# Aman Park, City of Grand Rapids, Ottawa County
# Natural Features Inventory

Compiled by William Martinus for Wild Ones River City Chapter

*Flora and Fauna observed on 4/24/20 along Sand Creek and the forested upland*

**FLORA**

**Pteridophytes**
**Fern Allies**
**Equisetaceae, Horsetail Family**
*Equisetum hyemale*, Common Scouring Rush 2; occasional in upland
**Ferns**
**Cystopteridaceae, Fragile Fern Family**
*Cystopteris protrusa*, Southern Fragile Fern 5; uncommon and local in floodplain forest
**Dryopteridaceae, Wood Fern Family**
*Dryopteris marginalis*, Marginal Woodfern 5; uncommon in upland
*Polystichum acrostichoides*, Christmas Fern 6; uncommon in upland
**Onocleaceae, Sensitive Fern Family**
*Matteuccia struthiopteris*, Ostrich Fern 3; common in wetlands

**Gymnosperms**
**Cupressaceae, Cypress Family**
*Juniperus virginiana*, Red-cedar 3; uncommon tree in upland
**Pinaceae, Pine Family**
*Picea abies*, Norway Spruce* 0; uncommon tree in upland
*Pinus strobus*, White Pine 3; common canopy tree in forests
*Tsuga canadensis*, Hemlock 5; common canopy tree in forests

**Angiosperms**
**Monocots**
**Alliaceae, Onion Family**
*Allium tricoccum*, Wild Leek 5; common in forests
**Amaryllidaceae, Amaryllis Family**
*Galanthus elwesii*, Giant Snowdrop* 0; uncommon in floodplain forest
*Galanthus nivalis*, Common Snowdrop* 0; uncommon in floodplain forest
**Araceae, Arum Family**
*Symplocarpus foetidus*, Skunk Cabbage 6; common in wetlands
**Convallariaceae, Lily-of-the-valley Family**
*Maianthemum canadense* var. *canadense*, Canada Mayflower 4; common in forests
**Juncaceae, Rush Family**
*Luzula acuminata*, Hairy Wood Rush 5; local in upland forest
**Liliaceae, Lily Family**
*Erythronium americanum*, Yellow Trout-lily 5; common in forests
**Smilacaceae, Carrion-flower Family**
*Smilax hispida*, Bristly Greenbrier 5; uncommon vine in forests
**Trilliaceae, Trillium Family**
*Trillium grandiflorum*, Common Trillium 5; common to abundant in forests

