

Kitchel Lindquist Hartger Dunes Preserve

A Natural Features Inventory

Ottawa County, Michigan
October 2025



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Table of Contents

I.	Introduction and Purpose	3
II.	Overview	4
III.	Plant Communities	5
IV.	Threatened and Special Concern Species	7
V.	Recommendations and Considerations	10
VI.	Flora and Fauna Inventories	10
VII.	Supplemental Plant Lists	20
VIII.	References and Rankings	23



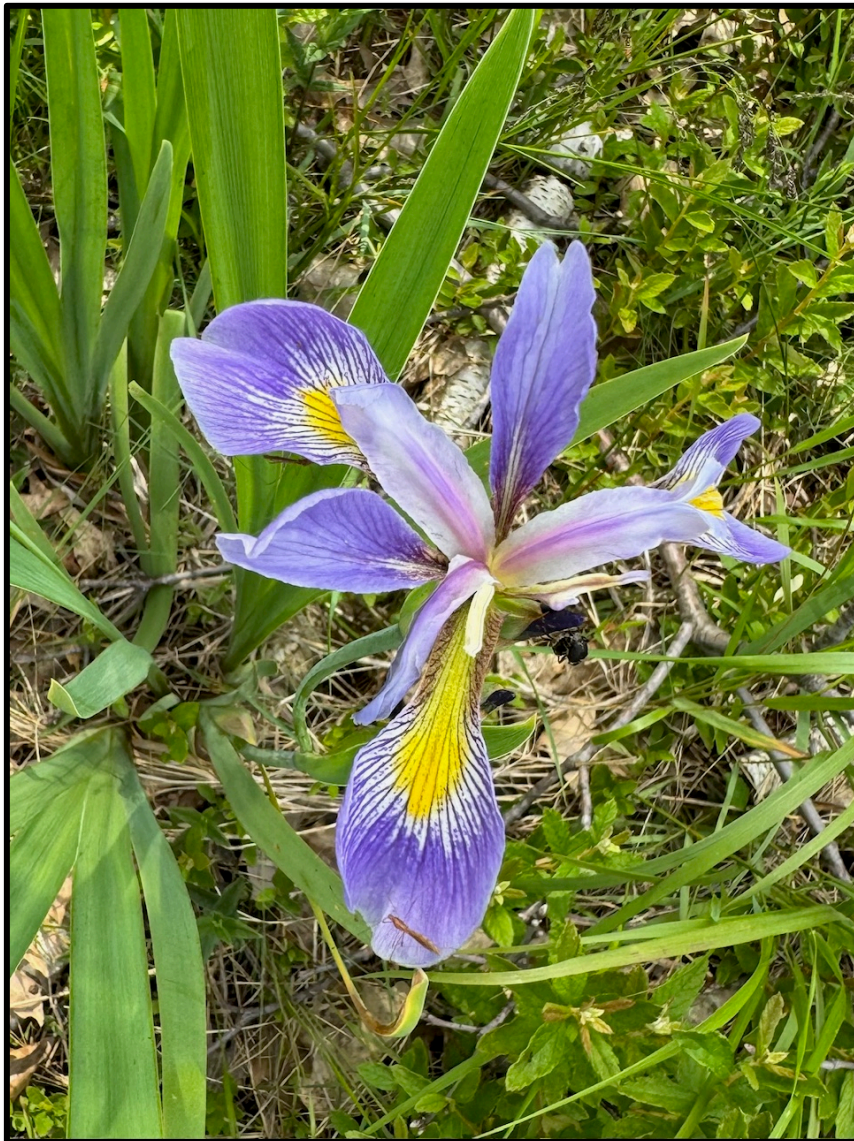
New hope, a basswood seedling in the dune forest. *William Martinus*

I. Introduction and Purpose

- The Kitchel Lindquist Hartger Dunes Preserve is owned and operated by the City of Ferrysburg and located in the City of Grand Haven, north of the Grand River.
- The 115-acre site has 2.22 miles of trails through varied dune topography and wetland landscapes, containing six natural plant communities.
- A Floristic Quality Assessment demonstrates that a diverse and rich plant component exists at the KLH Dunes Preserve.
- One State & Federally Threatened species and five State Special Concern species occur on the property.

Purpose

- Gain an understanding of the current vegetative plant communities and flora of Lake Michigan shoreline open and forested dunes fields and associated wetlands, including 1300 feet of Grand River natural sandy shore.
- Provide documentation of certain species and scientific data to Michigan Natural Features Inventory and University of Michigan Herbarium.
- Information to assist Preserve Board and volunteers with understanding and aid in interpretation of natural features and management concerns.
- Information to assist the general public with understanding what can be observed at the site.
- Provide data to compare with previous Natural Features Inventories.



Iris virginica, Southern Blue Flag – Common in Interdunal Wetlands. *William Martinus*

II. Overview

Species Statistics:

Plant species: 312 + 2 hybrids + 1 form
Native species: 219
Non-native species: 93 30%

Ferns: 8
Sedges: 31
Grasses: 44
Native trees: 30
Native shrubs: 23
Native Wildflowers: 84

Amphibians: 5
Reptiles: 1
Mammals: 11
Birds: 69
Mollusks: 9

Floristic Quality Assessment

Kitchel Lindquist Hartger Dunes Preserve Floristic Quality Assessment Score: 52.6

A tool useful in determining the natural significance of a location by a thorough examination of the flora found there, 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). Horsetweed (*Conyza canadensis*), for example, is common in Michigan and is found in numerous habitats and is quite weedy. It has a coefficient (C) of zero, while Sand Reed (*Calamovilfa longifolia*) 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, especially when wetlands are included.

“Areas with an 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).

Of the 312 species tallied at Kitchel Lindquist Hartger Dunes Preserve, 91 are new species to the preserve, including 61 native species. Natural Features Inventory fieldwork during 2001 and 2004 at the KLH, totaled 307 species with a Floristic Quality Assessment Score of 57.4.



An old willow along the Grand River. *William Martinus*

III. Plant Communities

Six natural plant communities, as described in Kost et al., 2007, occur at Kitchel Lindquist Hartger Dunes Preserve. Their Global and State Element Ranking Criteria can be found in References. The natural communities have been altered due to human activities including logging, breakwaters, changes in fauna, past open dune stabilizations, industrial use, and habitation.

The area pre-settlement map shows the open dunes on the west, and Beech-Maple-Hemlock to the east, with a sizable portion of the current KLH western open dune-field as part of Lake Michigan. In 1857 (168 years ago) the first breakwater was constructed out into Lake Michigan to try to channel the Grand River's flow to eliminate sandbar shallows, but in the process hindered the flow of sands moving along the lake shore. Eventually, over time, the stalled sand built up, and prevailing westerly winds piled them into the low, shifting dunes. Winds also scoured out the depressions for the interdunal ponds.



Area pre-settlement vegetation map based on surveys of 1832



Recent aerial of KLH and surrounding landscape

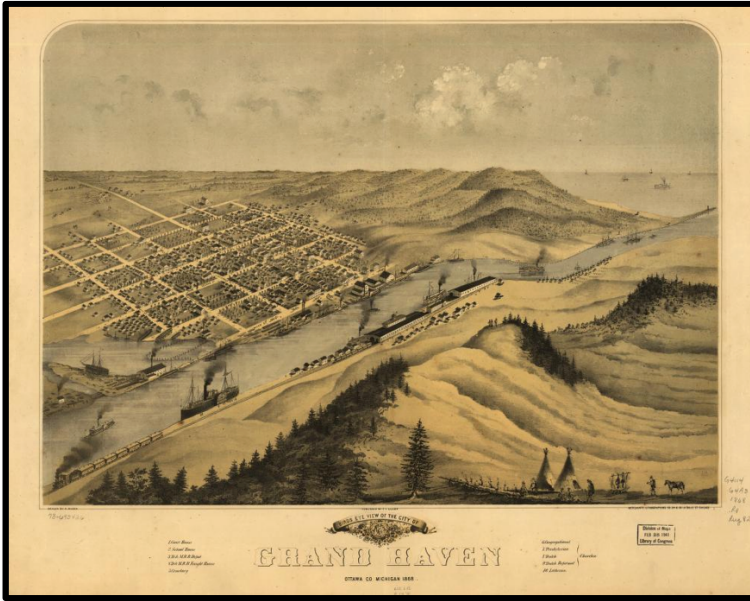
Natural Plant Communities	State Rank	Global Rank
Palustrine		
Submergent Marsh	S4	GU
Emergent Marsh	S4	GU
Interdunal wetland	S2	G2?
Terrestrial		
Mesic Northern Forest	S3	G4
Great Lakes Barrens	S2	G3
Open Dunes	S3	G3

Artificial Plant Communities

Conifer Plantation

Submergent Marsh and Emergent Marsh

Lake Michigan's water level fluctuated from record lows in 2013 to a near record high level in 2020; a variance of over six feet! During the recent period of high-water levels, Lake Michigan waves moving upriver eroded the KLH Grand River shoreline and substantially reduced the area of low, scrub dune-land along the riverfront. This erosion exposed the hidden linear post assemblage of the railroad complex started in 1858, and continued for another 15 years, when the enterprise was moved to the south side of the Grand River. Most of the facility, included depot, hotel, track yard, dock, maintenance and service buildings, and warehouse, rested on a forest of pilings along the river's edge. An early engraving of Grand Haven shows the warehouse area at the far end, where freight was unloaded, stored, and transferred to ships or onto railcars.



