2	-3	forb	annual	spotted touch-me-not
Juglans nigra	Juglandaceae	JUGNIG	native	5	3	tree	perennial	black walnut
Juncus acuminatus	Juncaceae	JUNACU	native	8	-5	forb	perennial	sharp-fruited rush
Juncus pylaei; j. effusus	Juncaceae	JUNPLA	native	3	-5	forb	perennial	pylaes soft rush
Juncus tenuis	Juncaceae	JUNTEN	native	1	0	forb	perennial	path rush
Juniperus communis	Cupressaceae	JUNCOI	native	4	3	shrub	perennial	common or ground juniper
Lactuca canadensis	Asteraceae	LACCAN	native	2	3	forb	biennial	tall lettuce
Lapsana communis	Asteraceae	LAPCOM	non-native	0	3	forb	annual	nipplewort
Larix decidua	Pinaceae	LARDEC	non-native	0	5	tree	perennial	european larch
Leonurus cardiaca	Lamiaceae	LEOCAR	non-native	0	5	forb	perennial	motherwort
Lepidium campestre	Brassicaceae	LEPCAM	non-native	0	5	forb	biennial	field cress
Lepidium virginicum	Brassicaceae	LEPVIR	native	0	3	forb	annual	common peppergrass
Leucanthemum vulgare; chrysanthemum leucanthemum	Asteraceae	LEUVUL	non-native	0	5	forb	perennial	ox-eye daisy
Lobelia inflata	Campanulaceae	LOBINF	native	0	3	forb	annual	indian-tobacco
Lonicera canadensis	Caprifoliaceae	LONCAN	native	5	3	shrub	perennial	canadian fly honeysuckle
Lonicera tatarica	Caprifoliaceae	LONTAT	non-native	0	3	shrub	perennial	tartarian honeysuckle
Lycopus uniflorus	Lamiaceae	LYCUNI	native	2	-5	forb	perennial	northern bugle weed
Maianthemum canadense	Convallariaceae	MAICAN	native	4	3	forb	perennial	canada mayflower
Maianthemum racemosum; smilacina r.	Convallariaceae	MAIRAC	native	5	3	forb	perennial	false spikenard
Malus baccata	Rosaceae	MALBAC	non-native	0	5	tree	perennial	siberian crab
Malus pumila	Rosaceae	MALPUM	non-native	0	5	tree	perennial	apple
Matteuccia struthiopteris	Onocleaceae	MATSTR	native	3	0	fern	perennial	ostrich fern
Medeola virginiana	Convallariaceae	MEDVIR	native	10	3	forb	perennial	indian cucumber-root
Medicago lupulina	Fabaceae	MEDLUP	non-native	0	3	forb	annual	black medick
Melica smithii	Poaceae	MELSMI	native	7	5	grass	perennial	melic grass
Mentha canadensis; m. arvensis	Lamiaceae	MENCAS	native	3	-3	forb	perennial	wild mint
Milium effusum	Poaceae	MILEFF	native	8	3	grass	perennial	wood millet
Mitchella repens	Rubiaceae	MITREP	native	5	3	forb	perennial	partridge-berry
Monarda punctata	Lamiaceae	MONPUN	native	4	5	forb	perennial	horse mint
Monotropa uniflora	Ericaceae	MONOUN	native	5	3	forb	perennial	indian-pipe
Muhlenbergia mexicana	Poaceae	MUHMEX	native	3	-3	grass	perennial	leafy satin grass

