

# THE NATURAL COMMUNITIES AND FLORA OF THE MATTHAEI BOTANICAL GARDENS AND NICHOLS ARBORETUM



BEVERLY WALTERS : MARY HEJNA : CONNIE CRANCER : JEFF PLAKKE



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# ACKNOWLEDGEMENTS

This report is the product of a project entitled *Assessing Globally-Ranked At-Risk Native Plant Communities: A General Conservation Survey of High Quality Natural Areas of the University of Michigan Matthaei Botanical Gardens and Nichols Arboretum*, which was funded by the Institute of Museum and Library Services.

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Many thanks also to Paul Berry for releasing Bev from duties at the University of Michigan Herbarium so that she could conduct the surveys, to Tony Reznicek for assistance with plant identification, and to Aunita Erskine for assistance in the field.

Photographs on cover page and page 94 taken by MBGNA Staff. All other photographs were taken by Mary Hejna and Bev Walters.

Cover image: *Cypripedium reginae* in Radrick Fen

Left: Radrick Forest

Right: *Lilium philadelphicum* in Radrick Fen



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# ABSTRACT

The University of Michigan Matthaei Botanical Gardens and Nichols Arboretum received \$150,000 for two years to assess the natural plant communities growing on its four properties. This was a critically urgent project as there are 16 distinct natural plant communities on the properties, the majority of which are at-risk around the world, in the Nation, and in the State of Michigan. Managing these natural communities for long-term conservation helps project our Nation's rich natural heritage for this and future generations.

This project produced detailed botanical inventories of each natural area on the four properties, as well as a Floristic Quality Assessment for each. Natural areas were delineated based upon plant community, and each occurrence of a particular community was typically surveyed individually. These results will be used to create a set of itemized natural area stewardship recommendations, which the institution will use to:

1. *Establish long-term conservation strategies for plant populations and plant communities;*
2. *Provide for the educational use of these communities while minimizing negative impacts to them, and;*
3. *Direct future research on these sites by students and faculty at the University of Michigan and other colleges and universities in the region.*

A web-page has been developed so that University faculty and students, the public and interested professionals can find out about the project and download maps and spatial data pertaining to the project and properties. As of April 2013 four data types are available for download: .pdfs, ESRI shapefiles and file geodatabases for ArcGIS (or other compatible software), and KMZ files for Google Earth. These are searchable and can be sorted by property. A "Links" tab provides links to other sources of spatial data as well as information about our regional ecology and botany. The page can be found at: <http://www.lsa.umich.edu/mbg/see/gis/>

The majority of the data currently posted is "base data" for the properties. These include things like property boundaries, roads and trails, hydrology, building footprints and topographic contours, as well as 2010 aerial photos and LiDAR-based elevation data from the Southeast Michigan Council of Governments (SEMCOG) for the areas immediately surrounding each property. The data produced during the botanical survey include basic land cover types, natural community delineation, and areas of past soil disturbance. Other information, such as big tree maps and stewardship/restoration work, and more will be added in the future.

The "Maps and Reports" section contains summarized results of the Floristic Quality Assessments connected with our botanical survey as well as "pre-made" maps, which can be sorted by property. The maps fall into the following categories:

- *Base maps, showing roads and trails on an aerial photograph*
- *Cover type, showing the basic land cover of each property (grassland, hardwood forest, etc.)*
- *Floristic quality, showing the results of our survey and analysis*
- *Historic aerials posters, formatted to print at 36x48", showing time series aerial photographs*
- *Natural communities, showing the high-quality natural areas identified during our survey*
- *Notable plants, showing point locations of selected plants and other features*
- *Relief map, showing a 3D-effect terrain map of each property with areas of steep slope emphasized*
- *Soil disturbance, showing areas of past till agriculture, wetland ditching, and gravel mining*
- *Soils, showing soil types as mapped by the USDA Natural Resources Conservation Service*
- *Survey areas, showing the areas where botanical inventories were completed in 2011-2012*
- *Circa 1800 landcover, showing early 19<sup>th</sup> century ecosystems delineated from surveyor's notes by the Michigan Natural Features Inventory*



*From top left clockwise: Mary Hejna, Jeff Plakke, Bev Walters, Connie Crancer, in various parts of Mud Lake Bog*

## Methods for Botanical Surveys of MBGNA Natural Areas 2011-2012

*Site locations:* Michigan, Washtenaw Co., Ann Arbor, University of Michigan properties at Matthaei Botanical Gardens, Nichols Arboretum, Horner McLaughlin Woods and Mud Lake Bog

*Surveyors:* Bev Walters, Botanist; Connie Crancer, Natural Areas Specialist; Mary Hejna, GIS Specialist

We conducted botanical surveys and delineations of the natural areas in each of the four sites managed by the Matthaei Botanical Gardens and Nichols Arboretum over the course of two field seasons in 2011 and 2012. Natural plant communities were identified according to the parameters outlined by the Michigan Natural Features Inventory (MNFI) and areas that were of medium to high quality were visited at least three times (spring, summer and fall), with more effort given to the highest quality areas. Surveys were conducted by walking in a grid or zigzag pattern as much as the terrain would allow. In large areas where dense vegetation, topography or deep water made navigation difficult, such as the swamps at Mud Lake Bog, a meander approach was incorporated, and by using GPS we were able to cover different routes during our treks through these areas. Plant lists and ecological notes were recorded in the field according to plant community. Species not recognized in the field were collected for identification later using higher magnification and plant keys. A few particularly troublesome collections were taken to University of Michigan Herbarium for determination by Dr. A. A. Reznicek. Low quality natural areas dominated by invasive species were noted, but not thoroughly surveyed.

GPS waypoints were taken in the field to mark significant rare and invasive plant occurrences, plant specimen collections, and to delineate boundaries between plant communities using ArcMap. Both a Trimble GeoXH 3000 unit and a Garmin eTrex Legend GPS unit were used to record points. Natural features, man-made alterations to the landscape and refuse were also marked. After the natural plant communities were mapped using aerial photography and the field GPS waypoints, field verification was conducted and plant community boundaries adjusted accordingly.

Plant species occurrence field data was entered into a MS Access database according to the plant communities present at each site. Using the methods detailed by the Floristic Quality Assessment, Michigan Dept. of Natural Resources, plant species lists with Floristic Quality Index calculations were generated for each natural area surveyed. Coefficient of Conservatism and Coefficient of Wetness values used in the calculations were the revised version from the University of Michigan Herbarium, February 2013. Summary reports were generated to compare floristic quality data between all natural plant communities included in the four properties and between the different natural areas within each site. Comprehensive reports including all the species found at each of the 4 sites were also prepared.

Field notes on ecology, invasive species and notable plants were transcribed into digital format for each of the four sites according to the natural plant communities. Notes for lower quality areas not included in the botanical surveys are located after the natural area assessments. Reports and maps of natural occurrences of State Threatened or Endangered species were prepared for submission to MNFI, where rare species occurrences in the State of Michigan are tracked. Voucher specimens were collected for species of particular interest and these will be deposited in the University of Michigan Herbarium.

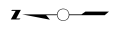
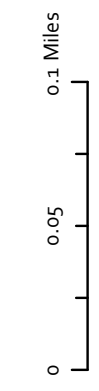




# Horner-McLaughlin Woods

Trails

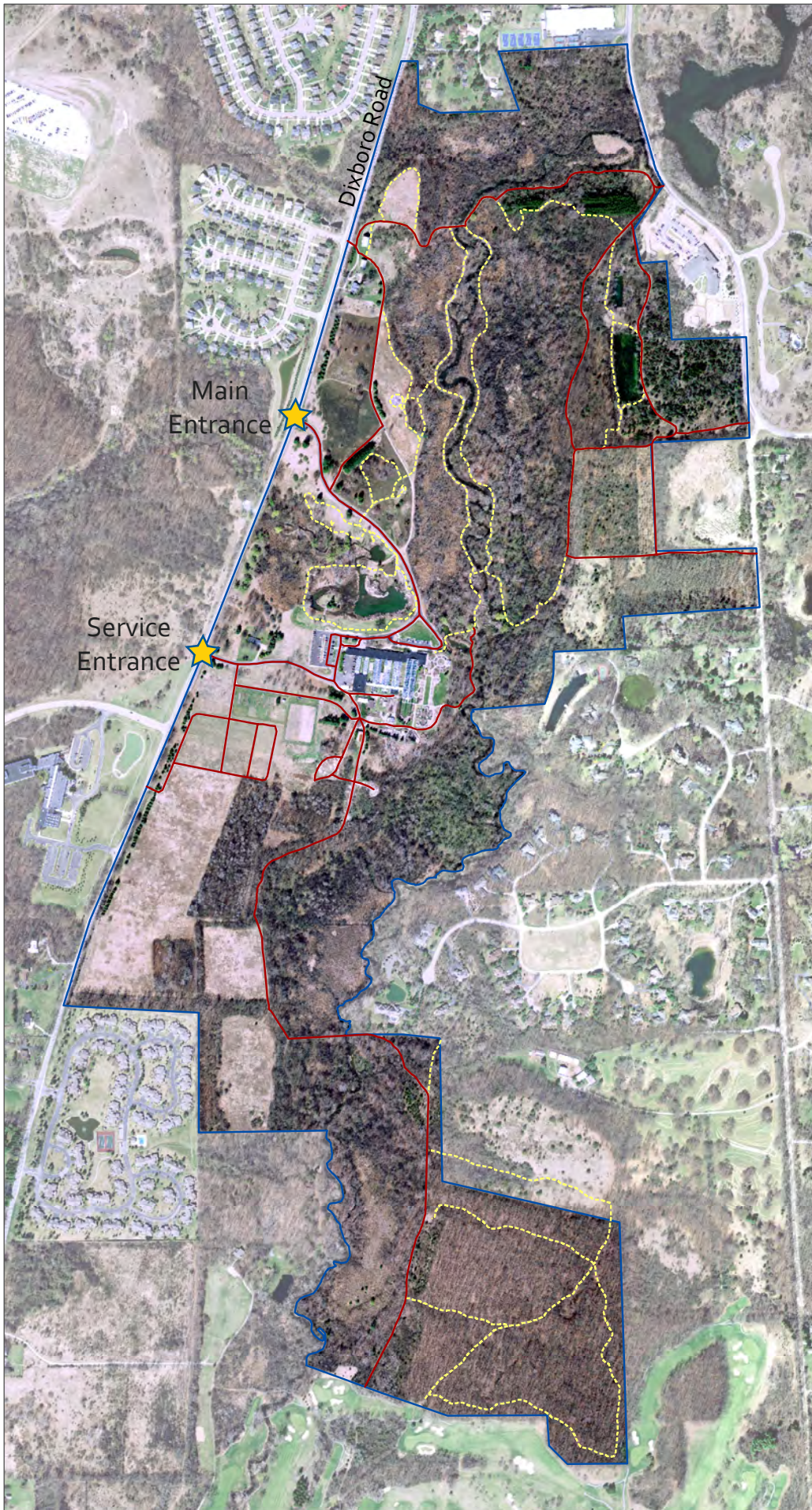
Property boundary



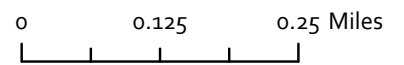
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**Matthaei Botanical gardens**  
**and Nichols arboretum**  
Mary Hejina : January 2013  
2010 Aerial Imagery Courtesy of SEMCOG