1868 hand-colored print of early Grand Haven showing the railroad terminus on Grand River's north side. *Loutit Library*



Ottawa County GIS 2024 aerial of the eroded area in red.



Log pilings from railroad complex of 1858. *William Martinus*

By 2025, water levels had dropped by several feet, providing a wide sandy beach and extensive shallow water, ideal for several aquatic plants to become established, and an excellent bed for mussels. Six different native mussel species were identified from the KLH Grand River shore in early March 2025.

Interdunal wetland

The recent near-high Lake Michigan water levels drastically influenced the numerous Interdunal Wetlands at KLH, with water over two feet deep covering vegetation, temporarily preventing many from developing. In a few years' time, the wetland flora flourished with an abundant native assemblage of grasses, sedges, and wildflowers. Each Interdunal Wetland in 2025 is different, often with a unique set of flora, varying degrees of abundance and amount of cover, from sparse in an open mudflat to dense in most others. Only one had a few inches of water, covering a dozen square feet.

Mesic Northern Forest

The Mesic Northern Forest has suffered from decades of over-abundance of deer browsing and physical terracing of the steep topography. Most of the dune flora within reach is gone – almost completely! The few remaining native species have been reduced to depauperate plants in brush tangles, or rare seedlings that will be consumed with the next round of browsing. Some species, mostly non-native, continue to exist because they are unpalatable. In its current state with lack of regeneration, native trees and shrubs diminish, and the forest will eventually disappear. The native understory has already vanished!

Great Lakes Barrens and Open Dunes

The Great Lakes Barrens is most prevalent in the immediate upland surrounding numerous interdunal wetlands, and each is different, as in the individual wetlands. The most notable change in twenty years is the effect of high water, on the conifers especially, adjacent to interdunal ponds. The increased mortality due to high water is a natural cycle of events in the Great Lakes Barrens landscape. On older interdunal wetlands located farther to the east, the dominant hardwood loss is also noticeably evident. However, the dead trees in the area are a boon to woodpeckers.



The mature older Interdunal Wetland in the northeast corner of the preserve. *William Martinus*

IV. Threatened and Special Concern Species

A number of rare plant and animal species in Michigan are given a status designation by the State for conservation purposes (MDNR, 2009). This status refers to the placement of a species on the Department of Natural Resources' "Threatened and Endangered Species" list. The "Endangered" category indicates the most precarious status in the State, "Threatened" is the next most severe; third is "Special Concern." Special Concern species have a degree of rarity within the state, often associated with diminishing habitat or lack of data. The current list has been updated and became effective on March 20, 2023.

Six T & E-listed species occur at the Kitchel Lindquist Hartger Dunes Preserve including three plants, one bird, and two mussels. Five of the six species are new Special Concern species for KLH, and another four bird species were observed at or from the preserve. Of the four, only the Common Loon does not nest in Ottawa nor in surrounding counties, but was observed on the Grand River in March. Four T & E-listed species that occurred in the preserve 2005, but not recorded in 2025, are Whip-poor-will (Threatened), Wood Thrush (Special Concern), Prairie Warbler (Special Concern), Fowler's Toad (Special Concern). These four species most likely are still present at the site but were not encountered in 2025.

Species	Status	State & Global Rank		Observed
<i>Cirsium pitcheri</i> , Pitcher's Thistle	State & Federally Threatened	S3	G2G3	All seasons
<i>Corispermum pallasii</i> , Siberian Bugseed	Special Concern	SNR	G4?	Fall
<i>Triplasis purpurea</i> , Sand Grass	Special Concern	S2	G4G5	Fall
<i>Melanerpes erythrocephalus</i> , Red-headed Woodpecker	Special Concern	S3	G5	Summer
<i>Potamilus alatus</i> , Pink Heelsplitter	Special Concern	SNR	G5	Late winter
<i>Truncilla truncata</i> , Deertoe	Special Concern	S2S3	G5	Late winter

Species observe in or from KLH Dunes

<i>Gavia immer</i> , Common Loon	Threatened	S3	G5	Early spring
<i>Falco peregrinus</i> , Peregrine Falcon	Threatened	S3	G4	Late summer
<i>Haliaeetus leucocephalus</i> , Bald Eagle	Special Concern	S4	G5	Winter
<i>Falco columbarius</i> , Merlin	Special Concern	S3	G5	Late summer

Cirsium pitcheri, Pitcher's Thistle

- Uncommon in open dunes. Recorded in 26 counties on the MNFI website, including Ottawa County; last observed in 2015. *Michigan Flora Online*: 167 specimen records in Michigan, with six in Ottawa County (three in 1800s).

Corispermum pallasii, Siberian Bugseed

- Uncommon in open sand. Recorded in 12 counties on the MNFI website including Ottawa County; last observed in 2015. *Michigan Flora Online*: nineteen specimen records in Michigan, with four in Ottawa County.

Triplasis purpurea, Sand Grass

- Common to locally abundant in open sand. Recorded in six counties on the MNFI website. *Michigan Flora Online*: fifteen specimen records in Michigan, with none in Ottawa County.

Melanerpes erythrocephalus, Red-headed Woodpecker

- Uncommon in northeast corner older interdunal wetland swamp throughout summer. Breeding. Recorded in 25 counties on the MNFI website: Ottawa County is not included.

Potamilus alatus, Pink Heelsplitter

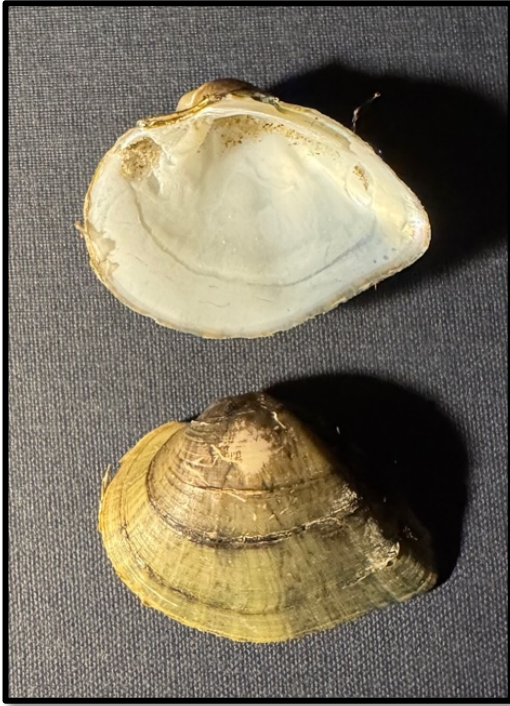
- Uncommon on sandy beach and shallow shore of Grand River in March. Recorded in 17 counties on the MNFI website including Ottawa County; last observed in 2019 with 6 occurrences.

Truncilla truncata, Deertoe

- Rare on sandy beach of Grand River in March. Recorded in 18 counties on the MNFI website including Ottawa County; last observed in 2024 with 6 occurrences.



Corispermum pallasii, Siberian Bugseed. William Martinus



Truncilla truncata, Deertoe. William Martinus



Potamilus alatus, Pink Heelsplitter. William Martinus



Newly eroded beach area providing “clam bed.” William Martinus



Grand River Beachfront with Kitchel Dune in the background. *William Martinus*

V. Recommendations and Considerations

- Deer are too abundant in this area, as evidenced by the lack of surviving seedlings and saplings of tree and shrub species, and severe browsing compared to similar habitats where deer are not as prevalent. Twenty years ago, deer were also abundant, and during the 2004 fieldwork for the first comprehensive NFI, spring wildflowers were rare on the forest floor, but now are almost completely absent, with the few remaining species very rare. It is highly recommended that an effective deer hunt or cull is implemented as soon as possible, and continued until the situation is rectified. The perceived health of the preserve is misleading with a very favorable Floristic Quality Assessment score, but the wellbeing of Kitchel Lindquist Hartger Dunes Preserve is at a critical state. The wetlands are functioning well, they contain numerous species that have a high *C* value, and a provide a hearty boost in figuring the FQI.
- Remove non-native invasive species:
 - Trees: Scotch Pine, Pitch Pine, Red Pine (non-native ones), Norway Spruce, White Mulberry, Lombardy Poplar, Tree of Heaven. Systematically remove pine plantations.
 - Shrubs: Japanese Barberry, Honeysuckle, Multiflora Rose, Autumn Olive
 - Forbs: Yucca, Common Reed, Spotted Knapweed, Garlic Mustard, Wallflower Cabbage, Hound's-tongue, Bladder Campion, Cypress Spurge, Motherwort, Catnip, Purple Loosestrife, Dalmatian Toadflax
- Treatment of tree diseases:
 - Hemlock: Hemlock Woolly Adelgid (*Adelges tsugae*), Butternut Canker: *Sirococcus clavigignenti-juglandacearum*, and Oak Wilt: *Ceratocystis fagacearum*.
- Eliminate encroachment that can cause unwanted legal situations
- Mark and clearly post boundaries
- Form a management plan of action: short term and long term.