Scientific Name	Family	Acronym	Native?	C	W	Physiognomy	Duration	Common Name
Nepeta cataria	Lamiaceae	NEPCAT	non-native	0	3	forb	perennial	catnip
Oenothera biennis	Onagraceae	OENBIE	native	2	3	forb	biennial	common evening-primrose
Onoclea sensibilis	Onocleaceae	ONOSEP	native	2	-3	fern	perennial	sensitive fern
Oryzopsis asperifolia	Poaceae	ORYASP	native	6	5	grass	perennial	rough-leaved rice-grass
Osmorhiza claytonii	Apiaceae	OSMCLI	native	4	3	forb	perennial	hairy sweet-cicely
Osmunda cinnamomea	Osmundaceae	OSMCLN	native	5	-3	fern	perennial	cinnamon fern
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
Oxalis acetosella	Oxalidaceae	OXAACE	native	7	3	forb	perennial	northern wood-sorrel
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
Persicaria amphibia; polygonum a.	Polygonaceae	PERAMP	native	6	-5	forb	perennial	water smartweed
Persicaria hydropiper; polygonum h.	Polygonaceae	PERHYR	native	1	-5	forb	annual	water-pepper
Persicaria maculosa; polygonum persicaria	Polygonaceae	PERMAC	non-native	0	0	forb	annual	lady's-thumb
Phalaris arundinacea	Poaceae	PHAARU	native	0	-3	grass	perennial	reed canary grass
Phegopteris connectilis; thelypteris phegopteris	Thelypteridaceae	PHECON	native	5	3	fern	perennial	northern beech-fern
Phleum pratense	Poaceae	PHLPRA	non-native	0	3	grass	perennial	timothy
Phragmites australis var. americanus	Poaceae	PHRAUM	native	5	-3	grass	perennial	reed
Picea abies	Pinaceae	PICABI	non-native	0	5	tree	perennial	norway spruce
Picea glauca	Pinaceae	PICGLA	native	3	3	tree	perennial	white spruce
Picea pungens	Pinaceae	PICPUN	non-native	0	3	tree	perennial	blue spruce
Pilea fontana	Urticaceae	PILFON	native	5	-3	forb	annual	bog clearweed
Pinus nigra	Pinaceae	PINNIG	non-native	0	5	tree	perennial	austrian pine
Pinus resinosa	Pinaceae	PINRES	native	6	3	tree	perennial	red pine
Pinus strobus	Pinaceae	PINSTR	native	3	3	tree	perennial	white pine
Piptatherum racemosum; oryzopsis r.	Poaceae	PIPRAC	native	8	5	grass	perennial	rice-grass
Plantago lanceolata	Plantaginaceae	PLALAN	non-native	0	3	forb	perennial	english plantain
Plantago major	Plantaginaceae	PLAMAJ	non-native	0	3	forb	perennial	common plantain
Plantago rugelii	Plantaginaceae	PLARUG	native	0	0	forb	perennial	red-stalked plantain
Platanthera orbiculata; habenaria o.	Orchidaceae	PLAORB	native	10	0	forb	perennial	round-leaved orchid
Poa annua	Poaceae	POAANN	non-native	0	3	grass	annual	annual bluegrass
Poa compressa	Poaceae	POACOM	non-native	0	3	grass	perennial	canada bluegrass
Poa pratensis	Poaceae	POAPRA	non-native	0	3	grass	perennial	kentucky bluegrass
Polygala paucifolia	Polygalaceae	POLPAU	native	7	3	forb	perennial	gay-wings
Polygonatum pubescens	Convallariaceae	POLPUB	native	5	5	forb	perennial	downy solomon seal
Polypodium virginianum	Polypodiaceae	POLVIR	native	8	5	fern	perennial	common polypody
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
Potentilla norvegica	Rosaceae	POTNOR	native	0	0	forb	annual	rough cinquefoil
Potentilla recta	Rosaceae	POTREC	non-native	0	5	forb	perennial	rough-fruited cinquefoil
Prunella vulgaris	Lamiaceae	PRUVUL	native	0	0	forb	perennial	self-heal
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
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 abortivus	Ranunculaceae	RANABO	native	0	0	forb	perennial	small-flowered buttercup
Ranunculus recurvatus	Ranunculaceae	RANREC	native	5	-3	forb	perennial	hooked crowfoot
Rhus typhina	Anacardiaceae	RHUTYP	native	2	3	shrub	perennial	staghorn sumac
Ribes cynosbati	Grossulariaceae	RIBCYN	native	4	3	shrub	perennial	prickly or wild gooseberry
Robinia pseudoacacia	Fabaceae	ROBPSE	non-native	0	3	tree	perennial	black locust
Rosa multiflora	Rosaceae	ROSMUL	non-native	0	3	shrub	perennial	multiflora rose
Rubus allegheniensis	Rosaceae	RUBALL	native	1	3	shrub	perennial	common blackberry
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
Sambucus canadensis	Adoxaceae	SAMCAN	native	3	-3	shrub	perennial	elderberry
Sambucus racemosa	Adoxaceae	SAMRAC	native	3	3	shrub	perennial	red-berried elder
Sanicula trifoliata	Apiaceae	SANTRI	native	6	5	forb	biennial	black snakeroot
Schedonorus arundinaceus; festuca a.	Poaceae	SCHARU	non-native	0	3	grass	perennial	tall fescue
Scirpus cyperinus	Cyperaceae	SCICYP	native	5	-5	sedge	perennial	wool-grass
Scrophularia lanceolata	Scrophulariaceae	SCRLAN	native	5	3	forb	perennial	early figwort
Setaria viridis	Poaceae	SETVIR	non-native	0	5	grass	annual	green foxtail
Silene coronaria; lychnis c.	Caryophyllaceae	SILCOR	non-native	0	5	forb	perennial	mullein pink
Silene vulgaris	Caryophyllaceae	SILVUL	non-native	0	5	forb	perennial	bladder campion
Solanum ptychanthum	Solanaceae	SOLPTY	native	1	3	forb	annual	black nightshade
Solidago altissima	Asteraceae	SOLALT	native	1	3	forb	perennial	tall goldenrod
Solidago caesia	Asteraceae	SOLCAE	native	6	3	forb	perennial	bluestem goldenrod
Solidago canadensis	Asteraceae	SOLCAN	native	1	3	forb	perennial	canada goldenrod
Solidago flexicaulis	Asteraceae	SOLFLC	native	6	3	forb	perennial	zigzag goldenrod
Solidago rugosa	Asteraceae	SOLRUG	native	3	0	forb	perennial	rough-leaved goldenrod
Spinulum annotinum; lycopodium a.	Lycopodiaceae	SPIANN	native	5	0	fern	perennial	stiff clubmoss
Stellaria media	Caryophyllaceae	STEMED	non-native	0	3	forb	annual	common chickweed
Stellaria pallida	Caryophyllaceae	STEPAL	non-native	0	5	forb	annual	least chickweed
Symphoricarpos albus var. laevigatus	Caprifoliaceae	SYMALL	non-native	0	3	shrub	perennial	snowberry
Symphotrichum ciliolatum; aster c.	Asteraceae	SYMCIO	native	4	5	forb	perennial	northern heart-leaved aster
Symphotrichum lateriflorum; aster l.	Asteraceae	SYMLAT	native	2	0	forb	perennial	calico aster