# Matthaei Botanical Gardens

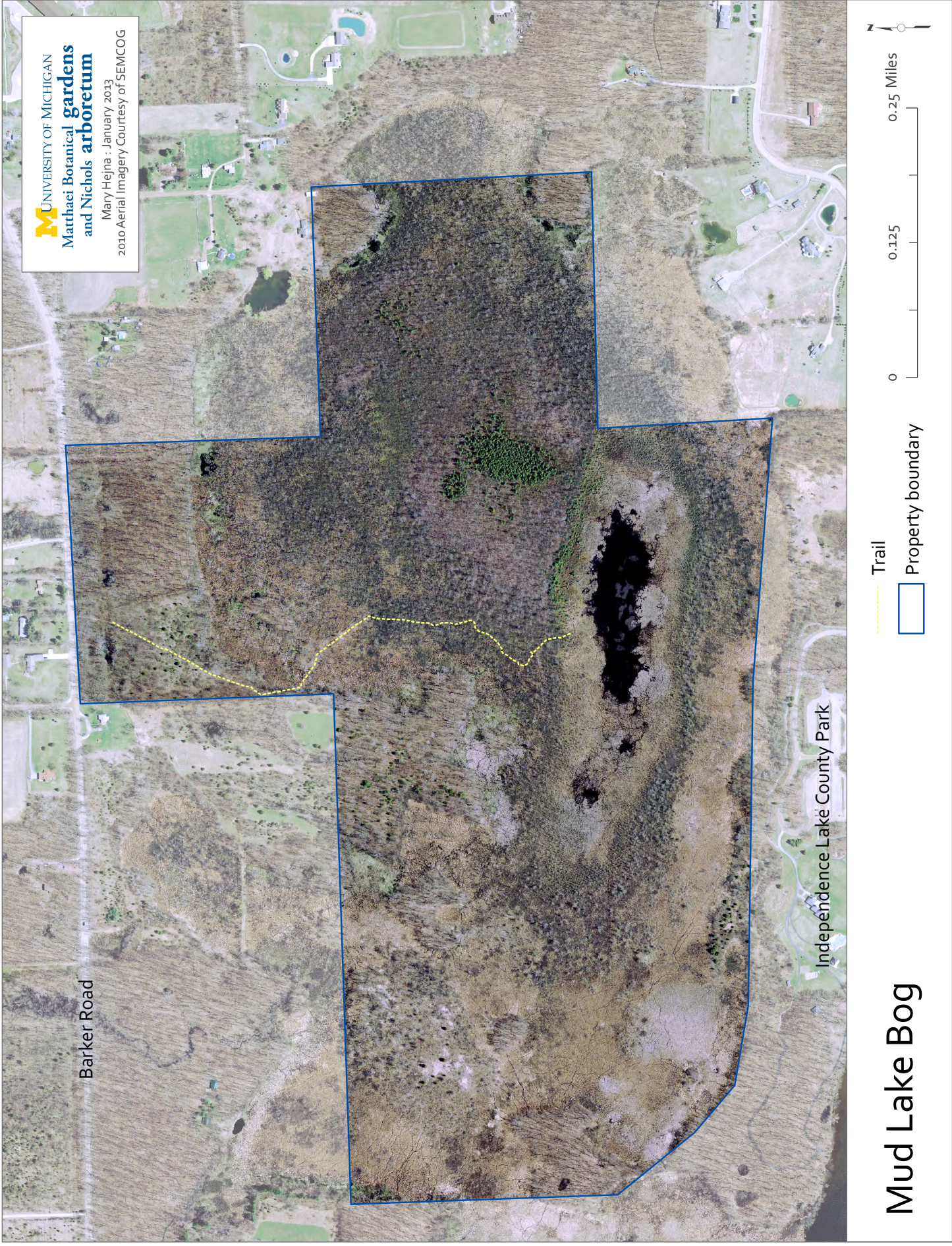


- Access roads
- - - Trails
- Property boundary



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# Mud Lake Bog

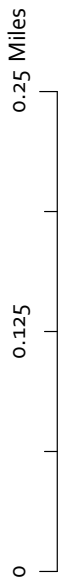
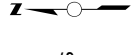
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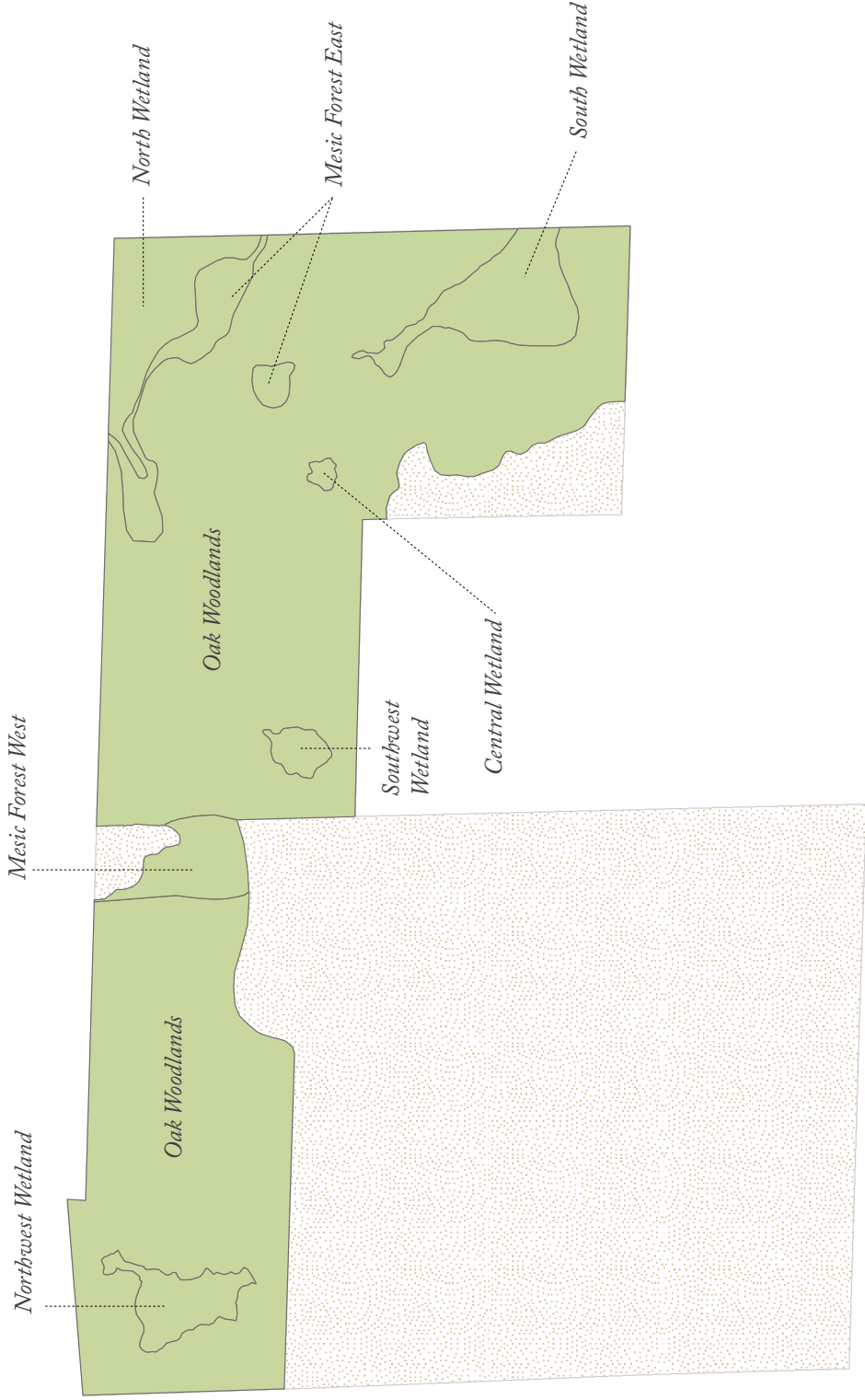


### Nichols Arboretum

- Main Trails
- Roads
- Secondary Trails
- Property boundary
- 5 foot contour lines

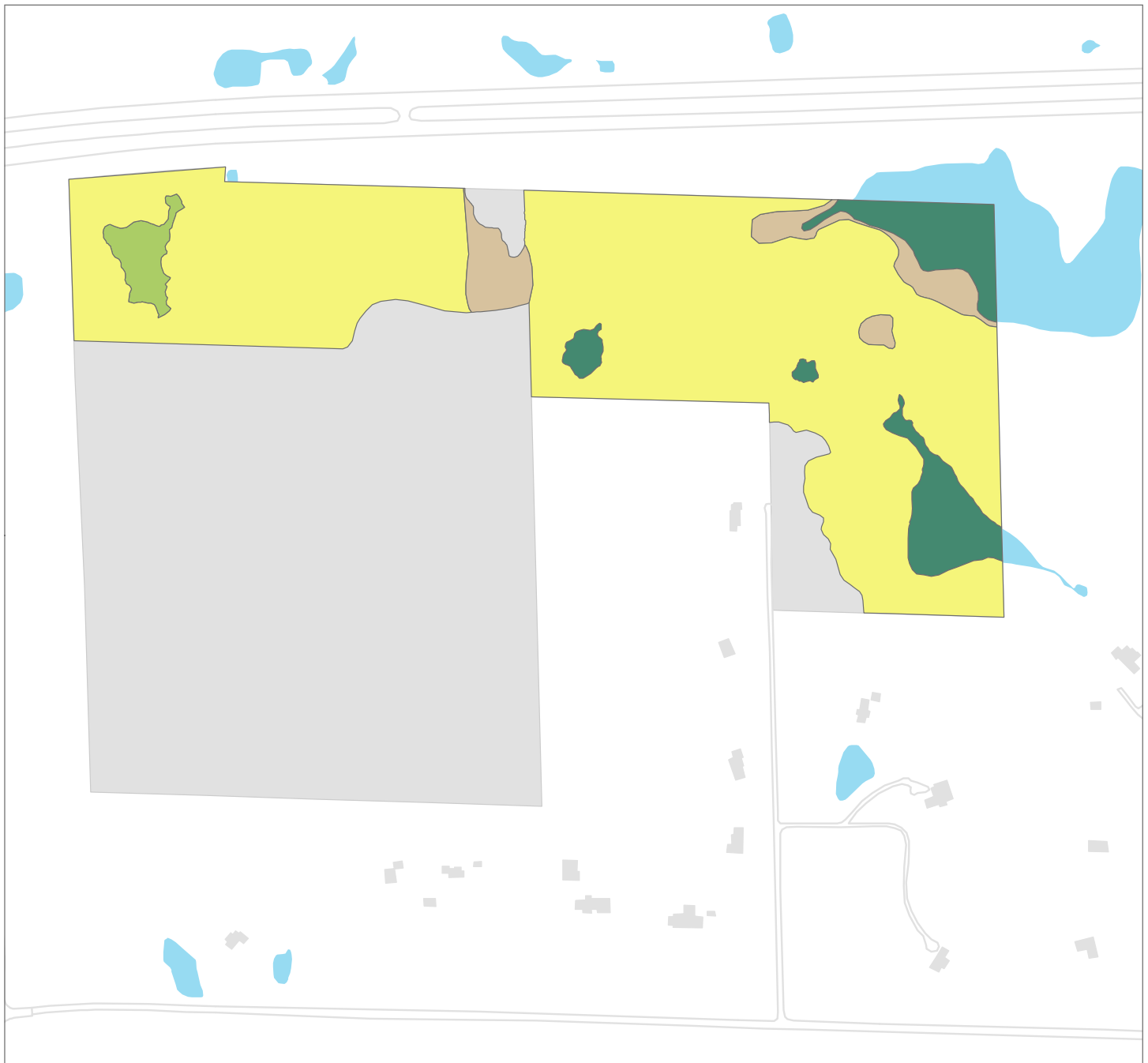


# HORNER-MCLAUGHLIN WOODS BOTANICAL SURVEY AREAS 2011-2012



# NATURAL COMMUNITIES OF HORNER-MCLAUGHLIN WOODS

Plant communities classified according to the natural community descriptions established by the Michigan Natural Features Inventory (Kost et al. 2007, Natural Communities of Michigan: Classification and Description, Report Number 2007-21; <http://mnfi.anr.msu.edu/>)



- Dry-Mesic Southern Forest* (39.2 acres)
- Inundated Shrub Swamp* (5.5 acres)
- Mesic Southern Forest* (2.6 acres)
- Southern Hardwood Swamp* (1.0 acre)
- Wetland / Water*

0 0.125 0.25 Miles



Mary Hejna  
1/8/13

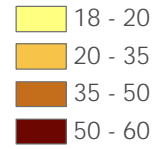
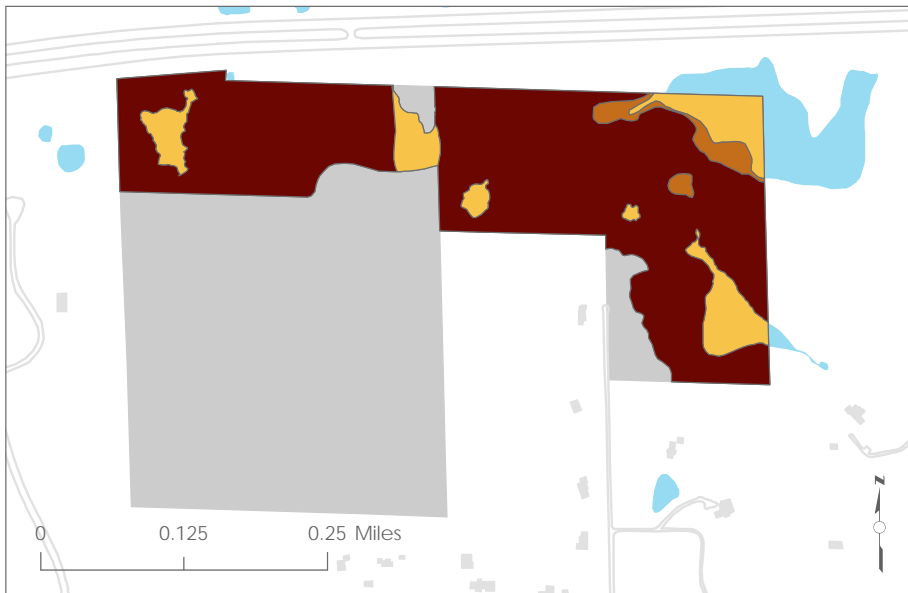
# Summary of Horner-McLaughlin Woods FQA Data by Plant Community