VI. Flora and Fauna Inventories

The primary emphasis of this study was a complete inventory of vascular plants; separate lists also include amphibians, reptiles, mammals, birds, and mollusks. Fieldwork was conducted with visits to various habitats beginning in March 2025, and continued during the growing season through late September 2025, with 15 field visits. Excursions on foot involved the “intuitive meander” method. All species were personally observed by the author.

Listing notes:

Nomenclature follows Voss & Reznicek, *Field Manual of Michigan Flora, 2012*, & *Michigan Flora Online*

There have been many family and nomenclature changes since the 2005 report; former names are in parentheses.

* Non-native Species

Coefficient of Conservatism number

Frequency based on field observations: rare, uncommon, occasional, common, abundant

Habitat occurrence

Years observed

Flora

Pteridophytes

Ferns

Aspleniaceae, Spleenwort Family

Asplenium platyneuron, Ebony Spleenwort 2; rare in dune forest; 2005

Dennstaedtiaceae, Bracken Fern Family

Pteridium aquilinum var. *latiusculum*, Bracken Fern 0; locally common in upland; 2005, 2025

Dryopteridaceae, Wood Fern Family

Dryopteris marginalis, Marginal Woodfern 5; rare in dune forest; 2005, 2025

Equisetaceae, Horsetail Family

Equisetum arvense, Field Horsetail 0; local and uncommon in interdunal wetlands; 2005, 2025

Equisetum hyemale subsp. *affine*, Common Scouring Rush 2; uncommon in open areas; 2005, 2025

Equisetum ×ferrissii, Intermediate Horsetail 2; rare in interdunal wetland; 2025

Ophioglossaceae, Adder's-tongue Family

Botrypus virginianum (*Botrychium virginianum*), Rattlesnake Fern 5; rare in successional upland forest; 2005, 2025

Sceptridium oneidense, Blunt-leaved Grapefern 7; rare in interdunal wetland edge; 2025

Thelypteridaceae, Marsh Fern Family

Thelypteris palustris, Marsh Fern 2; locally abundant in wetlands; 2005, 2025

Gymnosperms

Cupressaceae, Cypress Family

Juniperus communis var. *depressa*, Common Juniper 4; uncommon in upland; 2005, 2025

Juniperus virginiana, Red-cedar 3; uncommon in upland; 2005, 2025

Thuja occidentalis, Arbor Vitae 4; uncommon near interdunal wetlands and dune forest; 2005, 2025

Pinaceae, Pine Family

Pinus banksiana, Jack Pine 5; abundant near interdunal wetlands; 2005, 2025

Pinus resinosa, Red Pine 6; abundant in plantations; rare native canopy tree in dune forest; 2005, 2025

Pinus rigida, Pitch Pine* 0; abundant in plantations; 2005, 2025

Pinus strobus, White Pine 3; common in throughout; 2005, 2025

Pinus sylvestris, Scotch Pine* 0; common in dunes; abundant in Pine Plantations; 2005, 2025

Tsuga canadensis, Hemlock 5; uncommon in dune forest; 2005, 2025

Angiosperms

Monocots

Agavaceae, Agave Family

Yucca flaccida, Yucca* 0; uncommon in open dunes; 2025

Araceae, Arum Family

Lemna minor, Common Duckweed 5; uncommon along Grand River beach shore; 2025

Lemna turionifera, Red Duckweed 5; uncommon along Grand River beach shore; 2025

Spirodela polyrhiza, Greater Duckweed 6; rare along Grand River beach shore; 2025

Wolffia borealis, Dotted Water Meal 5; uncommon along Grand River beach shore; 2025

Wolffia columbiana, Common Water Meal 5; uncommon along Grand River beach shore; 2025

Convallariaceae, Lily-of-the-valley Family (Liliaceae, Lily Family)

Maianthemum canadense var. *interius*, Canada Mayflower 4; uncommon in semi-open upland; 2005, 2025

Maianthemum racemosum (*Smilacina racemosa*), False Spikenard 5; rare in successional forest; 2005, 2025

Maianthemum stellatum (*Smilacina stellata*), Starry False Solomon-seal 5; uncommon in upland; 2005 2025

Polygonatum pubescens, Downy Solomon-seal 5; rare in dune forest; 2005, 2025

Cyperaceae, Sedge Family

Bolboschoenus fluviatilis, River Bulrush 6; local on sandy beach along Grand River; 2025

Carex albicans var. *emmonsii*, White Tinge Sedge 3; uncommon in dune forest; 2005, 2025

Carex communis, Fibrous-rooted Sedge 2; uncommon in dune forest; 2025

Carex comosa, Bristly Sedge 5; rare in interdunal wetland; 2025

Carex eburnea, Bristle-leaved Sedge 7; locally abundant in dune forest; 2005, 2025

Carex garberi, Elk Sedge 8; uncommon in interdunal wetlands; 2005, 2025

Carex leptoneuria, Two-edged Sedge 3; rare in interdunal wetlands; 2025

Carex lurida, Sallow Sedge 3; rare in interdunal wetlands; 2025

Carex muehlenbergii, Sand Sedge 7; uncommon in open upland; 2005, 2025

Carex rosea, Stellate Sedge 2; rare in dune forest; 2005, 2025

Carex scoparia, Pointed Broom Sedge 4; uncommon in interdunal wetlands; 2005, 2025

Carex stricta, Tussock Sedge 4; locally common in interdunal wetlands; 2005, 2025
Carex tenera, Marsh Sedge 4; uncommon in dry interdunal wetlands; 2005, 2025
Carex tonsa var. *rugosperma*, Shaved Sedge 5; local and uncommon in open dunes; 2005, 2025
Carex tribuloides, Blunt Broom Sedge 3; locally common in interdunal wetland; 2025
Carex viridula, Green Sedge 4; common in interdunal wetlands; 2005, 2025
Carex vulpinoidea, Fox Sedge 1; local and uncommon in interdunal wetlands; 2005, 2025
Cladium mariscoides, Twig-rush 10; abundant in interdunal wetlands; 2005, 2025
Cyperus diandrus, Low Umbrella Sedge 5; locally abundant in interdunal wetlands; 2025
Cyperus esculentus, Yellow Nut-grass 1; uncommon in interdunal wetlands; 2025
Cyperus schweinitzii, Rough Sand Sedge 5; uncommon and local in open dunes; 2005, 2025
Cyperus strigosus, Long Scaled Nut Sedge 3; rare in interdunal wetlands and on Grand River shore; 2005, 2025
Eleocharis erythropoda, Creeping Spike-rush 4; common in interdunal wetlands; 2005, 2025
Eleocharis flavescens, Bright-green Spike-rush 7; locally abundant on interdunal mudflat; 2025
Rhynchospora capillacea, Hair Beak-rush 10; locally common in interdunal wetlands; 2005, 2025
Rhynchospora capitellata, Clustered Beak-rush 6; locally common in interdunal wetlands; 2025
Schoenoplectus acutus, Hardstem Bulrush 5; locally common in interdunal wetlands; 2025
Schoenoplectus pungens, Three-square 5; locally common in interdunal wetlands; 2025
Schoenoplectus tabernaemontani, Softstem Bulrush 4; locally common in interdunal wetlands; 2005, 2025
Scirpus atrovirens, Dark-green Bulrush 3; rare in interdunal wetland; 2025
Scirpus cyperinus, Wool-grass 5; common in interdunal wetlands; 2025, 2025

Hydrocharitaceae, Frog's-bit Family

Vallisneria americana, Eel-grass 7; uncommon along Grand River shore; 2025

Iridaceae, Iris Family

Iris virginica, Southern Blue Flag 5; common in interdunal wetlands; 2005, 2025
Sisyrinchium angustifolium, Stout Blue-eyed-grass 4; locally common in interdunal wetlands; 2005, 2025

Juncaceae, Rush Family

Juncus articulatus, Jointed Rush 3; uncommon in interdunal wetlands; 2025
Juncus balticus, Lakeshore Rush 4; abundant interdunal wetlands; 2005, 2025
Juncus brachycephalus, Short-headed Rush 7; uncommon in interdunal wetlands; 2005, 2025
Juncus brevicaudatus, Narrow-panicked Rush 8; common in interdunal wetlands; 2005, 2025
Juncus canadensis, Canadian Rush 6; common in interdunal wetlands; 2005, 2025
Juncus effusus, Soft-stemmed Rush 3; rare in interdunal wetland; 2025
Juncus tenuis (*Juncus dudleyi*), Path Rush 1; rare on trails; 2005, 2025
Juncus torreyi, Torrey's Rush 4; local in interdunal wetlands; 2025

Orchidaceae, Orchid Family

Corallorhiza odontorhiza var. *pringlei*, Fall Coral-root 8; rare in pine plantation; 2005, 2025
Epipactis helleborine, Helleborine* 0; rare in disturbed shaded upland; 2005, 2025
Spiranthes cernua, Nodding Ladies'-tresses 4; Nodding Ladies'-tresses 4; rare in interdunal wetland; 2005, 2025