**Dicots**
**Adoxaceae, Moschatel Family**
*Sambucus canadensis*, Common Elder 3; uncommon shrub in forests
*Viburnum plicatum*, Japanese Snowball* 0; rare shrub in floodplain forest
**Anacardiaceae, Cashew Family**
*Toxicodendron radicans,* Poison Ivy 2; uncommon vine in floodplain forest
**Annonaceae, Custard-apple Family**
*Asimina triloba*, Pawpaw 9; locally abundant understory tree in floodplain forest
**Apiaceae, Carrot Family**
*Heracleum maximum*, Cow-parsnip 3; occasional in floodplain forest
*Osmorhiza claytonii*, Hairy Sweet-cicely 4;
**Apocynaceae, Dogbane Family**
*Vinca minor*, Periwinkle* 0; common in disturbed upland
**Aristolochiaceae, Birthwort Family**
*Asarum canadense*, Wild-ginger 5; common in forests
**Asteraceae, Aster Family**
*Erigeron pulchellus*, Robin's-plantain 5; uncommon in upland
**Balsaminaceae, Touch-me-not Family**
*Impatiens capensis*, Spotted Touch-me-not 2; common in wetlands
**Berberidaceae, Barberry Family**
*Berberis thunbergii*, Japanese Barberry* 0; uncommon shrub in forests
*Caulophyllum thalictroides*, Blue Cohosh 5; uncommon in forests
*Podophyllum peltatum*, May-apple 3; common in forests
**Betulaceae, Birch Family**
*Carpinus caroliniana*, Blue Beech 6; common understory tree in floodplain forest
*Ostrya virginiana*, Hop-hornbeam 5; occasional understory tree in upland forest
**Boraginaceae, Borage Family**
*Hydrophyllum virginianum*, Virginia Waterleaf 4; occasional in floodplain forest
*Mertensia virginica*, Virginia Bluebells 10; locally common in floodplain forest
**Brassicaceae, Mustard Family**
*Alliaria petiolata*, Garlic Mustard* 0; abundant in upland forest
*Cardamine concatenata*, Cut-leaved Toothwort 5; common in forests
*Cardamine diphylla*, Two-leaved Toothwort 5; uncommon in forests
*Cardamine douglassii*, Pink Spring Cress 6; common in floodplain forest
**Cannabaceae, Hemp Family**
*Celtis occidentalis*, Hackberry 5; common canopy tree in floodplain forest
**Caprifoliaceae, Honeysuckle Family**
*Lonicera canadensis*, Canadian Fly Honeysuckle 5; uncommon shrub in upland forest
*Lonicera maackii*, Amur Honeysuckle* 0; uncommon shrub in disturbed upland
**Celastraceae, Bittersweet Family**
*Euonymus alatus*, Winged Euonymus* 0; uncommon shrub in forests
*Euonymus obovata*, Running Strawberry-bush 5; common in forests
**Cornaceae, Dogwood Family**
*Cornus florida*, Flowering Dogwood 8; uncommon understory tree in upland forest
**Elaeagnaceae, Oleaster Family**
*Elaeagnus umbellata*, Autumn Olive* 0; locally common shrub throughout
**Ericaceae, Heath Family**
*Gaultheria procumbens*, Wintergreen 5; common in forests
*Pyrola elliptica*, Large-leaved Shinleaf 6; uncommon in floodplain forest
**Fabaceae, Pea Family**
*Cercis canadensis*, Redbud 8; common understory tree in floodplain forest
**Fagaceae, Beech Family**
*Fagus grandifolia*, American Beech 6; common canopy tree in forests
*Quercus alba*, White Oak 5; common canopy tree in forests
*Quercus macrocarpa*, Bur Oak 5; uncommon canopy tree in floodplain forest
*Quercus muehlenbergii*, Chinquapin Oak 5; uncommon canopy tree in floodplain forest
*Quercus rubra*, Red Oak 5; common canopy tree in forests
*Quercus velutina*, Black Oak 6; common canopy tree in upland forest
**Geraniaceae, Geranium Family**

*Geranium maculatum*, Wild Geranium 4; common in forests
*Geranium robertianum*, Herb Robert 3; occasional in upland forest