Compiled by Bev Walters, 2011-2012

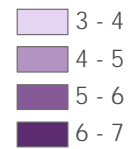
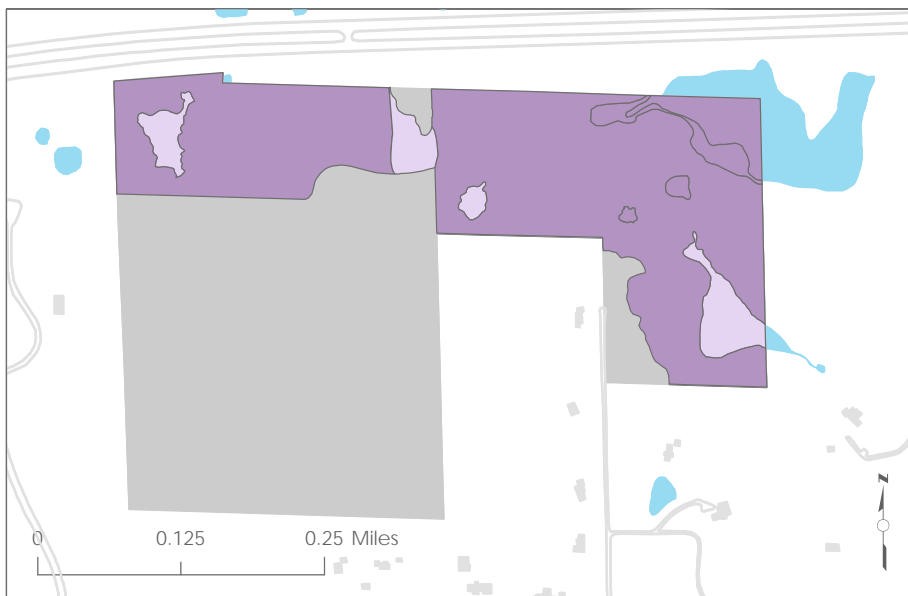
| <b><u>Horner-McLaughlin Woods</u></b> | TOTAL SPECIES | NATIVE FQI | FQI W/Adventives | % NATIVE | NATIVE MEAN C | NATIVE MEAN W |
|---------------------------------------|---------------|------------|------------------|----------|---------------|---------------|
| <b>Dry-mesic Southern Forest</b>      |               |            |                  |          |               |               |
| Oak Woodlands                         | 177           | 50.46      | 46.45            | 84.7     | 4.12          | 1.7           |
| <b>Inundated Shrub Swamp</b>          |               |            |                  |          |               |               |
| Central Wetland                       | 55            | 29.26      | 28.72            | 96.4     | 4.02          | -2.9          |
| North Wetland                         | 61            | 32.83      | 32.01            | 95.1     | 4.31          | -4.2          |
| South Wetland                         | 79            | 32.99      | 31.28            | 89.9     | 3.92          | -3.1          |
| Southwest Wetland                     | 48            | 26.08      | 24.97            | 91.7     | 3.93          | -0.8          |
| <b>Mesic Southern Forest</b>          |               |            |                  |          |               |               |
| Mesic Forest East                     | 103           | 42.22      | 41.19            | 95.1     | 4.27          | 0.1           |
| Mesic Forest West                     | 80            | 30.38      | 28.62            | 88.8     | 3.61          | 0.4           |
| <b>Southern Hardwood Swamp</b>        |               |            |                  |          |               |               |
| Northwest Wetland                     | 52            | 25.84      | 24.82            | 92.3     | 3.73          | -2.5          |



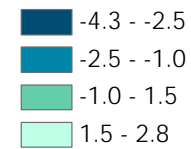
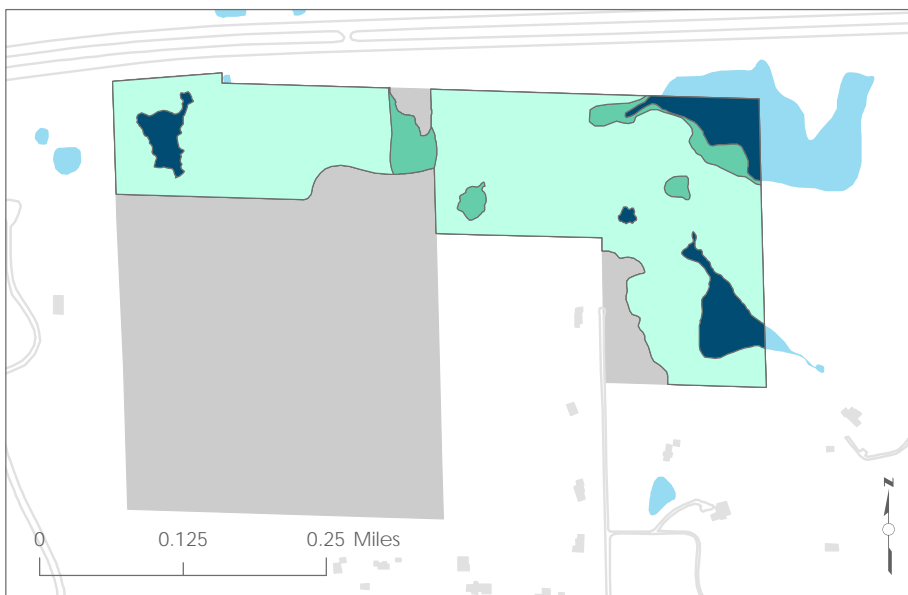
Horner-McLaughlin Woods: Floristic Quality Assessment Excluding Adventive Species



*Floristic Quality Index*

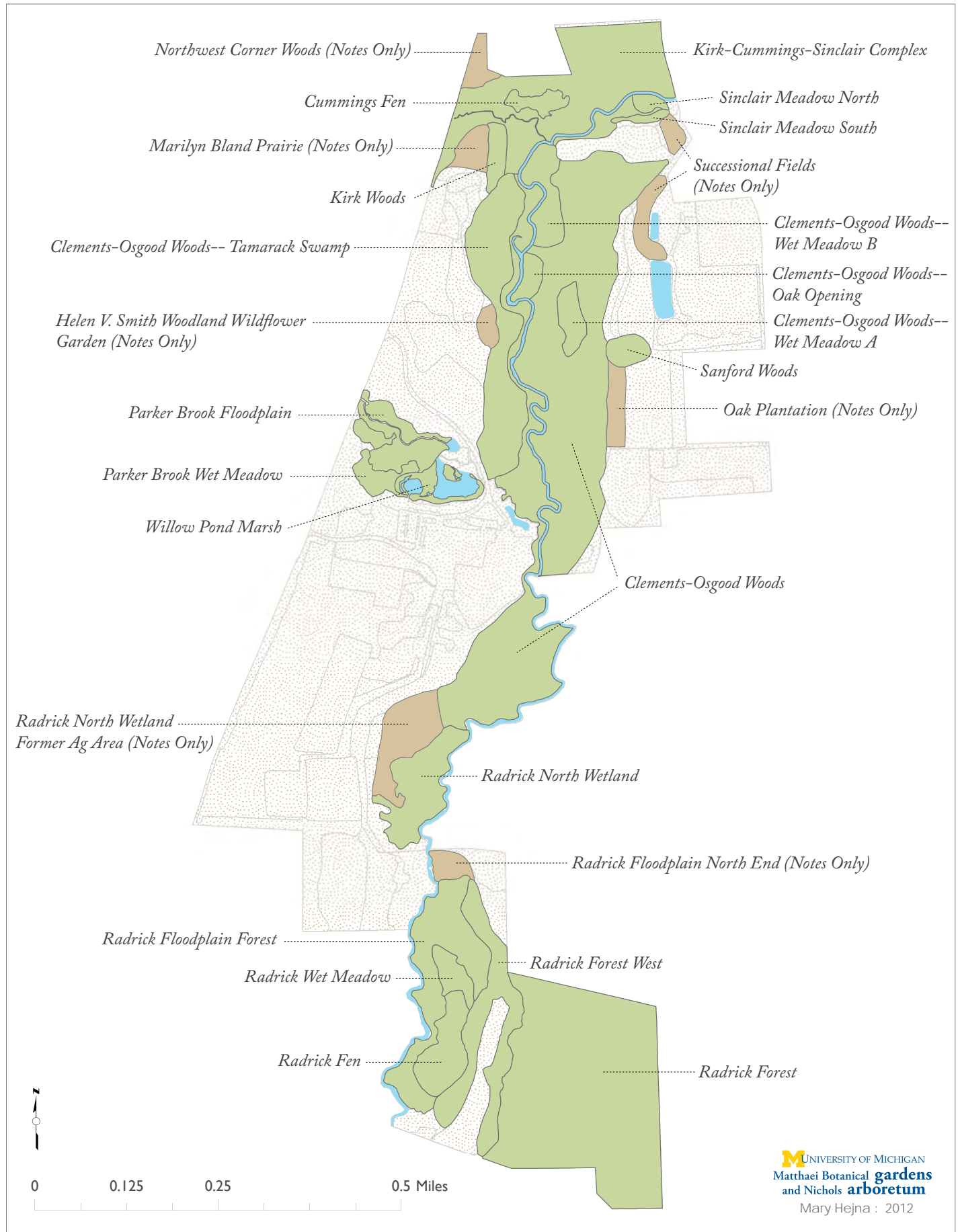


*Mean Coefficient of Conservatism*



*Mean Coefficient of Wetness*

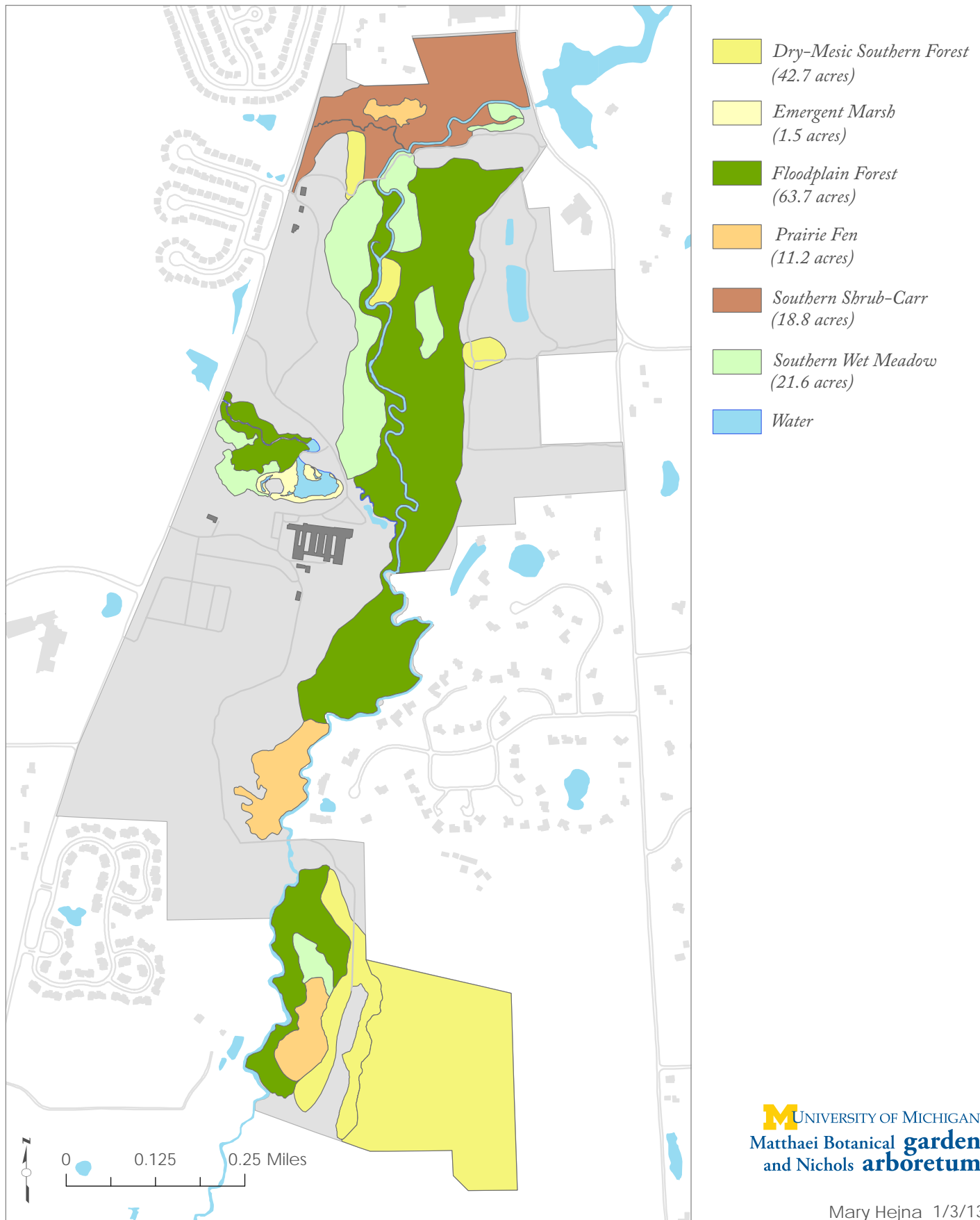
# MATTHAEI BOTANICAL GARDENS SURVEY AREAS