Poaceae, Grass Family

Andropogon gerardii, Big Bluestem 5; uncommon near parking lot; 2025
Agrostis gigantea, Redtop* 0; common along trails and roads; 2005, 2025
Agrostis scabra (*Agrostis hyemalis*), Ticklegrass 4; locally abundant in interdunal wetlands; 2005, 2025
Ammophila breviligulata, Marram Grass 10; abundant in open dunes; 2005, 2025
Andropogon virginicus, Broom-sedge 4; common in dryer interdunal wetlands; 2005, 2025
Anthoxanthum odoratum, Sweet Vernal Grass* 0; uncommon in disturbed open upland; 2005, 2025
Bromus hordeaceus subsp. *hordeaceus* (*Bromus mollis*), Soft Chess* 0; uncommon in open dunes; 2005, 2025
Bromus pubescens, Canada Brome 5; rare in dune forest; 2005, 2025
Bromus tectorum, Downy Chess* 0; common in open dunes; 2005, 2025
Calamagrostis canadensis, Blue-joint 3; locally common in interdunal wetlands; 2005, 2025
Calamovilfa longifolia var. *magna*, Sand Reed 10; abundant in open dunes; 2005, 2025
Cenchrus longispinus, Mat Sandbur 0; locally common in disturbed open upland; 2025
Dactylis glomerata, Orchard Grass* 0; uncommon along roads; 2005, 2025
Dichanthelium implicatum (*Panicum implicatum*), Slender-stemmed Panic-grass 3; uncommon in interdunal wetlands; 2005, 2025
Digitaria ischaemum, Smooth Crab Grass* 0; uncommon in disturbed open upland; 2025
Echinochloa muricata var. *microstachya*, Rough Barnyard Grass 1; uncommon on Grand River shore; 2005, 2025;
Elymus canadensis, Canada Wild-rye 5; common in open dunes and semi-open upland; 2005, 2025
Elymus repens (*Agropyron repens*), Quack Grass* 0; uncommon in disturbed open upland; 2005, 2025
Elymus virginicus, Virginia Wild-rye 4; rare on Grand River shore; 2025
Eragrostis pectinacea var. *pectinacea*, Small Love Grass 0; uncommon in disturbed open upland; 2025
Festuca octoflora, Six-weeks Fescue 5; local in open dunes; 2005, 2025
Festuca subverticillata, Nodding Fescue 5; uncommon in dune forest; 2025
Festuca trachyphylla, (*Festuca ovina*) Sheep Fescue* 0; uncommon in open upland; 2005

Leersia oryzoides, Cut Grass 3; local in interdunal wetlands; 2025
Leymus arenarius, Lyme Grass* 0; rare in interdunal wetlands; 2025
Lolium arundinaceum, Tall Fescue* 0; rare in disturbed open upland; 2025
Lolium perenne var. *perenne*, Perennial Rye Grass* 0; uncommon in disturbed upland; 2005, 2025
Muhlenbergia mexicana, Leafy Satin Grass 3; uncommon in interdunal wetlands; 2005, 2025
Muhlenbergia tenuiflora, Slender Satin Grass 8; uncommon in dune forest; 2005, 2025
Panicum capillare, Witch Grass 0; locally common in disturbed open upland; 2025
Panicum dichotomiflorum, Spreading Witch Grass 0; rare on Grand River shore; 2025
Panicum virgatum, Switch Grass 4; abundant in dryer interdunal wetlands and open dunes; 2005, 2025
Patis racemosa (*Oryzopsis racemosa*), Black-fruited Rice-grass 8; rare in dune forest; 2005, 2025
Phalaris arundinacea, Reed Canary Grass* 0; rare in interdunal wetlands; 2025
Phleum pratense, Timothy* 0; uncommon in disturbed open upland; 2005, 2025
Phragmites australis subsp. *australis*, Common Reed* 0; occasional on Grand River shore; 2025
Poa compressa, Canada Bluegrass* 0; locally common in upland; 2005, 2025
Poa pratensis, Kentucky Bluegrass* 0; uncommon in disturbed open upland; 2005, 2025
Schizachyrium scoparium (*Andropogon scoparius*), Little Bluestem 5; abundant in open dunes; 2005, 2025
Setaria faberi, Giant Foxtail* 0; rare in disturbed open upland; 2025
Setaria pumila, Yellow Foxtail* 0; rare in disturbed open upland; 2025
Sporobolus cryptandrus, Sand Dropseed 3; locally common in open dunes; 2005, 2025
Sporobolus vaginiflorus, Sheathed Rush-grass 2; common in disturbed open upland; 2025
Triplasis purpurea, Sand Grass 6; locally abundant in open dunes; 2025
Potamogetonaceae, Pondweed Family
Stuckenia pectinata, Sago Pondweed 3; rare in Grand River along shore; 2025
Typhaceae, Cat-tail & Bur-reed Family
Typha angustifolia, Narrow-leaved Cat-tail* 0; rare in interdunal wetland; 2025
Typha latifolia, Broad-leaved Cat-tail 1; uncommon in interdunal wetlands; 2005, 2025

Dicots

Adoxaceae, Moschatel Family (Caprifoliaceae, Honeysuckle Family; in part)
Sambucus racemosa, Red-berried Elder 3; uncommon in interdunal wetlands; 2005, 2025
Viburnum acerifolium, Maple-leaved Viburnum 6; locally common on dune forest; 2005, 2025
Amaranthaceae, Amaranth Family (Chenopodiaceae, Goosefoot Family)
Chenopodium album, Lambs-quarters* 0; uncommon in open dunes; 2005, 2025
Corispermum pallasii (*Corispermum hyssopifolium*), Siberian Bugseed 3; rare in open dunes; 2005, 2025
Cycloloma atriplicifolium, Winged Pigweed* 0; uncommon in open dunes; 2005, 2025
Dysphania botrys, Jerusalem-oak* 0; locally common in disturbed open upland; 2025
Anacardiaceae, Cashew Family
Toxicodendron rydbergii, Western Poison Ivy 3; common throughout; 2005, 2025
Apiaceae, Carrot Family
Daucus carota, Wild Carrot* 0; common in open upland; 2005, 2025
Osmorhiza claytonii, Hairy Sweet-cicely 4; rare in dune forest; 2025
Apocynaceae, Dogbane Family
Asclepias syriaca, Common Milkweed 1; uncommon in open dunes; 2005, 2025
Aquifoliaceae, Holly Family
Ilex verticillata, Michigan Holly 5; locally common in interdunal wetland; 2005, 2025
Asteraceae, Aster Family
Achillea millefolium, Common Yarrow 1; uncommon in open upland; 2005, 2025
Ambrosia artemisiifolia, Common Ragweed 0; uncommon in open upland; 2005, 2025
Antennaria parlinii ssp. *fallax*, Smooth Pussytoes 2; uncommon in dune forest; 2025
Artemisia campestris subsp. *caudata*, Wild Wormwood 5; abundant in open dunes; 2005, 2025
Bidens cernua, Nodding Bur-marigold 3; uncommon in interdunal wetlands and on Grand River shore; 2005
Bidens frondosa, Common Beggar-ticks 1; rare on Grand River shore; 2025
Centaurea stoebe subsp. *micranthos*, Spotted Knapweed* 0; abundant in open upland; 2005, 2025
Chondrilla juncea, Skeleton-weed* 0; uncommon in disturbed open upland; 2025
Cirsium arvense var. *horridum*, Canada Thistle* 0; locally common in interdunal wetlands; 2005, 2025
Cirsium pitcheri, Pitcher's Thistle 10; uncommon in open dunes; 2005, 2025
Cirsium vulgare, Bull Thistle* 0; uncommon in interdunal wetlands; 2005, 2025
Conyza canadensis, Horseweed 0; uncommon in disturbed open upland; 2025
Eclipta prostrata, Yerba De Tajo* 0; rare on Grand River shore; 2025
Erechtites hieraciifolius, Fireweed 2; abundant in interdunal wetlands; 2005, 2025
Eupatorium perfoliatum, Boneset 4; uncommon in interdunal wetlands; 2005, 2025
Euthamia graminifolia, Grass-leaved Goldenrod 3; uncommon in interdunal wetlands; 2025

Hieracium aurantiacum, Orange Hawkweed* 0; uncommon in open dunes; 2005
Hieracium caespitosum, Yellow Hawkweed* 0; common in open dunes; 2005, 2025
Hypochaeris radicata, Cat's-ear* 0; uncommon in open dunes; 2005, 2025
Pseudognaphalium obtusifolium (*Gnaphalium obtusifolium*), Fragrant Cudweed 2; common in interdunal wetlands and open dunes; 2005, 2025
Solidago caesia, Bluestem Goldenrod 6; uncommon in dune forest; 2005, 2025
Solidago canadensis, Canada Goldenrod 1; uncommon in open dunes; 2005, 2025
Solidago nemoralis, Gray Goldenrod 2; uncommon in open dunes; 2005, 2025
Solidago rugosa var. *aspera*, Rough-stemmed Goldenrod 3; uncommon in interdunal wetlands; 2005, 2025
Solidago simplex, Gillman's Goldenrod 10; rare in open dunes; 2005, 2025
Symphotrichum pilosum var. *pringlei*, (*Aster pilosus*), Frost Aster 1; uncommon in interdunal wetlands; 2005, 2025
Taraxacum officinale, Common Dandelion* 0; uncommon in upland; 2005, 2025
Tragopogon dubius, Sand Goat's Beard* 0; uncommon in open upland; 2005, 2025
Xanthium strumarium, Cocklebur* 0; uncommon on Grand River shore; 2005, 2025