**Grossulaceae, Gooseberry Family**
*Ribes cynosbati*, Prickly Gooseberry 4; occasional shrub in forests
**Hamamelidaceae, Witch-hazel Family**
*Hamamelis virginiana*, American Witch-hazel 5; uncommon understory tree in forests
**Juglandiceae, Walnut Family**
*Carya cordiformis*, Bitternut Hickory 5; uncommon tree in upland forest
*Carya ovata*, Shagbark Hickory 5; uncommon tree in upland forest
*Juglans nigra*, Black Walnut 5; uncommon canopy tree in floodplain forest
**Lamiaceae, Mint Family**
*Lamiastrum galeobdolon*, Yellow Archangel* 0; occasional in upland forest
**Lauraceae, Laurel Family**
*Lindera benzoin*, Spicebush 7; common understory tree in floodplain forest
*Sassafras albidum*, Sassafras 5; common tree in forests
**Limnanthaceae, False Mermaid Family**
*Floerkea proserpinacoides*, False Mermaid 7; abundant in floodplain forest
**Malvaceae, Mallow Family**
*Tilia americana*, Basswood 5; common canopy tree in forests
**Menispermaceae, Moonseed Family**
*Menispermum canadense*, Moonseed 5; common vine in floodplain forest
**Montiaceae, Blinks Family**
*Claytonia virginica*, Narrow Leaved Spring Beauty 4; common in forests
**Orobanchaceae, Broom-rape Family**
*Conopholis americana*, Squaw-root 10; rare in upland forest
*Epifagus virginiana*, Beech-drops 10; rare in forests
*Pedicularis canadensis*, Wood-betony 10; occasional in upland forest
**Papaveraceae, Poppy Family**
*Dicentra cucullaria*, Dutchman's-breeches 7; abundant in upland forest
*Sanguinaria canadensis*, Bloodroot 5; common in forests
**Platanaceae, Plane-tree Family**
*Platanus occidentalis*, American Sycamore 7; occasional canopy tree in floodplain forest
**Polemoniaceae, Phlox Family**
*Phlox divaricata*, Wild Blue Phlox 5; uncommon in upland forest
**Polygonaceae, Smartweed Family**
**Ranunculaceae, Buttercup Family**
*Anemone quinquefolia*, Wood Anemone 5; occasional in upland forest
*Aquilegia canadensis*, Wild Columbine 5; occasional in upland forest
*Enemion biternatum*, False Rue-anemone 8; common in forests
*Hepatica acutiloba*, Sharp-lobed Hepatica 8; common in upland forest
*Ranunculus hispidus*, Swamp Buttercup 5; occasional in floodplain forest
*Thalictrum dasycarpum*, Purple Meadow-rue 3; common in floodplain forest
**Rosaceae, Rose Family**
*Amelanchier arborea*, Downy Juneberry 4; uncommon understory tree in upland
*Crataegus punctata*, Dotted Hawthorn 1; uncommon understory tree in floodplain
*Fragaria virginiana*, Wild Strawberry 2; occasional in upland forest
*Geum canadense*, White Avens 1; common in upland forest
*Prunus serotina*, Wild Black Cherry 2; common canopy tree in forests
*Rosa multiflora*, Multiflora Rose* 0; common shrub throughout
*Rubus occidentalis*, Black Raspberry 1; uncommon in upland forest
**Rubiaceae, Madder Family**
*Galium aparine*, Cleavers 0; common in uplands
*Mitchella repens*, Partridge Berry 5; occasional in forests
**Rutaceae, Rue Family**
*Ptelea trifoliata*, Hop-tree 4; uncommon in shrub in upland forest
**Salicaceae, Willow Family**
*Populus deltoides*, Eastern Cottonwood 1; uncommon canopy tree in floodplain forest
*Populus grandidentata*, Largetooth Aspen 4; locally common canopy tree in upland forest
*Salix nigra*, Black Willow 5; uncommon canopy tree in floodplain forest
**Sapindaceae, Soapberry Family**

*Acer negundo*, Box-elder 0; uncommon tree in disturbed forests
*Acer nigrum*, Black Maple 4; uncommon canopy tree in floodplain forest
*Acer rubrum*, Red Maple 1; common canopy tree in forests
*Acer saccharinum*, Silver Maple 2; common canopy tree in floodplain forest
*Acer saccharum*, Sugar Maple 5; common canopy tree in floodplain forest
**Saxifragaceae, Saxifrage Family**
*Mitella diphylla*, Bishop's-cap 8; uncommon in floodplain forest
**Staphyleaceae, Bladdernut Family**
*Staphylea trifolia*, Bladdernut 9; locally common understory tree in floodplain forest
**Ulmaceae, Elm Family**
*Ulmus americana*, American Elm 1; uncommon canopy tree in floodplain forest
*Ulmus rubra*, Slippery Elm 2; uncommon tree in floodplain forest
**Violaceae, Violet Family**
*Viola odorata*, English Violet* 0;
**Vitaceae, Grape Family**
*Parthenocissus quinquefolia*, Virginia Creeper 5; common vine in upland
*Vitis riparia*, River-bank Grape 3; uncommon vine in forests

**Notes**
Nomenclature follows Voss & Reznicek, *Field Manual of Michigan Flora*, *2012* & *Michigan Flora Online*
* Non-native Species
Coefficient of Conservatism number
Frequency based on date of observation: rare, uncommon, occasional, common, abundant