# NATURAL COMMUNITIES OF THE MATTHAEI BOTANICAL GARDENS

Plant communities classified according to the natural community descriptions established by the Michigan Natural Features Inventory (Kost et al. 2007, Natural Communities of Michigan: Classification and Description, Report Number 2007-21; <http://mnfi.anr.msu.edu/>)

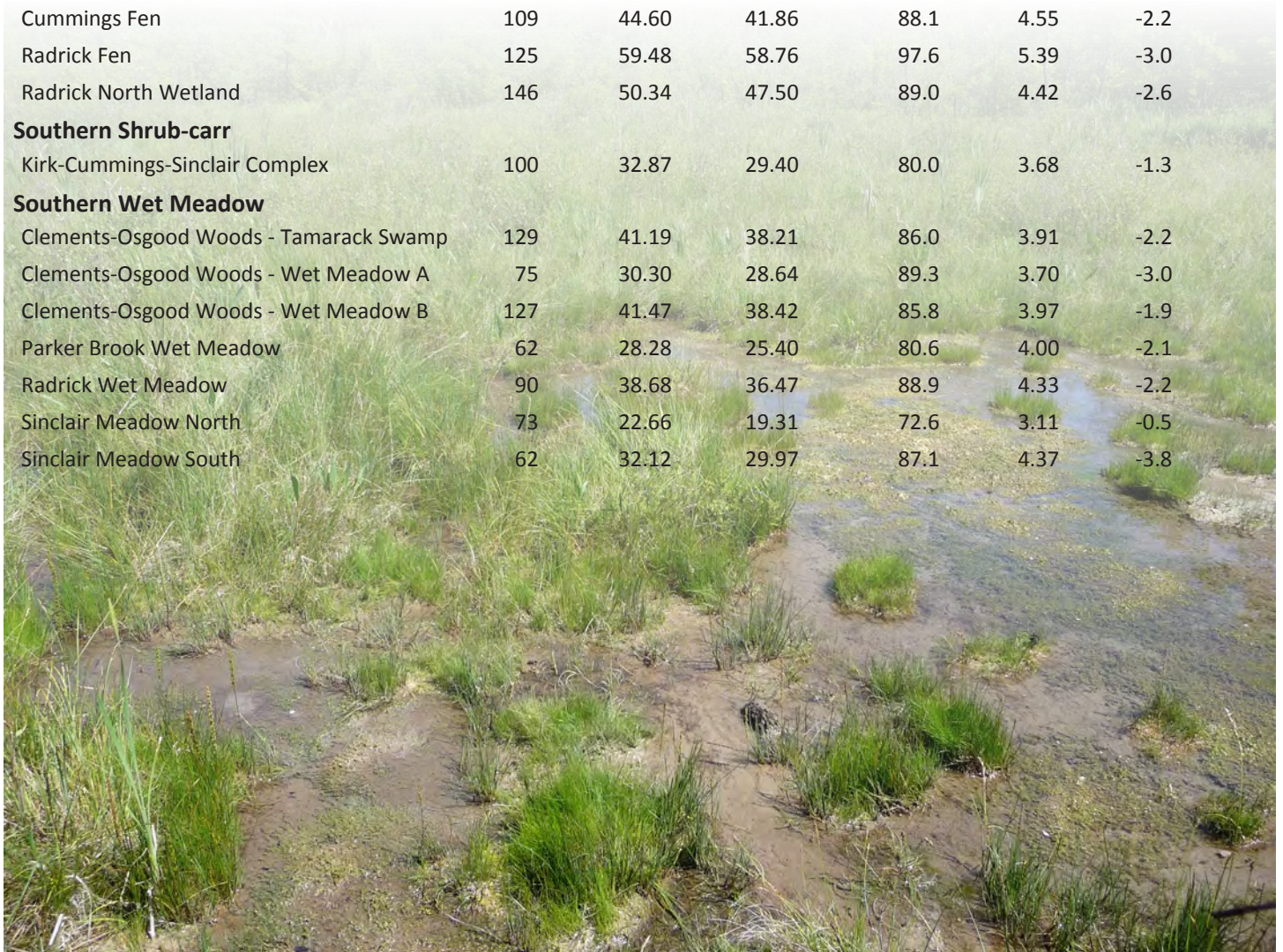


Mary Hejna 1/3/13

# Summary of Matthaei Botanical Gardens FQA Data by Plant Community

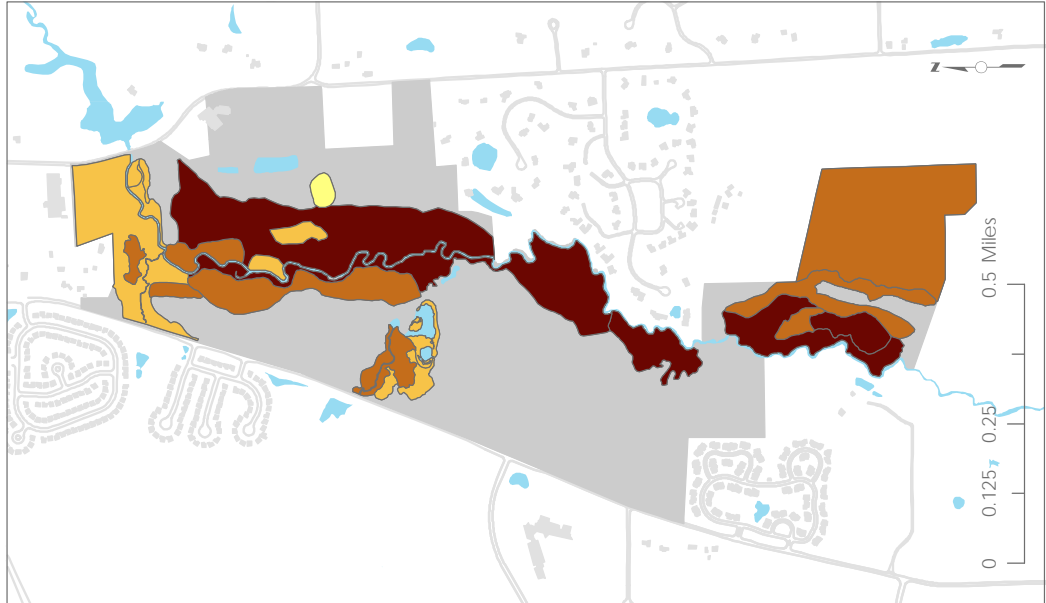
Compiled by Bev Walters, 2011-2012

| <b>Matthaei Botanical Gardens</b>      | TOTAL SPECIES | NATIVE FQI | FQI W/Adventives | % NATIVE | NATIVE MEAN C | NATIVE MEAN W |
|--|---------------|------------|------------------|----------|---------------|---------------|
| <b>Dry-mesic Southern Forest</b>       |               |            |                  |          |               |               |
| Clements-Osgood Woods - Oak Opening    | 60            | 26.99      | 24.14            | 80.0     | 3.90          | 1.6           |
| Kirk Woods                             | 145           | 39.82      | 36.37            | 83.4     | 3.62          | 0.8           |
| Radrick Forest                         | 98            | 41.84      | 39.19            | 87.8     | 4.51          | 2.8           |
| Radrick Forest West                    | 134           | 46.52      | 43.28            | 86.6     | 4.32          | 2.6           |
| Sanford Woods                          | 38            | 18.76      | 16.38            | 76.3     | 3.48          | 2.1           |
| <b>Emergent Marsh</b>                  |               |            |                  |          |               |               |
| Willow Pond Marsh                      | 76            | 25.47      | 22.25            | 76.3     | 3.34          | -2.0          |
| <b>Floodplain Forest</b>               |               |            |                  |          |               |               |
| Clements-Osgood Woods                  | 219           | 52.00      | 46.22            | 79.0     | 3.95          | -0.8          |
| Parker Brook Floodplain                | 129           | 38.33      | 34.25            | 79.8     | 3.78          | -2.0          |
| Radrick Floodplain Forest              | 173           | 51.26      | 48.05            | 87.9     | 4.16          | -0.7          |
| <b>Prairie Fen</b>                     |               |            |                  |          |               |               |
| Cummings Fen                           | 109           | 44.60      | 41.86            | 88.1     | 4.55          | -2.2          |
| Radrick Fen                            | 125           | 59.48      | 58.76            | 97.6     | 5.39          | -3.0          |
| Radrick North Wetland                  | 146           | 50.34      | 47.50            | 89.0     | 4.42          | -2.6          |
| <b>Southern Shrub-carr</b>             |               |            |                  |          |               |               |
| Kirk-Cummings-Sinclair Complex         | 100           | 32.87      | 29.40            | 80.0     | 3.68          | -1.3          |
| <b>Southern Wet Meadow</b>             |               |            |                  |          |               |               |
| Clements-Osgood Woods - Tamarack Swamp | 129           | 41.19      | 38.21            | 86.0     | 3.91          | -2.2          |
| Clements-Osgood Woods - Wet Meadow A   | 75            | 30.30      | 28.64            | 89.3     | 3.70          | -3.0          |
| Clements-Osgood Woods - Wet Meadow B   | 127           | 41.47      | 38.42            | 85.8     | 3.97          | -1.9          |
| Parker Brook Wet Meadow                | 62            | 28.28      | 25.40            | 80.6     | 4.00          | -2.1          |
| Radrick Wet Meadow                     | 90            | 38.68      | 36.47            | 88.9     | 4.33          | -2.2          |
| Sinclair Meadow North                  | 73            | 22.66      | 19.31            | 72.6     | 3.11          | -0.5          |
| Sinclair Meadow South                  | 62            | 32.12      | 29.97            | 87.1     | 4.37          | -3.8          |