Berberidaceae, Barberry Family
Berberis aquifolium (*Mahonia aquifolium*), Oregon-grape* 0; uncommon in upland; 2005, 2025
Berberis thunbergii, Japanese Barberry* 0; common to abundant throughout; 2005, 2025
Berberis thunbergii f. *atropurpurea*, Purple Japanese Barberry* 0; rare in dune forest; 2025
Podophyllum peltatum, May-apple 3; uncommon in dune forest; 2005, 2025

Betulaceae, Birch Family
Betula papyrifera, Paper Birch 2; uncommon in interdunal wetlands; 2005, 2025
Ostrya virginiana, Hop-hornbeam 5; locally common in dune forest; 2005, 2025

Boraginaceae, Borage Family
Cynoglossum officinale, Hound's-tongue* 0; locally common in disturbed upland; 2025
Echium vulgare, Common Viper's Bugloss* 0; rare in disturbed open upland; 2025
Hackelia virginiana, Virginia Stick-seed 1; uncommon in dune forest; 2005, 2025
Lithospermum carolinense, Hairy Puccoon 10; common in open dunes; 2005, 2025
Myosotis scorpioides, True Forget-me-not* 0; uncommon in dune forest; 2005, 2025

Brassicaceae, Mustard Family
Alliaria petiolata, Garlic Mustard* 0; uncommon in upland; 2005, 2025
Alyssum alyssoides, Pale Alyssum* 0; uncommon in disturbed open upland; 2005, 2025
Arabidopsis lyrata, Sand Cress 7; abundant in open dunes; 2005, 2025
Boechera stricta (*Arabis drummondii*), Drummond Rock Cress 6; uncommon in upland; 2005, 2025
Barbarea vulgaris, Yellow Rocket* 0; uncommon in interdunal wetlands; 2005, 2025
Berteroa incana, Hoary Alyssum* 0; uncommon in open upland; 2005, 2025
Cardamine hirsuta, Hoary Bitter Cress* 0; uncommon in open upland; 2005, 2025
Coincya monensis, Wallflower Cabbage* 0; uncommon in open dunes; 2025
Draba verna, Whitlow-grass* 0; locally common in disturbed open upland; 2025
Lepidium virginicum, Common Peppergrass 0; uncommon in disturbed open upland; 2005, 2025

Campanulaceae, Harebell Family
Lobelia kalmii, Brook Lobelia 10; abundant in interdunal wetlands; 2005, 2025
Lobelia siphilitica, Great Blue Lobelia 4; uncommon in interdunal wetlands; 2005, 2025

Caprifoliaceae, Honeysuckle Family
Lonicera x bella, Hybrid Honeysuckle* 0; uncommon in dune forest; 2025
Lonicera morrowii, Morrow Honeysuckle* 0; abundant throughout; 2005, 2025

Caryophyllaceae, Pink Family
Arenaria serpyllifolia, Thyme-leaved Sandwort* 0; common in open upland; 2005, 2025
Cerastium semidecandrum, Small Mouse-eared Chickweed* 0; locally common in disturbed open upland; 2025
Petrorhagia prolifera, Childing Pink* 0; locally common in open upland; 2005, 2025
Saponaria officinalis, Bouncing Bet* 0; locally abundant in upland; 2005, 2025
Silene coronaria, Mullein Pink* 0; rare in open upland; 2025
Silene latifolia (*Silene pratensis*), White Champion* 0; rare in open upland; 2005, 2025
Silene vulgaris, Bladder Champion* 0; common in open upland; 2005, 2025

Celastraceae, Bittersweet Family
Celastrus scandens, American Bittersweet 3; rare in dune forest edge; 2005, 2025

Cistaceae, Rockrose Family
Hudsonia tomentosa, False Heather 10; abundant in open dunes; 2005, 2025

Cleomaceae, Spider-plant Family
Polanisia dodecandra var. *dodecandra*, Redwhisker Clammy-weed 5; uncommon in semi-open forest; 2025

Cornaceae, Dogwood Family
Cornus amomum subsp. *obliqua* 2; uncommon in interdunal wetlands; 2005, 2025
Cornus sericea, Red-osier Dogwood 2; common in interdunal wetlands; 2005, 2025

Elaeagnaceae, Oleaster Family

Elaeagnus umbellata, Autumn Olive* 0; rare in open upland; 2005, 2025

Ericaceae, Heath Family (Pyrolaceae, Wintergreen Family & Monotropaceae, Indian-pipe Family; in part)

Arctostaphylos uva-ursi, Bearberry 8; rare in open dunes; 2005, 2025

Chimaphila maculata, Spotted Wintergreen 8; uncommon in dune forest; 2005, 2025

Gaultheria procumbens, Wintergreen 5; rare in upland; 2005, 2025

Monotropa uniflora, Indian-pipe 5; rare in dune forest; 2005, 2025

Euphorbiaceae, Spurge Family

Euphorbia corollata, Flowering Spurge 4; rare in open dunes; 2005, 2025

Euphorbia cyparissias, Cypress Spurge* 0; rare in disturbed open upland; 2025

Euphorbia maculata, Spotted Spurge 0; uncommon in open dunes; 2005, 2025

Euphorbia polygonifolia, Seaside Spurge 10; common in open dunes; 2005, 2025

Fabaceae, Pea Family

Medicago lupulina, Black Medick* 0; uncommon in disturbed open upland; 2005, 2025

Melilotus alba, White Sweet-clover* 0; common in open upland; 2005, 2025

Trifolium repens, White Clover* 0; rare in disturbed open upland; 2025

Fagaceae, Beech Family

Fagus grandifolia, American Beech 6; uncommon tree in dune forest; 2005, 2025

Quercus alba, White Oak 5; rare in dune forest; 2005, 2025

Quercus ellipsoidalis, Hill's Oak 4; rare in open dunes; 2005, 2025

Quercus palustris, Pin Oak 8; rare in interdunal wetlands; 2005, 2025

Quercus rubra, Red Oak 5; common in dune forest; 2005, 2025

Gentianaceae, Gentian Family

Centaurium erythraea, Forking Centaury* 0; locally common in interdunal wetlands; 2005, 2025

Geraniaceae, Geranium Family

Geranium pusillum, Small Geranium* 0; uncommon in disturbed upland; 2005, 2025

Geranium robertianum, Herb Robert 3; uncommon in dune forest; 2005

Grossulaceae, Gooseberry Family

Ribes cynosbati, Prickly Gooseberry 4; rare in dune forest; 2005, 2025

Haloragaceae, Water-milfoil Family

Myriophyllum heterophyllum, Various-leaved Water-milfoil 6; uncommon in Grand River; 2025

Hamamelidaceae, Witch-hazel Family

Hamamelis virginiana, American Witch-hazel 5; common in dune forest; 2005, 2025

Hypericaceae, St. John's-wort Family (Clusiaceae, St. John's-wort Family)

Hypericum majus, Larger Canada St. John's-wort 4; common in interdunal wetlands; 2005, 2025

Hypericum perforatum, Common St. John's-wort* 0; uncommon in open dunes; 2005, 2025

Juglandiceae, Walnut Family

Juglans cinerea, Butternut 5; uncommon in dune forest; 2005, 2025

Juglans nigra, Black Walnut 5; seedling uncommon on Grand River shore; 2025

Lamiaceae, Mint Family

Lamium purpureum, Purple Dead-nettle* 0; uncommon in open upland; 2005, 2025

Leonurus cardiaca, Motherwort* 0; uncommon in disturbed upland; 2025

Lycopus americanus, Cut-leaved Water Horehound 2; locally abundant in interdunal wetlands; 2005, 2025

Lycopus uniflorus, Northern Bugleweed 2; locally common in wetlands; 2025

Mentha canadensis (*Mentha arvensis*), Wild Mint 3; locally common in interdunal wetlands; 2005, 2025

Monarda punctata, Horse Mint 4; abundant in open dunes; 2005, 2025

Nepeta cataria, Catnip* 0; uncommon in dune forest; 2005, 2025

Scutellaria galericulata, Marsh Skullcap 5; uncommon in interdunal wetlands; 2025

Teucrium canadense var. *occidentale*, Wood-sage 4; rare on Grand River shore; 2005, 2025

Lauraceae, Laurel Family

Sassafras albidum, Sassafras 5; abundant in dune forest; 2005, 2025

Lythraceae, Loosestrife Family

Lythrum salicaria, Purple Loosestrife* 0; rare in interdunal wetlands; 2005, 2025

Malvaceae, Mallow Family (Tiliaceae, Linden Family; in part)