**Floristic Quality Assessment (currently not calculated for Aman Park)**
A tool useful in determining the natural significance of a location by a thorough examination of the flora found therein, is the Floristic Quality Assessment. The Floristic Quality Assessment is determined by the Floristic Quality Index (FQI), calculated by using the "Coefficient of Conservatism" (*C*) value that has been given to each native vascular plant species in Michigan by the Department of Natural Resources Natural Heritage Program. Values range from 0 - 10 and "represent an estimated probability that a plant is likely to occur in a landscape relatively unaltered from what is believed to be pre-European settlement condition." (Herman et al., 2001). Common Ragweed (*Ambrosia artemisiifolia*), for example, is common in Michigan and is found in numerous habitats. It has a coefficient (*C*) of zero, while Wood-betony (*Pedicularis canadensis*), is a species rated a ten, and one that "almost always is restricted to a pre-settlement remnant, *i.e.* a high quality natural area" (Herman et al. 2001). The FQI results will be higher when several diverse plant communities occur at a particular site. Generally, species associated with wet habitats have higher individual coefficient numbers.

"Areas with FQI higher than 35 possess sufficient conservatism and richness that they are floristically important from a statewide perspective. Areas registering in the 50s and higher are extremely rare and represent a significant component of Michigan's native biodiversity and natural landscapes." (Herman et al., 2001).

**Plant Communities**
Seven natural plant communities as described by Michigan Natural Features Inventory (Kost et al., 2007) occur in Aman Park. Several communities are listed as at risk of extinction, imperiled, or vulnerable in the Global and State Element Ranking Criteria (Ranking Criteria found at the end of References). All of the natural communities have been somewhat altered due to periodic logging, farming and grazing, lack of fire, and fauna changes (e.g. no beaver to flood waterways; no wolves to keep deer population under control). The changes from pre-settlement times are often complex. The artificial communities, with disturbed and greatly altered habitats, are not listed as being natural. It is difficult to place the successional forest into an exact future natural community category. Many successional areas are beginning to mature exceptionally well.

Pre-settlement habitat maps (Comer et al., 1995) for the Aman Park area indicate that the area was predominately Beech - Sugar Maple forest habitat west of Sand Creek, and White Pine – Mixed Hardwood forest east of Sand Creek, with an area of Mixed Conifer Swamp (surrounding the small lake) within the Indian Trails Camp (private area). Pre-settlement maps are based on Michigan's original surveyor notes from 1832-35 when first surveys were conducted in Ottawa County.

| **Natural Plant Communities** | **State & Global Rank** |
|---|---|
| **Palustrine** | |
| Submergent Marsh | S4, GU |
| Emergent Marsh | S4, GU |
| Intermittent Wetland | S3, G2 |
| Floodplain Forest | S3, G3? |
| Bog | S4, G2G5 |

**Terrestrial**

| | |
|---|---|
| Dry-mesic Northern Forest | S3, G4 |
| Mesic Southern Forest | S3, G2G3 |

**Artificial Plant Communities**

Successional Mesic Forest
Old Field
Conifer Plantation
Mowed Areas

**Natural Features Highlights and Statistics**

The 331-acre Aman Park natural area is located in eastern Ottawa County and is managed by the City of Grand Rapids. Sand Creek winds its way through a magnificent Mesic Forest landscape, dramatically carpeted in wildflowers, boasting approximately 75 spring-blooming species and an additional 65 summer species. Over forty different species of trees occur within the park.

**Endangered, Threatened, and Special Concern Species**

| Species | Status | State & Global Rank | Date observed |
|---|---|---|---|
| *Hybanthus concolor*, Green Violet | Special Concern | S3, G5 | early 1970s |
| *Mertensia virginica*, Virginia Bluebells | Endangered (Threatened) | S2S3, G5 | yearly since 1968 |
| *Emydoidea blandingii*, Blanding's Turtle | Special Concern | S2S3, G4 | 2014 |
| *Buteo lineatus*, Red-shouldered Hawk | Threatened | S4, G5 | 5/29/15 |
| *Parkesia motacilla*, Louisiana Waterthrush | Threatened | S2, G5 | 5/2/15, 5/18/19 |
| *Setophaga cerulea*, Cerulean Warbler | Threatened | S3, G4 | 5/19/13, 2015 |