# Matthaei Botanical Gardens: Floristic Quality Assessment Excluding Adventive Species

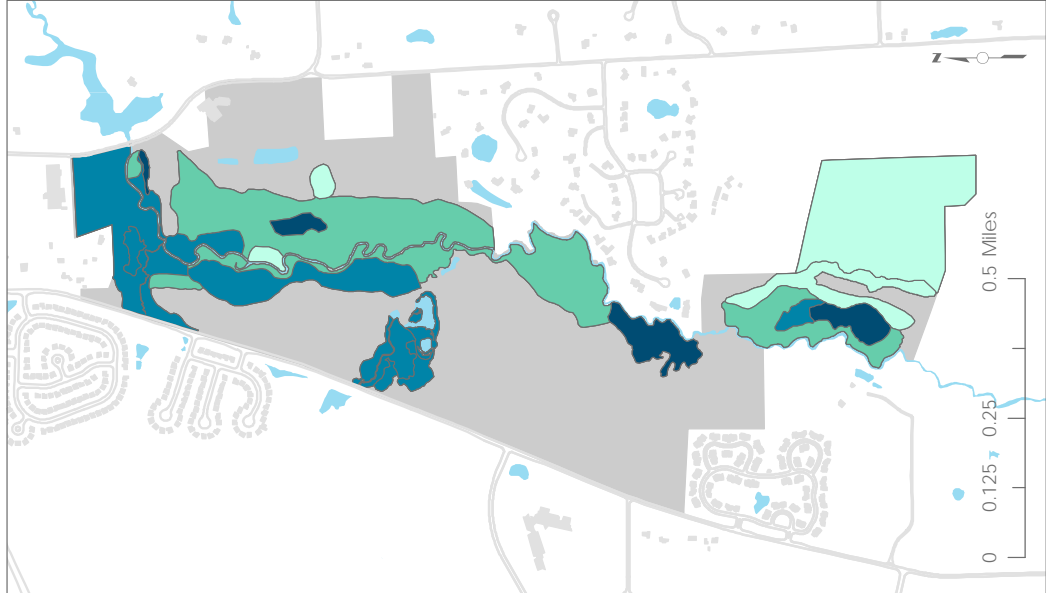
*Floristic Quality Index*




*Mean Coefficient of Conservatism*



*Mean Coefficient of Wetness*

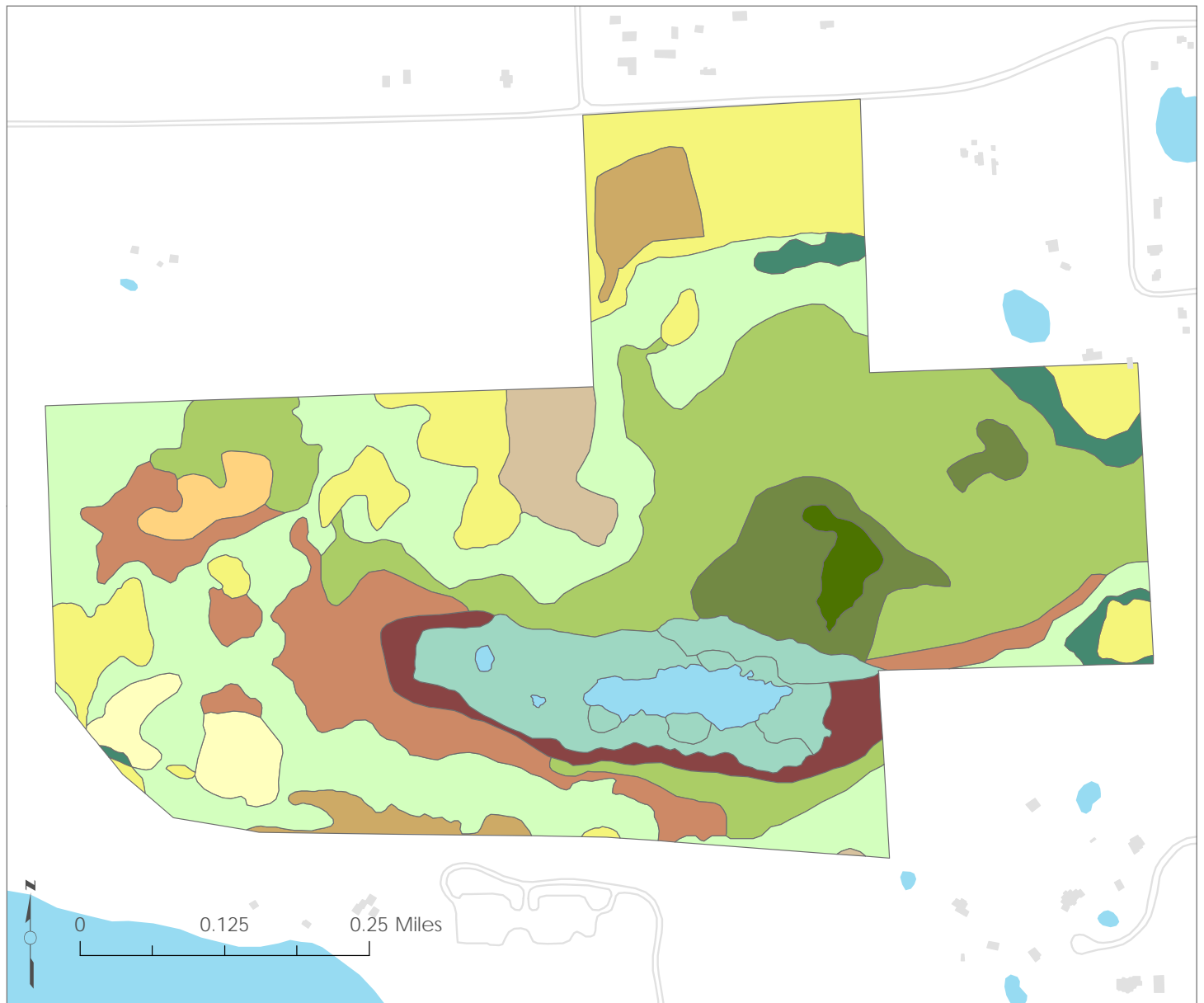
















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 Matthaei Botanical gardens  
 and Nichols arboretum  
 Mary Hejma : 2013



# NATURAL COMMUNITIES OF MUD LAKE BOG

Plant communities classified according to the natural community descriptions established by the Michigan Natural Features Inventory (Kost et al. 2007, Natural Communities of Michigan: Classification and Description, Report Number 2007-21; <http://mnfi.anr.msu.edu/>)




|   |   |
|---|---|
|  Bog (18.1 acres)                        |  Poor Conifer Swamp (2.3 acres)       |
|  Dry-Mesic Southern Forest (31.2 acres)  |  Prairie Fen (2.9 acres)              |
|  Emergent Marsh (5.2 acres)              |  Rich Tamarack Swamp (6.7 acres)      |
|  Hardwood-Conifer Swamp (11.8 acres)     |  Southern Hardwood Swamp (62.1 acres) |
|  Inundated Shrub Swamp (4.6 acres)       |  Southern Shrub-Carr (21.2 acres)     |
|  Mesic Southern Forest (5.9 acres)       |  Southern Wet Meadow (64.1 acres)     |
|  Old Field, Late Succession* (7.1 acres) |  Submergent Marsh / Water (4.2 acres) |

\* Not an MNFI defined community

# Summary of Mud Lake Bog FQA Data by Plant Community

Compiled by Bev Walters, 2011-2012

| <b>Mud Lake Bog</b>              | TOTAL SPECIES | NATIVE FQI | FQI W/Adventives | % NATIVE | NATIVE MEAN C | NATIVE MEAN W |
|----------------------------------|---------------|------------|------------------|----------|---------------|---------------|
| <b>Bog</b>                       |               |            |                  |          |               |               |
| Bog North                        | 71            | 50.20      | 49.49            | 97.2     | 6.04          | -4.3          |
| Bog South                        | 76            | 47.64      | 46.69            | 96.1     | 5.58          | -3.9          |
| <b>Dry-mesic Southern Forest</b> |               |            |                  |          |               |               |
| Big Oak Island                   | 100           | 36.69      | 35.00            | 91.0     | 3.85          | 1.3           |
| Horseshoe Island                 | 76            | 30.61      | 27.64            | 81.6     | 3.89          | 0.9           |
| Juniper Hill                     | 61            | 24.43      | 21.89            | 80.3     | 3.49          | 1.4           |
| Little Oak Island                | 47            | 22.14      | 19.11            | 74.5     | 3.74          | 1.9           |
| North Island                     | 62            | 26.19      | 23.75            | 82.3     | 3.67          | 1.7           |
| Oak Woods SE                     | 74            | 25.47      | 22.55            | 78.4     | 3.34          | 2.0           |
| Oak-Hickory North                | 137           | 38.33      | 34.35            | 80.3     | 3.65          | 1.4           |
| <b>Hardwood-conifer Swamp</b>    |               |            |                  |          |               |               |
| Hardwood-Conifer Swamp           | 40            | 31.71      | 31.31            | 97.5     | 5.08          | -2.5          |
| <b>Mesic Southern Forest</b>     |               |            |                  |          |               |               |
| Swamp White Oak Woods            | 91            | 29.82      | 27.26            | 83.5     | 3.42          | 0.4           |
| <b>Poor Conifer Swamp</b>        |               |            |                  |          |               |               |
| Black Spruce Bog                 | 23            | 29.00      | 28.36            | 95.7     | 6.18          | -2.1          |
| <b>Prairie Fen</b>               |               |            |                  |          |               |               |
| Prairie Fen                      | 110           | 44.21      | 43.19            | 95.5     | 4.31          | -2.2          |
| <b>Rich Tamarack Swamp</b>       |               |            |                  |          |               |               |
| Tamarack Swamp                   | 94            | 50.60      | 49.51            | 95.7     | 5.33          | -3.6          |
| <b>Southern Hardwood Swamp</b>   |               |            |                  |          |               |               |
| Hardwood Swamp                   | 126           | 48.82      | 47.84            | 96.0     | 4.44          | -2.8          |
| <b>Southern Shrub-carr</b>       |               |            |                  |          |               |               |
| Shrub-carr                       | 51            | 32.81      | 32.49            | 98.0     | 4.64          | -3.0          |
| <b>Southern Wet Meadow</b>       |               |            |                  |          |               |               |
| Wet Meadow                       | 133           | 49.71      | 48.38            | 94.7     | 4.43          | -3.2          |

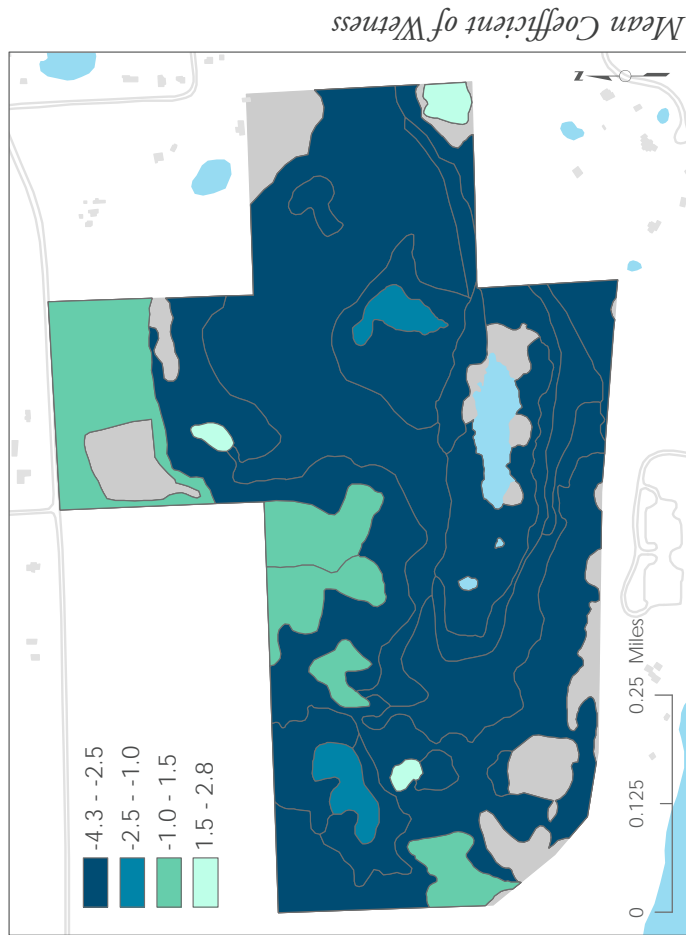
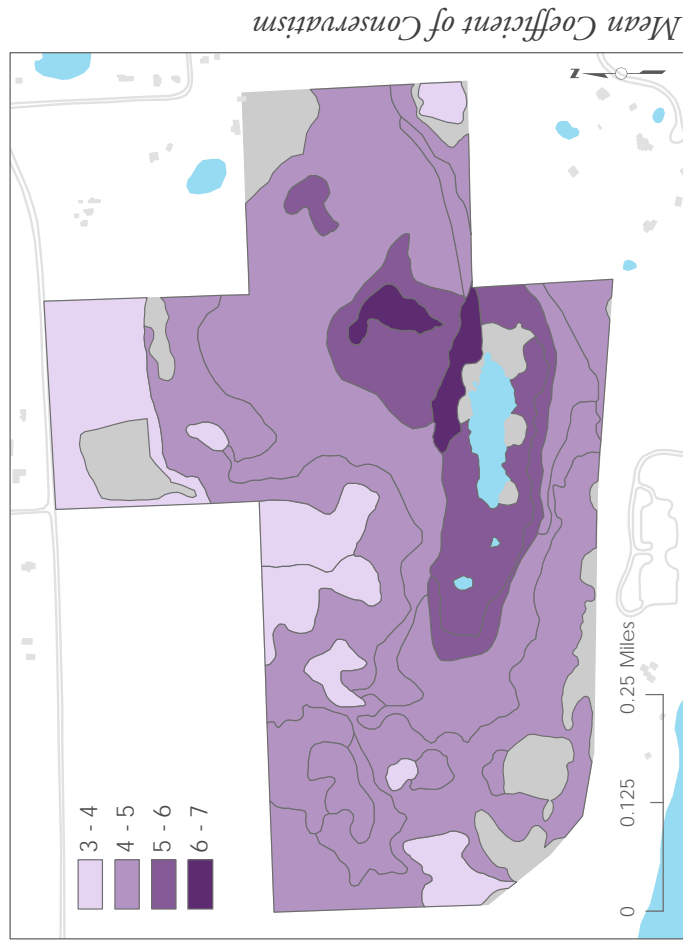
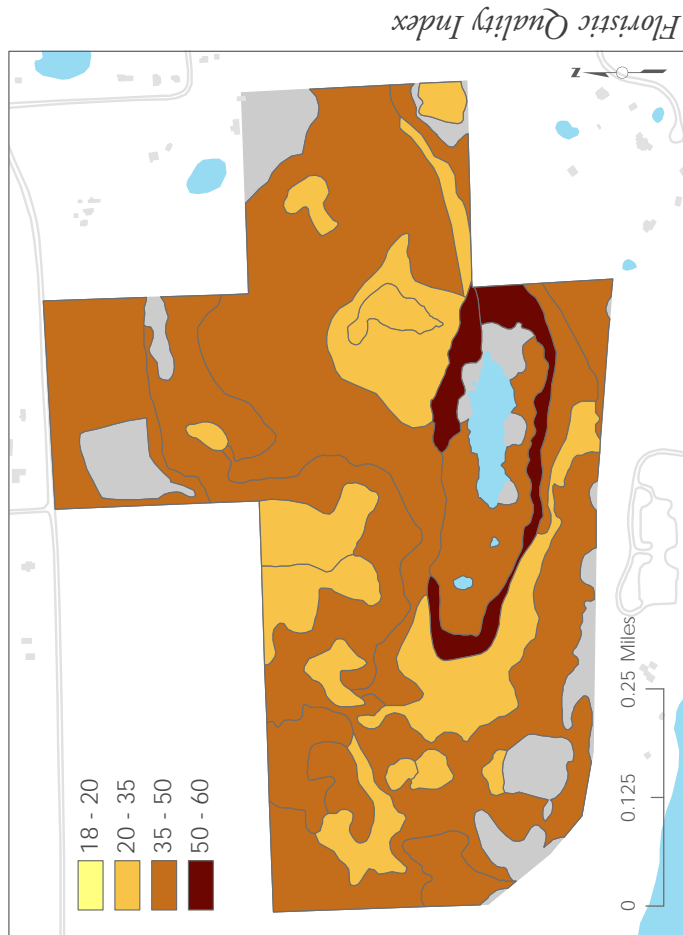