Tilia americana, Basswood 5; uncommon in dune forest; 2025

Molluginaceae, Carpetweed Family

Mollugo verticillata, Carpetweed* 0; rare in disturbed open upland; 2025

Moraceae, Mulberry Family

Morus alba, White Mulberry* 0; rare in dune forest; 2025

Nelumbonaceae, Lotus Family

Nelumbo lutea, American Lotus 8; seedheads common on Grand River shore; 2025

Nymphaeaceae, Water-lily Family

Nymphaea odorata, Sweet-scented Water-lily 6; rare in Grand River; 2025

Oleaceae, Olive Family

Fraxinus americana, White Ash 5; uncommon in upland; 2005, 2025

Syringa vulgaris, Common Lilac* 0; uncommon in open upland; 2005, 2025

Onagraceae, Evening-primrose Family

Epilobium ciliatum, Northern Willow-herb 3; uncommon in interdunal wetlands; 2025

Ludwigia palustris, Water-purslane 4; uncommon on Grand River shore; 2025

Oenothera biennis, Common Evening-primrose 2; rare in open dunes; 2005, 2025

Orobanchaceae, Broom-rape Family (Scrophulariaceae, Figwort Family; in part)

Agalinis purpurea subsp. *parviflora*, Purple False Foxglove 7; abundant in interdunal wetlands; 2005, 2025

Conopholis americana, Squaw-root 10; rare in dune forest; 2005, 2025

Melampyrum lineare, Cow-wheat 6; rare in dune forest; 2005, 2025

Oxalidaceae, Wood-sorrel Family

Oxalis dillenii (*Oxalis stricta*), Common Yellow Wood-sorrel 0; uncommon in upland; 2005, 2025

Phytolaccaceae, Pokeweed Family

Phytolacca americana, Pokeweed 2; rare in upland; 2005, 2025

Plantaginaceae, Plantain Family (Scrophulariaceae, Figwort Family; in part)

Linaria dalmatica, Dalmatian Toadflax* 0; common to abundant in open dunes; 2005, 2025

Linaria vulgaris, Butter-and-eggs* 0; uncommon in open dunes; 2005, 8/5/25

Nuttallanthus canadensis (*Linaria canadensis*), Blue Toadflax 8; uncommon in open dunes; 2005, 2025

Plantago lanceolata, English Plantain* 0; uncommon in disturbed open upland; 2005, 2025

Plantago major, Common Plantain* 0; uncommon in disturbed open upland; 2005, 2025

Plantago rugelii, Red-stalked Plantain 0; rare in disturbed open upland; 2025

Veronica arvensis, Corn Speedwell* 0; locally common in disturbed open upland; 2025

Veronica officinalis, Common Speedwell* 0; uncommon in disturbed open upland; 2025

Polygalaceae, Milkwort Family

Polygala paucifolia, Fringed Polygala 7; rare in dune forest; 2005, 2025

Polygonaceae, Smartweed Family

Persicaria hydropiper (*Polygonum hydropiper*), Water-pepper 1; uncommon in interdunal wetlands; 2005, 2025

Persicaria lapathifolia (*Polygonum lapathifolium*), Willow-weed 0; uncommon in interdunal wetlands; 2005, 2025

Persicaria maculosa, Lady's-thumb* 0; uncommon in interdunal wetlands; 2025

Persicaria punctata (*Polygonum punctatum*), Dotted Smartweed 5; common in interdunal wetlands; 2005, 2025

Polygonum achoreum, Beak-seeded Knotweed 0; rare in disturbed open upland; 2025

Polygonum articulatum (*Polygonella articulata*), Jointweed 8; rare in open dunes; 2005, 2025

Polygonum aviculare subsp. *depressum*, Prostrate Knotweed* 0; locally common in disturbed open upland; 2025

Rumex acetosella, Sheep Sorrel* 0; uncommon in open dunes; 2005, 2025

Rumex obtusifolius, Bitter Dock* 0; rare in disturbed open upland; 2025

Ranunculaceae, Buttercup Family

Aquilegia canadensis, Wild Columbine 5; uncommon in dune forest; 2005, 2025

Ranunculus sceleratus, Cursed Crowfoot 1; rare on Grand River shore; 2005, 2025

Rosaceae, Rose Family

Amelanchier arborea, Downy Juneberry 4; uncommon in dune forest; 2025

Amelanchier interior, Swamp Sugar-pear 4; uncommon in dune forest; 2005, 2025

Amelanchier laevis, Smooth Shadbush 4; rare dune forest; 2025

Aronia prunifolia, Chokeberry 5; uncommon in interdunal wetlands; 2005, 2025

Fragaria virginiana, Wild Strawberry 2; uncommon in upland; 2005, 2025

Malus pumila Miller, Apple* 0; uncommon open upland; 2005, 2025

Potentilla anserina, Silverweed 5; locally common in interdunal wetlands; 2005, 2025

Potentilla simplex, Old-field Cinquefoil 2; uncommon in interdunal wetlands; 2005, 2025

Prunus pensylvanica, Pin Cherry 3; uncommon in dune forest; 2005, 2025

Prunus pumila var. *pumila*, Sand Cherry 8; uncommon of open dunes; 2005, 2025

Prunus serotina, Wild Black Cherry 2; uncommon in dune forest; 2005, 2025

Prunus virginiana, Choke Cherry 2; locally common in dune forest; 2005, 2025

Rosa multiflora, Multiflora Rose* 0; uncommon in open dunes; 2005, 2025

Rosa rubiginosa, Sweetbrier* 0; rare in dryer interdunal wetland; 2025

Rubus allegheniensis, Common Blackberry 1; uncommon in open upland; 2005, 2025

Rubus flagellaris, Northern Dewberry 1; rare in open upland; 2025

Rubus strigosus, Wild Red Raspberry 2; locally common in interdunal wetlands; 2005, 2025

Sorbus aucuparia, European Mountain-ash* 0; rare in dune forest; 2025

Spiraea tomentosa, Steeplebush 5; common to abundant in interdunal wetlands; 2005, 2025

Rubiaceae, Madder Family

Cephalanthus occidentalis, Buttonbush 7; rare in interdunal wetland; 2025

Galium aparine, Cleavers 0; uncommon in dune forest; 2005, 2025
Galium circaeazans, White Wild Licorice 4; uncommon in dune forest; 2025
Galium pilosum, Hairy Bedstraw 6; uncommon in dune forest; 2025
Rutaceae, Rue Family
Ptelea trifoliata var. *mollis*, Hop-tree 4; uncommon in upland; 2005, 2025
Salicaceae, Willow Family
Populus deltoides subsp. *monilifera*, Eastern Cottonwood 1; common in open dunes; 2005, 2025
Populus nigra, Lombardy Poplar* 0; uncommon in open dunes; 2005, 2025
Populus tremuloides, Quaking Aspen 1; uncommon in dune forest; 2005, 2025
Salix cordata, Furry Willow 10; rare in open dunes; 2005, 2025
Salix discolor, Pussy Willow 1; uncommon in interdunal wetlands; 2005, 2025
Salix eriocephala, Heart-leaved Willow 2; uncommon in interdunal wetlands; 2025
Salix interior (*Salix exigua*), Sandbar Willow 1; locally common in interdunal wetlands; 2005, 2025
Salix myricoides, Blueleaf Willow 9; abundant in open dunes; 2005, 2025
Salix nigra, Black Willow 5; rare along the Grand River; 2005, 2025
Sapindaceae, Soapberry Family
Acer rubrum, Red Maple 1; locally uncommon in interdunal wetlands and dune forest; 2005, 2025
Acer saccharum, Sugar Maple 5; uncommon in dune forest; 2005, 2025
Scrophulariaceae, Figwort Family
Verbascum blattaria, Moth Mullein* 0; uncommon in open dunes; 2005, 2025
Verbascum thapsus, Common Mullein* 0; uncommon throughout; 2005, 2025
Simaroubaceae, Quassia Family
Ailanthus altissima, Tree-of-Heaven* 0; uncommon in disturbed upland; 2005, 2025
Urticaceae, Nettle Family
Boehmeria cylindrica, False Nettle 5; uncommon in interdunal wetlands; 2025
Urtica dioica subsp. *gracilis*, Stinging Nettle 1; uncommon in interdunal wetlands; 2025
Verbenaceae, Vervain Family
Verbena hastata, Blue Vervain 4; common in interdunal wetlands; 2005, 2025
Verbena stricta, Hoary Vervain* 0; locally common in disturbed open upland; 2025
Violaceae, Violet Family
Viola blanda var. *palustriformis*, Sweet White Violet 5; locally abundant in interdunal wetlands; 2025
Vitaceae, Grape Family
Vitis aestivalis, Summer Grape 6; rare in dune forest; 2005, 2025
Vitis riparia, River-bank Grape 3; uncommon throughout; 2005, 2025