Scientific Name	Family	Acronym	Native?	C	W	Physiognomy	Duration	Common Name
<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>Taxus canadensis</i>	Taxaceae	TAXCAN	native	5	3	shrub	perennial	yew
<i>Thelypteris noveboracensis</i>	Thelypteridaceae	THENOV	native	5	0	fern	perennial	new york fern
<i>Thelypteris palustris</i>	Thelypteridaceae	THEPAL	native	2	-3	fern	perennial	marsh fern
<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>Trientalis borealis</i>	Myrsinaceae	TRIBOR	native	5	0	forb	perennial	star-flower
<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>Trillium grandiflorum</i>	Trilliaceae	TRIGRA	native	5	3	forb	perennial	common trillium
<i>Tsuga canadensis</i>	Pinaceae	TSUCAN	native	5	3	tree	perennial	hemlock
<i>Turritis glabra</i> ; <i>arabis g.</i>	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>Urtica dioica</i>	Urticaceae	URTDIO	native	1	0	forb	perennial	stinging nettle
<i>Uvularia grandiflora</i>	Convallariaceae	UVUGRA	native	5	5	forb	perennial	bellwort
<i>Vaccinium angustifolium</i>	Ericaceae	VACANG	native	4	3	shrub	perennial	low sweet blueberry
<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 arvensis</i>	Plantaginaceae	VERARV	non-native	0	3	forb	annual	corn speedwell
<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 polita</i>	Plantaginaceae	VERPOL	non-native	0	5	forb	annual	speedwell
<i>Veronica serpyllifolia</i>	Plantaginaceae	VERSER	non-native	0	0	forb	perennial	thyme-leaved speedwell
<i>Viburnum acerifolium</i>	Adoxaceae	VIBACE	native	6	5	shrub	perennial	maple-leaved viburnum
<i>Vicia villosa</i>	Fabaceae	VICVIL	non-native	0	5	vine	annual	hairy vetch
<i>Vinca minor</i>	Apocynaceae	VINMIN	non-native	0	5	shrub	perennial	periwinkle
<i>Viola arvensis</i>	Violaceae	VIOARV	non-native	0	5	forb	annual	field pansy
<i>Viola canadensis</i>	Violaceae	VIOCAN	native	5	3	forb	perennial	canada violet
<i>Viola cucullata</i>	Violaceae	VIOCUC	native	5	-5	forb	perennial	marsh violet
<i>Viola pubescens</i>	Violaceae	VIOPUB	native	4	3	forb	perennial	yellow violet
<i>Vitis riparia</i>	Vitaceae	VITRIP	native	3	0	vine	perennial	river-bank grape

## Floristic Quality Inventory Definitions

### FLORISTIC QUALITY INVENTORY KEY

**ACRONYM** Six digit reference code for each taxa

**C** Coefficient of conservatism  
\* Adventive taxa [defaults to 0 (zero) in the 2000 FQA Computer Program]

**ST** Status as recognized by the State of MI

**X** Extirpated  
**E** Endangered  
**T** Threatened  
**SC** Special concern

**PHYS** Physiognomy

**AD** Adventive taxa  
**NT** Native taxa  
**A** Annual  
**B** Biennial  
**P** Perennial

**W** Wetness coefficient

**WET** Michigan wetland categories  
[ ] Assigned for Michigan

### COEFFICIENT OF CONSERVATION RANKING CRITERIA

**C** Criteria

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- 0** obligate to ruderal areas
- 1** occurs more frequently in ruderal areas than natural areas
- 2** facultative to ruderal and natural areas
- 3** occurs less frequent in ruderal areas than natural areas
- 4** occurs much more frequently in natural areas than ruderal areas
- 5** obligate to natural areas (quality of area is low)
- 6** weak affinity to high quality natural areas
- 7** moderate affinity a high quality natural areas
- 8** high affinity to high quality natural areas
- 9** very high affinity to high quality natural areas
- 10** obligate to high quality natural areas