# Mud Lake Bog:

## Floristic Quality Assessment Excluding Adventive Species

**UNIVERSITY OF MICHIGAN**  
**Matthaei Botanical gardens**  
**and Nichols arboretum**

Mary Hejna : 2013



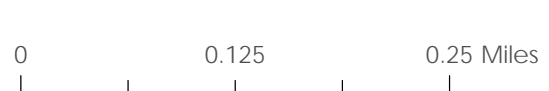
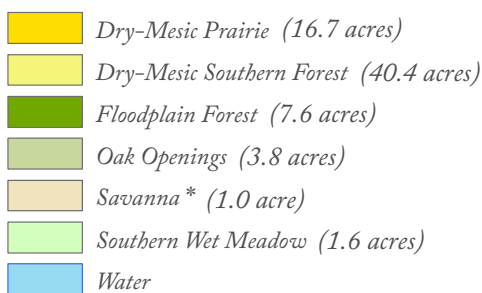
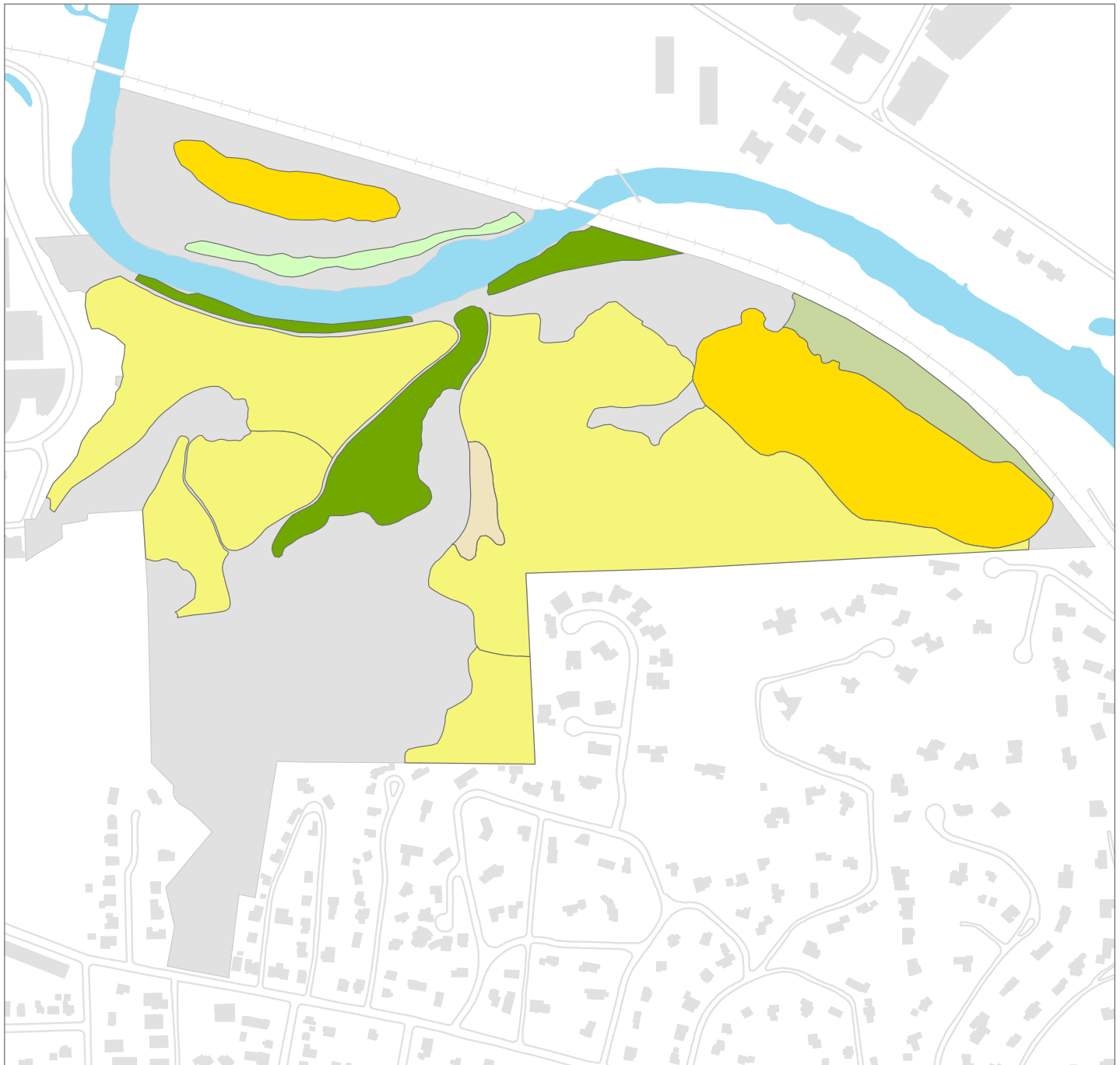
# NICHOLS ARBORETUM BOTANICAL SURVEY AREAS 2011-2012





# NATURAL COMMUNITIES OF NICHOLS ARBORETUM

Plant communities classified according to the natural community descriptions established by the Michigan Natural Features Inventory (Kost et al. 2007, Natural Communities of Michigan: Classification and Description, Report Number 2007-21; <http://mnfi.anr.msu.edu/>)



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\* Not an MNFI defined community

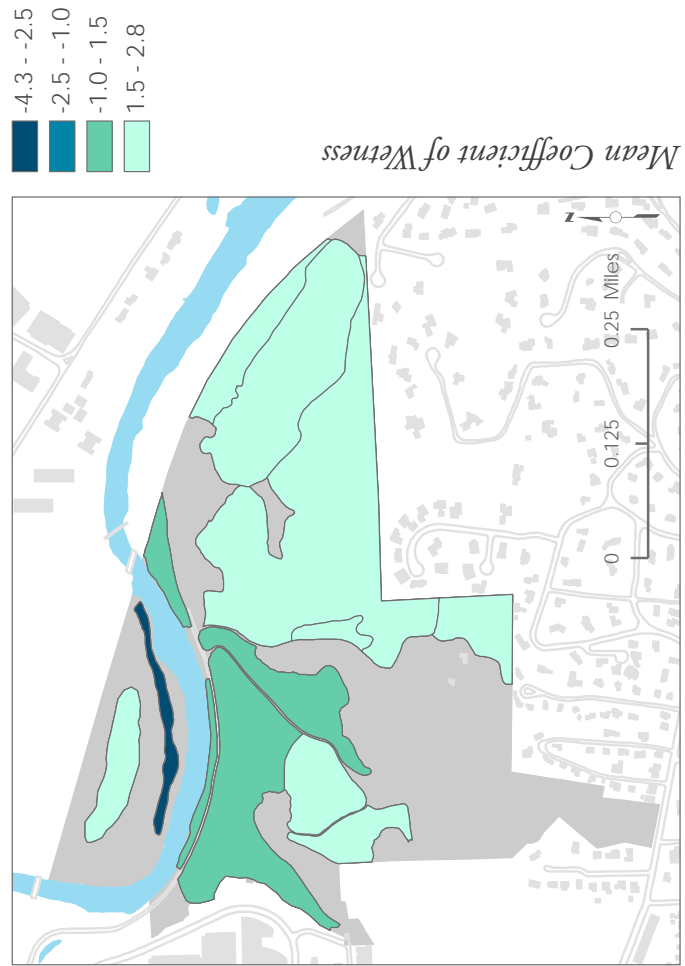
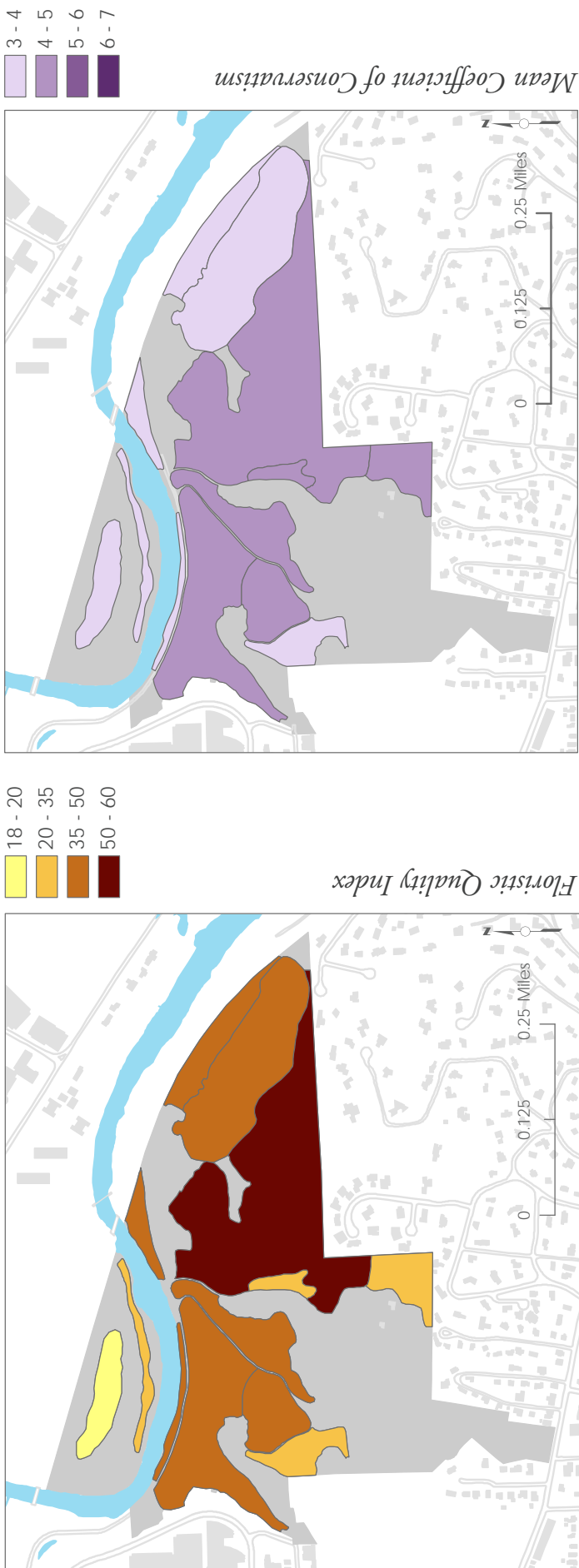
Mary Hejna 1/8/13