Fauna

Amphibians

Bufonidae, Toad Family

Anaxyrus fowleri, Fowler's Toad; 2005, 2025

Hylidae, Tree Frog Family

Hyla versicolor, Eastern Gray Treefrog; 2005, 2025

Ranidae, Frog Family

Lithobates clamitans, Green Frog; 2025

Lithobates pipiens, Northern Leopard Frog; 2025

Lithobates sylvaticus, Wood Frog; 2025

Reptiles

Emydidae, Pond and Box Turtle Family

Graptemys geographica, Common Map Turtle; 2025

Mammals

Soricidae, Shrew Family

Blarina brevicauda, Northern Short-tail Shrew; 2025

Leporidae, Rabbit Family

Sylvilagus floridanus, Eastern Cottontail; 2005, 2025

Sciuridae, Squirrel Family

Tamias striatus, Eastern Chipmunk; 2005, 2025

Tamiasciurus hudsonicus, Red Squirrel; 2005, 2025

Sciurus carolinensis, Eastern Gray Squirrel; 2005, 2025

Sciurus niger, Fox Squirrel; 2025

Muridae; Rat, Mouse, Lemming, and Vole Family

Peromyscus maniculatus, Deer Mouse; 2025

Microtus pennsylvanicus, Meadow Vole; 2025

Canidae, Dog Family

Vulpes vulpes, Red Fox; 2025

Mustelidae, Weasel Family

Mephitis mephitis, Striped Skunk; 2025

Cervidae, Deer Family

Odocoileus virginianus, White-tail Deer; 2005, 2025

Birds

- The American Ornithologist's Union Check-list of North American Birds 7th edition, 58th supplement (August 2017)

- SR Summer Resident and probable breeding in or near preserve: 55 species

Anatidae, Waterfowl Family

Branta canadensis, Canada Goose; SR 2005, 2025

Anas platyrhynchos, Mallard; SR 2002, 2025

Bucephala clangula, Common Goldeneye; 2025

Mergus merganser, Common Merganser; 2025

Mergus serrator, Red-breasted Merganser; 2025

Phasianidae, Grouse and Turkey Family

Meleagris gallopavo, Wild Turkey; SR 2025

Columbidae, Pigeon and Dove Family

Zenaida macroura, Mourning Dove; SR 2005, 2025

Charadriidae, Plover Family

Charadrius vociferus, Killdeer; SR 2005, 2025

Laridae, Gull and Tern Family

Larus delawarensis, Ring-billed Gull; 2005, 2025

Larus argentatus, Herring Gull; 2005, 2025

Gaviidae, Loon Family

Gavia immer, Common Loon; 2025

Phalacrocoracidae, Cormorant Family

Phalacrocorax auritus, Double-crested Cormorant; SR 2005, 2025

Ardeidae, Bittern and Heron Family

Ardea herodias, Great Blue Heron; SR2005, 2025

Ardea alba, Great Egret; 2025

Butorides virescens, Green Heron; SR 2005, 2025

Cathartidae, New World Vulture Family

Cathartes aura, Turkey Vulture; SR 2005, 2025

Accipitridae, Hawk, Kite, and Eagle Family

Haliaeetus leucocephalus, Bald Eagle; 2005, 2025

Buteo jamaicensis, Red-tailed Hawk; SR 2005, 2025

Alcedinidae, Kingfisher Family

Megasceryle alcyon, Belted Kingfisher; SR 2005, 2025

Picidae, Woodpecker Family

Melanerpes erythrocephalus, Red-headed Woodpecker; SR 2025

Melanerpes carolinus, Red-bellied Woodpecker; SR 2025

Picoides pubescens, Downy Woodpecker; SR 2005, 2025

Picoides villosus, Hairy Woodpecker; SR 2002, 2025

Colaptes auratus, Northern Flicker; SR 2005, 2025

Dryocopus pileatus, Pileated Woodpecker; SR 2005, 2025

Falconidae, Caracara and Falcon Family

Falco columbarius, Merlin; SR 2025

Falco peregrinus, Peregrine Falcon; SR 2005, 2025

Tyrannidae, Flycatcher Family

Contopus virens, Eastern Wood-Pewee; SR 2005, 2025

Myiarchus crinitus, Great Crested Flycatcher; SR 2002, 2025

Tyrannus tyrannus, Eastern Kingbird; SR 2005, 2025

Vireonidae, Vireo Family

Vireo gilvus, Warbling Vireo; SR 2002, 2025

Vireo solitarius, Blue-headed Vireo; SR 2025

Corvidae, Jay and Crow Family

Cyanocitta cristata, Blue Jay; SR 2002, 2025
Corvus brachyrhynchos, American Crow; SR 2002, 2025

Hirundinidae, Swallow Family

Progne subis, Purple Martin; SR 2002, 2025
Tachycineta bicolor, Tree Swallow; SR 2005, 2025
Riparia riparia, Bank Swallow; SR 2002, 2025
Hirundo rustica, Barn Swallow; SR 2002, 2025

Paridae, Chickadee and Titmouse Family

Poecile atricapillus, Black-capped Chickadee; SR 2002, 2025
Baeolophus bicolor, Tufted Titmouse; SR 2002, 2025

Sittidae, Nuthatch Family

Sitta carolinensis, White-breasted Nuthatch; SR 2002, 2025

Troglodytidae, Wren Family

Troglodytes aedon, House Wren; SR 2005, 2025

Turdidae, Thrush Family

Sialia sialis, Eastern Bluebird; SR 2005, 2025
Turdus migratorius, American Robin; SR 2002, 2025

Mimidae, Mockingbird and Thrasher Family

Dumetella carolinensis, Gray Catbird; SR 2005, 2025

Sturnidae, Starling Family

Sturnus vulgaris, European Starling*; SR 2002, 2025

Bombycillidae, Waxwing Family

Bombycilla cedrorum, Cedar Waxwing; SR 2002, 2025

Passeridae, Old World Sparrow Family

Passer domesticus, House Sparrow*; SR 2005, 2025

Fringillidae, Finch Family

Haemorhous mexicanus, House Finch*; SR 2005, 2025
Spinus tristis, American Goldfinch; SR 2005, 2025

Passerellidae, New World Sparrow Family

Pipilo erythrophthalmus, Eastern Towhee; SR 2005, 2025
Spizella arborea, American Tree Sparrow; 2025
Spizella passerina, Chipping Sparrow; SR 2005, 2025
Melospiza melodia, Song Sparrow; SR 2005, 2025
Zonotrichia albicollis, White-throated Sparrow; 2025

Icteridae, Blackbird Family

Icterus galbula, Baltimore Oriole; SR 2005, 2025
Agelaius phoeniceus, Red-winged Blackbird; SR 2005, 2025
Molothrus ater, Brown-headed Cowbird; SR 2005, 2025
Quiscalus quiscula, Common Grackle; SR 2005, 2025

Parulidae, Wood Warbler Family

Setophaga ruticilla, American Redstart; SR 2005, 2025
Setophaga magnolia, Magnolia Warbler; 2005, 2025
Setophaga petechia, Yellow Warbler; SR 2005, 2025
Setophaga palmarum, Palm Warbler; 2005, 2025
Setophaga pinus, Pine Warbler; SR 2025
Setophaga coronata, Yellow-rumped Warbler; 2005, 2025
Cardellina canadensis, Canada Warbler; 2025

Cardinalidae, Cardinal Family

Cardinalis cardinalis, Northern Cardinal; SR 2005, 2025
Pheucticus ludovicianus, Rose-breasted Grosbeak; SR 2005, 2025
Passerina cyanea, Indigo Bunting; SR 2005, 2025

Mollusks

Bivalves

Unionidae, Freshwater Mussel Family

Amblema plicata, Threeridge; on sandy beach of Grand River; 2005, 2025
Lasmigona complanata, White Heelsplitter; on sandy beach of Grand River; 2025
Leptodea fragilis, Fragile Papershell; on sandy beach of Grand River; 2025
Potamilus alatus, Pink Heelsplitter; on sandy beach of Grand River; 2025
Quadrula quadrula, Mapleleaf; on sandy beach of Grand River; 2005, 2025
Truncilla truncata, Deertoe; on sandy beach of Grand River; 2025

Dreissenidae, Zebra Mussel Family

Dreissena polymorpha, Zebra Mussel*; on sandy beach of Grand River; 2005, 2025
Dreissena rosteriformis bugensis, Quagga Mussel*; on sandy beach of Grand River; 2025

Gastropods: Snails

Polygyridae

Webbhelix multilineata, Striped Whitelip; in interdunal wetlands; 2025

VII. Supplemental Plant Lists

Species collected by William S. Martinus and vouchered to University of Michigan Herbarium

Several plant species were collected to update species scientific data with modern criteria: date following species name is the year it was last collected in Ottawa County. One species was documented to MNFI as Special Concern. Two native species are new to Ottawa County. Voucher specimens that have been collected in 2025 will receive final determinations in early 2026. The specimens take several years to correctly process, mount, and post at the U of M Herbarium website. Specimen collection data can be accessed at the MICHIGAN FLORA ONLINE website under the species name, year, county, or collector (William S. Martinus).