**FAUNA**

**Mammals**
**Sciuridae, Squirrel Family**
*Sciurus carolinensis*, Eastern Gray Squirrel

**BIRDS**

**Anatidae, Waterfowl Family**
*Anas platyrhynchos*, Mallard; SR
**Alcedinidae, Kingfisher Family**
*Megaceryle alcyon*, Belted Kingfisher; SR
**Picidae, Woodpecker Family**
*Melanerpes carolinus*, Red-bellied Woodpecker; SR
**Corvidae, Jay and Crow Family**
*Cyanocitta cristata*, Blue Jay; SR
**Paridae, Chickadee and Titmouse Family**
*Poecile atricapillus*, Black-capped Chickadee; SR
**Sittidae, Nuthatch Family**
*Sitta carolinensis*, White-breasted Nuthatch; SR
**Regulidae, Kinglet Family**
*Regulus setrapa*, Golden-crowned Kinglet
*Regulus calendula*, Ruby-crowned Kinglet
**Turdidae, Thrush Family**
*Catharus guttatus*, Hermit Thrush
*Turdus migratorius*, American Robin; SR
**Parulidae, Wood Warbler Family**
*Parkesia motacilla*, Louisiana Waterthrush; SR
**Cardinalidae, Cardinal Family**
*Cardinalis cardinalis*, Northern Cardinal; SR
- The American Ornithologist's Union Check-list of North American Birds 7th edition, 53rd supplement (2013)
- SR Summer Resident and probable breeding

**FUNGI**

**Helotiaceae**
*Chlorociboria aeruginascens,* Green Stain;
**Venturiaceae**
*Apiosporina morbosa,* Black Knot;

**RANKING**

**Global Rank**
The priority assigned by NatureServe's national office for data collection and protection based upon the element's status throughout its entire world-wide range. Criteria not based only on number of occurrences; other critical factors also apply. Note that ranks are frequently combined.

G1 = critically imperiled globally because of extreme rarity (5 or fewer occurrences range-wide or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.
G2 = imperiled globally because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.
G3 = either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g. a single western state, a physiographic region in the East) or because of other factor(s) making it vulnerable to extinction throughout its range; in terms of occurrences, in the range of 21 to 100.
G4 = apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.
G5 = demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.
GH = of historical occurrence throughout its range, i.e. formerly part of the established biota, with the expectation that it may be rediscovered (e.g. Bachman's Warbler).
GU = possibly in peril range-wide, but status uncertain; need more information.
GX = believed to be extinct throughout its range (e.g. Passenger Pigeon with virtually no likelihood that it will be rediscovered).
G? = incomplete data.
Q = taxonomy uncertain.
T = subspecies.
U = unmappable through out the global geographic extent
? = questionable

**State Rank**
The priority assigned by the Michigan Natural Features Inventory for data collection and protection based upon the element's status within the state. Criteria not based only on number of occurrences; other critical factors also apply. Note that ranks are frequently combined.

S1 = critically imperiled in the state because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extirpation in the state.
S2 = imperiled in state because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extirpation from the state.
S3 = rare or uncommon in state (on the order of 21 to 100 occurrences).
S4 = apparently secure in state, with many occurrences.
S5 = demonstrably secure in state and essentially ineradicable under present conditions.
SA = accidental in state, including species (usually birds or butterflies) recorded once or twice or only at very great intervals, hundreds or even thousands of miles outside their usual range.
SE = an exotic established in the state; may be native elsewhere in North America (e.g. house finch or catalpa in eastern states).
SH = of historical occurrence in state and suspected to be still extant.
SN = regularly occurring, usually migratory and typically nonbreeding species.
SR = reported from state, but without persuasive documentation which would provide a basis for either accepting or rejecting the report.
SRF = reported falsely (in error) from state but this error persisting in the literature.
SU = possibly in peril in state, but status uncertain; need more information.
SX = apparently extirpated from state.