# Summary of Nichols Arboretum FQA Data by Plant Community

Compiled by Bev Walters, 2011-2012

| <b><u>Nichols Arboretum</u></b>  | TOTAL SPECIES | NATIVE FQI | FQI W/Adventives | % NATIVE | NATIVE MEAN C | NATIVE MEAN W |
|----------------------------------|---------------|------------|------------------|----------|---------------|---------------|
| <b>Dry-mesic Prairie</b>         |               |            |                  |          |               |               |
| Alex Dow Field - Prairie         | 155           | 35.18      | 28.67            | 66.5     | 3.47          | 2.4           |
| North Floodplain Prairie Remnant | 58            | 19.23      | 15.36            | 63.8     | 3.16          | 2.5           |
| <b>Dry-mesic Southern Forest</b> |               |            |                  |          |               |               |
| East Oak Woodlands               | 194           | 54.75      | 48.46            | 78.4     | 4.44          | 1.9           |
| Forest Hills Woods               | 54            | 22.29      | 17.69            | 63.0     | 3.82          | 2.1           |
| Heathdale                        | 153           | 47.00      | 41.80            | 79.1     | 4.27          | 1.7           |
| Maple Glen                       | 37            | 22.84      | 20.22            | 78.4     | 4.24          | 2.6           |
| West Oak Woodlands               | 155           | 47.95      | 42.89            | 80.0     | 4.31          | 1.3           |
| <b>Floodplain Forest</b>         |               |            |                  |          |               |               |
| Forested Wetland                 | 163           | 49.06      | 43.47            | 78.5     | 4.34          | 0.5           |
| South Floodplain Woods           | 160           | 45.96      | 42.06            | 83.8     | 3.97          | 0.0           |
| <b>Oak Openings</b>              |               |            |                  |          |               |               |
| Alex Dow Field - Savanna         | 121           | 36.68      | 31.64            | 74.4     | 3.87          | 2.6           |
| <b>Savanna</b>                   |               |            |                  |          |               |               |
| Magnolia Glade                   | 82            | 32.62      | 29.04            | 79.3     | 4.05          | 2.8           |
| <b>Southern Wet Meadow</b>       |               |            |                  |          |               |               |
| North Floodplain Swale           | 110           | 34.91      | 31.75            | 82.7     | 3.66          | -3.1          |





Nichols  
Arboretum:  
Floristic Quality  
Assessment  
Excluding  
Adventive Species

# Natural Community Global and State Rankings for Matthaei-Nichols Properties

|  | MNFI Community            | State Rank | Global Rank |
|--|---------------------------|------------|-------------|
| <b><u>Horner-McLaughlin Woods</u></b>    |                           |            |             |
| Central Wetland                          | Inundated Shrub Swamp     | S3         | G4          |
| Mesic Forest East                        | Mesic Southern Forest     | S3         | G2G3        |
| Mesic Forest West                        | Mesic Southern Forest     | S3         | G2G3        |
| North Wetland                            | Inundated Shrub Swamp     | S3         | G4          |
| Northwest Wetland                        | Southern Hardwood Swamp   | S3         | G3          |
| Oak Woodlands                            | Dry-mesic Southern Forest | S3         | G4          |
| South Wetland                            | Inundated Shrub Swamp     | S3         | G4          |
| Southwest Wetland                        | Inundated Shrub Swamp     | S3         | G4          |
| <b><u>Matthaei Botanical Gardens</u></b> |                           |            |             |
| Clements-Osgood Woods                    | Floodplain Forest         | S3         | G3?         |
| Clements-Osgood Woods - Oak Opening      | Dry-mesic Southern Forest | S3         | G4          |
| Clements-Osgood Woods - Tamarack Swamp   | Southern Wet Meadow       | S3         | G4?         |
| Clements-Osgood Woods - Wet Meadow A     | Southern Wet Meadow       | S3         | G4?         |
| Clements-Osgood Woods - Wet Meadow B     | Southern Wet Meadow       | S3         | G4?         |
| Cummings Fen                             | Prairie Fen               | S3         | G3          |
| Kirk Woods                               | Dry-mesic Southern Forest | S3         | G4          |
| Kirk-Cummings-Sinclair Complex           | Southern Shrub-carr       | S5         | GU          |
| Parker Brook Floodplain                  | Floodplain Forest         | S3         | G3?         |
| Parker Brook Wet Meadow                  | Southern Wet Meadow       | S3         | G4?         |
| Radrick Fen                              | Prairie Fen               | S3         | G3          |
| Radrick Floodplain Forest                | Floodplain Forest         | S3         | G3?         |
| Radrick Forest                           | Dry-mesic Southern Forest | S3         | G4          |
| Radrick Forest West                      | Dry-mesic Southern Forest | S3         | G4          |
| Radrick North Wetland                    | Prairie Fen               | S3         | G3          |
| Radrick Wet Meadow                       | Southern Wet Meadow       | S3         | G4?         |
| Sanford Woods                            | Dry-mesic Southern Forest | S3         | G4          |
| Sinclair Meadow North                    | Southern Wet Meadow       | S3         | G4?         |
| Sinclair Meadow South                    | Southern Wet Meadow       | S3         | G4?         |
| Willow Pond Marsh                        | Emergent Marsh            | S4         | GU          |

|                                  | <b>MNFI Community</b>     | <b>State Rank</b> | <b>Global Rank</b> |
|----------------------------------|---------------------------|-------------------|--------------------|
| <b><u>Mud Lake Bog</u></b>       |                           |                   |                    |
| Big Oak Island                   | Dry-mesic Southern Forest | S3                | G4                 |
| Black Spruce Bog                 | Poor Conifer Swamp        | S4                | G4                 |
| Bog North                        | Bog                       | S4                | G3G5               |
| Bog South                        | Bog                       | S4                | G3G5               |
| Hardwood Swamp                   | Southern Hardwood Swamp   | S3                | G3                 |
| Hardwood-Conifer Swamp           | Hardwood-conifer Swamp    | S3                | G4                 |
| Horseshoe Island                 | Dry-mesic Southern Forest | S3                | G4                 |
| Juniper Hill                     | Dry-mesic Southern Forest | S3                | G4                 |
| Little Oak Island                | Dry-mesic Southern Forest | S3                | G4                 |
| North Island                     | Dry-mesic Southern Forest | S3                | G4                 |
| Oak Woods SE                     | Dry-mesic Southern Forest | S3                | G4                 |
| Oak-Hickory North                | Dry-mesic Southern Forest | S3                | G4                 |
| Prairie Fen                      | Prairie Fen               | S3                | G3                 |
| Shrub-carr                       | Southern Shrub-carr       | S5                | GU                 |
| Swamp White Oak Woods            | Mesic Southern Forest     | S3                | G2G3               |
| Tamarack Swamp                   | Rich Tamarack Swamp       | S3                | G4                 |
| Wet Meadow                       | Southern Wet Meadow       | S3                | G4?                |
| <b><u>Nichols Arboretum</u></b>  |                           |                   |                    |
| Alex Dow Field - Prairie         | Dry-mesic Prairie         | S1                | G3                 |
| Alex Dow Field - Savanna         | Oak Openings              | S1                | G1                 |
| East Oak Woodlands               | Dry-mesic Southern Forest | S3                | G4                 |
| Forest Hills Woods               | Dry-mesic Southern Forest | S3                | G4                 |
| Forested Wetland                 | Floodplain Forest         | S3                | G3?                |
| Heathdale                        | Dry-mesic Southern Forest | S3                | G4                 |
| Maple Glen                       | Dry-mesic Southern Forest | S3                | G4                 |
| North Floodplain Prairie Remnant | Dry-mesic Prairie         | S1                | G3                 |
| North Floodplain Swale           | Southern Wet Meadow       | S3                | G4?                |
| South Floodplain Woods           | Floodplain Forest         | S3                | G3?                |
| West Oak Woodlands               | Dry-mesic Southern Forest | S3                | G4                 |

# Botanical Survey Field Notes

Bev Walters, 2011-2012

## Horner-McLaughlin Woods

### Central Wetland

Michigan Natural Plant Community: Inundated Shrub Swamp

Description: Small wetland inside the trail loop, surrounded by oak forest and dominated by sedges and duckweed, with some shrubs around edges

- About half of pond open with duckweed covering surface, Summer 2011
- Totally dry in July 2012 drought year
- Around edges: *Glyceria striata*, *Tilia americana*, *Ilex verticillata*, *Spiraea alba*
- In NE corner overflow ditch connects to Mesic Forest East
- *Carex stricta*\* and *C. lupulina* dominant in NW corner
- *Rhamnus cathartica* present but infrequent

### Mesic Forest East

Michigan Natural Plant Community: Mesic Southern Forest

Description: A fairly rich open forest situated between oak forest and North Wetland, dominated by *Acer saccharinum* and *Quercus bicolor* with lush herbaceous groundcover near intermittent stream

- Canopy cover thins along N edge next to wetland
- Nice population of *Ulmus rubra* at W end, no *Ulmus americana* observed
- Extensive population of *Asarum canadense* NE of log pile\* in intermittent stream, also *Hydrophyllum appendiculatum* here
- Plant inventory includes small wet depression to S connected by intermittent stream where *Impatiens capensis*, *Glyceria striata* are dominant, with some *Cephalanthus occidentalis* present
- *Lilium michiganense*\* and *Phlox divaricata*\* notable plants in southern depression
- Small amounts of *Alliaria petiolata* and *Elaeagnus umbellata*, only one *Viburnum opulus*\* seen

### Mesic Forest West

Michigan Natural Plant Community: Mesic Southern Forest

Description: In W-central area, a disturbed forest in a bowl depression considerably wetter than surrounding oak forest; fairly dense herbaceous ground cover

- Area to the N is an old conifer plantation\*, shrubby old field to the S, oak forest to E and W
- Forms headwaters of intermittent stream draining to E; soils with poor drainage
- Dominant trees *Liriodendron tulipifera*\* (planted here, Sylvia Taylor, pers. com.), *Juglans nigra*, *Populus deltoides* with tree canopy fairly thin due to conifer-elm-ash die-back
- Even in 2012 drought year, forest floor covered with green herbaceous vegetation – *Leersia virginica*, *Toxicodendron radicans*, *Parthenocissus quinquefolia*, *Cinna arundinacea*
- At S end there's an E-W intermittent stream with concrete culvert\*; more drain tiles in stream bed to W
- Piles of metal trash and old fencing at S end
- Some scattered *Robinia pseudoacacia*, *Picea glauca*\* and *Pinus strobus* probably seedlings of old plantings
- Potential threat from *Rosa multiflora*, *Rhamnus cathartica*, *Torilis japonica*\* and *Frangula alnus*

### North Wetland

Michigan Natural Plant Community: Inundated Shrub Swamp

Description: Wetland in NE corner of property, with mucky soil, dominant shrub *Cephalanthus occidentalis* with *Acer saccharinum* occasional

- Mesic forest to the S, Goodrich Preserve and M-14 to the N
- In fall 2011 open water areas covered with duckweed
- In fall 2012 after drought, open areas dried muck with forbs, dominated by *Leersia virginica*
- *Ranunculus flabellaris*\* in several places along S edge
- Occasional *Lycopus rubellus* is not common locally
- *Typha latifolia* patch at W end
- *Lythrum salicaria*\* occasional on edges to dense in the interior

\* Feature Mapped

### Northwest Wetland

Michigan Natural Plant Community: Southern Hardwood Swamp

Description: Small mostly forested wetland at W edge of property, dominated by *Acer saccharinum* with more open inundated areas in N end dominated by *Cephalanthus occidentalis* and *Rosa palustris*

- Shallower shady open areas at NE part dominated by *Leersia oryzoides*, *Sium suave*, with some *Ranunculus flabellaris*\* present
- Totally dried up in July 2012 drought
- Wind throws of *Acer saccharinum* in summer 2012 opened up canopy at S end
- *Zanthoxylum americanum* thicket and some *Berberis thunbergii*\* at S end
- *Carex tuckermanii*\* at SE edge is rare in Washtenaw Co.
- Small wetland pocket to 165 ft. to NE is connected by ditch, dominated by *Cephalanthus occidentalis*, *Iris virginica*
- Medium sized *Rhamnus cathartica* frequent around edges, especially at S end