Species	Status, last collection year
<i>Carex viridula</i> , Green Sedge	1959
<i>Cyperus schweinitzii</i> , Rough Sand Sedge	1939
<i>Rhynchospora capillacea</i> , Hair Beak-rush	new county species
<i>Juncus brachycephalus</i> , Short-headed Rush	1941
<i>Juncus brevicaudatus</i> , Narrow-panicked Rush	new county species
<i>Sporobolus cryptandrus</i> , Sand Dropseed	1947
<i>Triplasis purpurea</i> , Sand Grass	MNFI record
<i>Stuckenia pectinata</i> , Sago Pondweed	1941
<i>Centaurea stoebe</i> subsp. <i>micranthos</i> , Spotted Knapweed	1979
<i>Lobelia kalmii</i> , Brook Lobelia	1895
<i>Agalinis purpurea</i> subsp. <i>parviflora</i> , Purple False Foxglove	1910
<i>Linaria dalmatica</i> , Dalmatian Toadflax	1959
<i>Polygonum aviculare</i> subsp. <i>depressum</i> , Prostrate Knotweed	1995
<i>Rosa rubiginosa</i> , Sweetbrier	1947
<i>Populus deltoides</i> subsp. <i>monilifera</i>	1980

Species previously recorded in the 2005 report but not observed in 2025

There are several reasons that can explain why a large number of plants and animals were not observed in 2025, such as: many were rare and easily overlooked, numerous species vanished as a result of rampant deer population, some annuals and perennials did not reproduce, 2025 was recorded as a moderate drought year, habitat changes in wetlands, erosion along the Grand River, and plant keys much improved in the revised Michigan Flora resulting in species misidentifications in earlier inventories.

Huperzia lucidula, Shining Clubmoss
Dryopteris intermedia, Evergreen Woodfern
Osmunda regalis, Royal Fern
Osmundastrum cinnamomeum (*Osmunda cinnamomea*), Cinnamon Fern
Taxus canadensis, Canada Yew
Asparagus officinalis, Garden Asparagus*
Carex blanda, Woodland Sedge
Carex brevior, Fescue Sedge
Carex flava, Large Yellow Sedge
Carex pellita, Woolly Sedge
Carex tenera, Marsh Sedge
Eleocharis elliptica, Golden-seeded Spike-rush
Dioscorea villosa, Wild Yam
Cypripedium acaule, Pink Lady-slipper
Spiranthes cernua, Nodding Ladies'-tresses
Danthonia spicata, Common Wild Oat-grass
Dichanthelium clandestinum (*Panicum clandestinum*), Deer-tongue Grass
Dichanthelium columbianum (*Panicum columbianum*), American Panic-grass
Dichanthelium depauperatum (*Panicum depauperatum*), Starved Panic-grass
Dichanthelium praecocius (*Panicum praecocius*), Early-branching Panic-grass
Festuca rubra, Red Fescue*

Festuca saximontana, Northern Fescue
Festuca trachyphylla, (*Festuca ovina*) Sheep Fescue*
Glyceria striata, Fowl Manna Grass
Leersia virginica, White Grass
Sphenopholis intermedia, Slender Wedgegrass
Smilax hispida (*Smilax tamnoides*), Bristly Greenbrier
Smilax lasioneura, Carrion-flower
Smilax rotundifolia, Common Greenbrier
Trillium grandiflorum, Common Trillium
Viburnum opulus, European Highbush Cranberry
Chenopodium glaucum, Oak-leaved Goosefoot*
Salsola tragus, Russian-thistle*
Asclepias incarnata, Swamp Milkweed
Aralia nudicaulis, Wild Sarsaparilla
Bidens cernua, Nodding Bur-marigold
Erigeron philadelphicus, Common Fleabane
Erigeron strigosus, Daisy Fleabane
Hieracium aurantiacum, Orange Hawkweed*
Krigia virginica, Dwarf Dandelion
Prenanthes alba, Rattlesnake-root
Solidago altissima, Tall Goldenrod
Caulophyllum thalictroides, Blue Cohosh
Betula pendula, European White Birch*
Cakile edentula, Sea-rocket
Diplotaxis muralis, Wall Rocket*
Diplotaxis tenuifolia, Sand Rocket*
Campanula rotundifolia, Harebell
Lonicera xylosteum, European Fly Honeysuckle*
Cerastium fontanum, Mouse-ear Chickweed*
Dianthus armeria, Deptford Pink*
Silene armeria (*Atocion armeria*), Sweet-William Catchfly*
Silene latifolia (*Silene pratensis*), White Champion*
Calystegia sepium, Hedge Bindweed
Cornus florida, Flowering Dogwood
Sedum acre, Mossy Stonecrop*
Lathyrus latifolius, Everlasting Pea*
Melilotus officinalis, Yellow Sweet-clover*
Quercus velutina, Black Oak
Geranium robertianum, Herb Robert
Hypericum canadense, Canadian St. John's-wort
Scutellaria lateriflora, Mad-dog Skullcap
Linnaea borealis, Twinflower
Nyssa sylvatica, Sour-gum
Circaea canadensis subsp. *canadensis*, Enchanter's-nightshade
Agalinis tenuifolia, Common False Foxglove
Pedicularis canadensis, Wood-betony
Dicentra canadensis, Squirrel-corn
Dicentra cucullaria, Dutchman's-breeches
Mimulus ringens, Square-stemmed Monkey-flower
Fallopia scandens (*Polygonum scandens*), Black-bindweed
Persicaria amphibia (*Polygonum amphibium*), Water Smartweed
Rumex crispus, Curly Dock*
Actaea pachypoda, White Baneberry
Hepatica americana, Round-lobed Hepatica
Ranunculus abortivus, Small-flowered Buttercup
Physocarpus opulifolius, Ninebark
Rosa blanda, Meadow Rose
Rosa palustris, Swamp Rose
Rubus hispidus, Swamp Dewberry
Galium lanceolatum, Yellow Wild Licorice
Galium triflorum, Fragrant Bedstraw
Mitchella repens, Partridge Berry

Populus alba, Silver Poplar*
Populus grandidentata, Largetooth Aspen
Salix euxina (*Salix fragilis*), Crack Willow*
Salix pedicellaris Pursh, Bog Willow
Acer platanoides, Norway Maple*
Physalis heterophylla, Clammy Ground-cherry
Solanum ptychanthum, Black Nightshade
Ulmus americana, American Elm
Ulmus pumila, Siberian Elm*
Laportea canadensis, Wood Nettle
Viola macloskeyi, Smooth White Violet

Amphibians

Plethodon cinereus, Red-backed Salamander
Pseudacris crucifer, Spring Peeper
Pseudacris triseriata triseriata, Western Chorus Frog

Reptiles

Coluber constrictor foxi, Blue Racer

Mammals

Procyon lotor, Raccoon

Birds

Cygnus columbianus, Tundra Swan
Chordeiles minor, Common Nighthawk
Chaetura pelagica, Chimney Swift
Scolopax minor, American Woodcock
Chroicocephalus philadelphia, Bonaparte's Gull
Buteo lagopus, Rough-legged Hawk
Bubo virginianus, Great Horned Owl
Empidonax traillii, Willow Flycatcher
Vireo olivaceus, Red-eyed Vireo
Stelgidopteryx serripennis, Northern Rough-winged Swallow
Sitta canadensis, Red-breasted Nuthatch
Sitta carolinensis, White-breasted Nuthatch
Poliophtila caerulea, Blue-gray Gnatcatcher
Regulus calendula, Ruby-crowned Kinglet
Hylocichla mustelina, Wood Thrush
Toxostoma rufum, Brown Thrasher
Spinus pinus, Pine Siskin
Plectrophenax nivalis, Snow Bunting
Junco hyemalis, Dark-eyed Junco
Setophaga fusca, Blackburnian Warbler
Setophaga discolor, Prairie Warbler
Piranga olivacea, Scarlet Tanager

Mollusks

Pelecypoda: Mussels

Pyganodon grandis, Giant Floater

Gastropoda: Snails

Anguispira alternata, Flamed Disc
Succinea ovalis, Oval Ambersnail
Campeloma decisum, Pointed Campeloma
Pleurocera acuta, Sharp Hornsnail
Physella gyrina, Tadpole Snail
Planorbella trivolvis, Marsh Rams-horn

VIII. References

- Comer, P.J., D.A. Albert, H.A. Wells, B.L. Hart, J.B. Raab, D.L. Price, D.M. Kashian, R.A. Corner, and D.W. Schuen. 1995. Michigan's pre-settlement vegetation, as interpreted from the General Land Office Surveys 1816-1856. Michigan Natural Features Inventory, Lansing, MI.
- Endangered, Threatened, Special Concern, and Probably Extirpated list. Endangered Species Program of the Michigan Department of Natural Resources and the Michigan Natural Features Inventory. April 9, 2009.
- Kost, M.A., D.A. Albert, J.G. Cohen, B.S. Slaughter, R.K. Schillo, C.R. Weber, and K.A. Chapman. 2007. Natural Communities of Michigan: Classification and Description. Michigan Natural Features Inventory, Report Number 2007-21, Lansing, MI. 314 pp.
- Herman, K. D., L. A. Masters, M. R. Penskar, A. A. Reznicek, G. S. Wilhelm, W. W. Brodowicz, and K. P. Gardiner. (2001). Floristic Quality Assessment with Wetland Categories and Computer Applications for the State of Michigan - Revised, 2nd Edition. Lansing: Michigan Department of Natural Resources, Wildlife, Natural Heritage Program.
- Voss, Edward G. and Anton A. Reznicek (2012). Field Manual of Michigan Flora. The University of Michigan Press.
- *MICHIGAN FLORA ONLINE*. A. A. Reznicek, E. G. Voss, & B. S. Walters. February 2011. University of Michigan.

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.

GU unrankable

? 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.

SNR Not ranked