### Oak Woodlands

Michigan Natural Plant Community: Dry-mesic Southern Forest

Description: Fairly open oak forest on rolling hills covering most of the surveyed area, diverse in E portions but W section with a thick *Acer saccharum* understory and few forbs

- Dominant trees *Quercus rubra* and *Quercus alba*, with many oaks over 2 ft. in diameter\*
- Several small vernal pools\* account for most of wetland plants on plant inventory
- N-central region bisected by an E-W intermittent stream bed
- Almost no oak regeneration observed
- In spring dominant groundcover is *Erythronium americanum*
- In fall patches of *Carex pensylvanica* observed, but mostly no groundcover except in vernal pool areas
- Knoll in SE corner more open with dominant groundcover *Carex pensylvanica*, some *Anemone virginiana* and *Rudbeckia hirta*
- The *Liriodendron tulipifera*\* were probably planted or seeded in from plantings (Sylvia Taylor, pers. com.)
- Rich mesic pocket to W of South Wetland with *Lindera benzoin*\*, *Allium tricoccum*\*, *Tiarella cordifolia*\*, *Cardamine diphylla*\*, *Trillium flexipes*\*
- *Mitchella repens* and *Zizia aurea*\* observed only just S of South Wetland
- Large population of *Staphylea trifolia*\* SW of S wetland
- Just N of South Wetland there are some species tolerant of drier woods: *Vaccinium pallidum*\*, *Elymus hystrix*, *Galium concinnum*\*
- Only a few *Fagus grandifolia*\* observed – one by Central Wetland, and several E of NW wetland with *Epifagus virginiana*\*
- Lots of trash (junk cars, wheelbarrow, fencing piles, culverts, oil tank)\*
- Several apparent research plots at W-central end
- Some large boulders, one with a dedication plaque\*, are at the main S entrance
- There are 3 old posts that may mark the edge of the Goodrich Preserve and a metal stake\* at the SE corner of the property
- Both the native and non-native *Celastrus*\* are present in the SE region
- SW edge a wall of *Rhamnus cathartica*\*
- Other notable invasive species include: 2 large double trunked *Robinia pseudoacacia*\* just W of Mesic Forest West, *Galium odoratum*\* S of South Wetland, *Euonymus fortunei* and *Euonymus alata* by junk cars\*

### South Wetland

Michigan Natural Plant Community: Inundated Shrub Swamp

Description: Wetland in SE corner of property, with mucky soil, dominant shrub *Cephalanthus occidentalis*, with *Acer saccharinum* an occasional tree; patches along S edge dominated by *Carex* spp. or *Salix* spp.

- Surrounding area upland oak forest
- All areas inundated in 2011, but no standing water in 2012 summer drought
- In NW corner a wet swale extends into woods, this area more open and dominated by sedges and *Leersia oryzoides*
- In SW corner *Carex lacustris*\* is dominant

- A *Salix lucida*\* thicket occurs in SE region and is uncommon in Washtenaw Co., as is *Bidens discoidea*\* in the NW leg
- Some *Rhamnus cathartica*, *Frangula alnus* and *Elaeagnus umbellata*\* present around edges

### Southwest Wetland

Michigan Natural Plant Community: Inundated Shrub Swamp

Description: Small wetland in central part of property, dominated by *Cephalanthus occidentalis* and ringed by *Quercus bicolor*

- *Lycopus rubellus*\* at edges is uncommon in Washtenaw Co.
- Several large old wind throws fallen into pond with exposed roots providing foothold for some upland species (*Rubus* spp., *Poa compressa*)
- One huge *Rhus typhina* at N edge
- Totally dry in July 2012 drought
- Overflow ditch at N end runs N to main E-W intermittent stream bed
- A few small *Elaeagnus umbellata* at edges

### Notes on areas not included in the plant inventory for Horner McLaughlin Woods

- Conifer plantation\* along the N property line with many trees dead, some still standing, many fallen
- *Lonicera japonica*\* is growing along Wood Dr. just S of parking area
- SE corner by Wood Dr. is a former home site with an old partly fallen shed\*, and a small man-made pond\*
  - Area around old home site with ornamental plantings of *Forsythia*, *Cornus florida*, *Thuja occidentalis*
  - The small pond near the old home site is probably man-made, some *Viburnum lentago* here and lots of *Rhamnus cathartica*



\* Feature Mapped



## Matthaei Botanical Garden

### Clements-Osgood Woods

Michigan Natural Plant Community: Floodplain Forest

Description: Large forest along Fleming Creek, with sparse overstory tree canopy and *Rhamnus cathartica* frequent in understory, especially in areas nearest buildings, occasional wet mucky areas

- Historical records indicate this was formerly an elm forest, but currently *Quercus macrocarpa* is dominant
- Notable large trees of *Quercus macrocarpa*\*, *Platanus occidentalis*\*
- Herbaceous groundcover with *Urtica dioica* and *Laportea canadensis* locally dominant in moist areas
- *Symplocarpus foetidus*\* dominant in mucky areas, often with some *Rhamnus cathartica*\*
- *Arisaema dracontium*\* and *Geum vernum*\* observed only in vicinity of Fleming Creek near buildings
- *Asimina triloba*\* may have been planted
- Occasional small wet meadow openings with *Carex lacustris* and *Eutrochium maculatum*, shrubs encroaching
- Two wet meadow areas, one in the central interior and one in the NW corner, were inventoried separately
- A man made ditch with ridge\* and small pond\* are in the N central region
- At S end there is small pocket of higher quality woodland vegetation with *Caulophyllum thalictroides*\*
- Some *Alliaria petiolata* and *Hesperis matronalis* but infrequent in interior
- *Veronica hederifolia*\*, in muck along trail W of the gazebo, is a new record for Washtenaw Co.
- N end a bit higher and drier, forest closed canopy, shrubbier
  - Only place *Hypericum prolificum* observed
  - *Alliaria petiolata* and *Hesperis matronalis* frequent here

### Clements-Osgood Woods - Oak Opening

Michigan Natural Plant Community: Dry-mesic Southern Forest

Description: Small forested knoll with some larger oaks, Fleming Creek to the W and otherwise bordered by floodplain forest

- *Prunus* sp.\* may be *Prunus nigra*, but this needs to be verified with flowers, it is very rare in Washtenaw Co.
- One larger *Quercus muehlenbergii*\*, species is not common locally
- Many spring wildflowers, but mostly not blooming
- Many invasive species present, *Rhamnus cathartica* and *Lonicera* sp. on the E side are the most problematic

### Clements-Osgood Woods - Tamarack Swamp

Michigan Natural Plant Community: Southern Wet Meadow

Description: Swath of wet meadow N of buildings and W of trail, with variable dominant species, both native and non-native; occasional young *Larix laricina* present with many older ones dead or dying

- *Carex lacustris* and *Carex stricta* locally dominant, especially N of footbridge to labyrinth
- Pocket on W side with *Thelypteris palustris* and *Eutrochium maculatum* dominant
- S end a mix of *Typha latifolia*, *Lythrum salicaria* and *Carex lacustris*
- Recent hardwood tree plantings at S end near area of dead *Larix laricina*
- Central patch of *Phragmites australis* is the native variety
- *Micranthes pennsylvanica*\* present, only rosettes observed
- Some large patches of *Iris virginica* in central sedge areas (good spots to collect seed)
- *Thuja occidentalis*\* (planted?) and *Cephalanthus occidentalis*\* observed only in one locality each
- One *Toxicodendron vernix* overhanging trail\*
- Going N from the footbridge near the labyrinth the vegetation changes
  - Near bridge is an area of denser *Larix laricina*
  - Next to the N is an opening dominated by *Carex stricta*
  - Then vegetation changes to a mix of *Symphotrichum* spp. and *Equisetum fluviatile* with a few large shrubs
  - N of here *Carex lacustris* dominates a large area that is fairly free of invasive species
- Some areas are dominated by shrubs
  - Especially drier areas along the E and W edges
  - Large thickets of *Corylus americana* established on E side along trail
  - Shrubs on W side N of grove of *Populus tremuloides*\* mostly *Lonicera* spp.

- Large population of 15 ft. tall *Rhamnus cathartica*\* in NW corner in a higher quality area of meadow, with *Toxicodendron vernix*
- In N end an area has young 3-5 ft. tall *Cornus* spp.\* densely established
- *Ligustrum* spp. frequent in central area S of footbridge to labyrinth
- Some shady thickets at edges have *Symplocarpus foetidus* or *Solidago patula* as the dominant forbs
- *Lythrum salicaria* scattered throughout but dominant plant in places in S half and N central area

#### Clements-Osgood Woods - Wet Meadow A

Michigan Natural Plant Community: Southern Wet Meadow

Description: Open wet meadow in center of floodplain forest, dominated by *Leersia oryzoides* with *Caltha palustris* and *Symplocarpus foetidus* frequent

- Small man made pond at S end\*
- Several spring fed seeps on E side\*
- Only a few small live trees of *Acer rubrum* and *Ulmus americana*
- *Carex lurida* found here is very rare in Washtenaw Co.
- N end shrubbed in with *Cornus amomum*
- Just a few *Lythrum salicaria* on W side, but frequent in the N half
- A few *Epilobium hirsutum*\*, this species can be problematic in wetlands
- One small patch of *Phalaris arundinacea* at N end

#### Clements-Osgood Woods - Wet Meadow B

Michigan Natural Plant Community: Southern Wet Meadow

Description: Shrubby wet meadow along trail just NW of floodplain forest, dominated by *Carex lacustris*

- One large *Quercus macrocarpa* E of bench
- *Glyceria grandis*\* population in middle of largest *Carex lacustris* patch
- N end considerably shrubbier but mostly lacking any tree canopy
  - *Corylus americana* and *Rhamnus cathartica* dominant shrubs with some *Cornus* spp. and *Lonicera* spp.
  - *Juglans nigra* at E edge
  - One large opening\* with more native shrubs, few invasive species: *Cornus* spp., *Corylus americana*, *Viburnum lentago*, *Salix bebbiana*
- *Alliaria petiolata* only observed in areas where shrubs were cleared for *Ulmus* planting

#### Cummings Fen

Michigan Natural Plant Community: Prairie Fen

Description: High quality fen at N end of property with recent shrub clearing, plant diversity greatest on the eastern slope W of tamaracks

- Surrounded by shrub-carr with occasional trees and seeps
- E slope very diverse with *Hypoxis hirsuta*\*, *Valeriana uliginosa*\*, *Hierochloe hirta*\*, *Lobelia kalmii*\*
- Much of the rest of the area is boarder-line wet meadow with coarser wetland forbs
- Medium sized tamaracks on E end with many dead
- SE area included in inventory of fen is a small open wet meadow, a bit lower elevation, dominated by *Solidago* spp., *Carex stricta*, *Eutrochium maculatum*, *Eupatorium perfoliatum*
- In areas of recent shrub removal the mixture of forbs coming in is variable
  - NE corner with good sedge diversity and *Lysimachia quadriflora*\*
  - W clearing with coarser native forbs and *Cirsium arvense*\*, *Hesperis matronalis* and *Rhamnus cathartica* seedlings
- The presence of sedges and calciphiles (*Solidago riddellii*, *Solidago ohioensis*, *Lysimachia quadriflora*) was used to delineate fen where recently cleared
- Deer exclosure in central area
- *Frangula alnus*, especially resprouts, one of the biggest threats, other invasive species also present in smaller numbers

#### Kirk Woods

Michigan Natural Plant Community: Dry-mesic Southern Forest

Description: Open oak woods NE of N barn with *Quercus alba* dominant and a good diversity of woodland wildflowers

- Small moister depression at S end with *Symplocarpus foetidus*

\* Feature Mapped

- Huge *Acer nigrum* at S end 3 ft. in diameter
- *Taenidia integerrima* by bench in NW corner planted (Aunita Erskine, per. comm.)
- Swale at S end likely not a natural depression, with *Leersia oryzoides* and *Persicaria punctata* dominant and *Symphotrichum ontarionis*\* present
- Between swale and upland woods more disturbed, lower quality area with *Rubus* spp. dominant groundcover
  - About 50% canopy cover here
  - *Rubus occidentalis*, *Rubus allegheniensis*, *Cirsium arvense* potential problems
- Several larger *Sassafras albidum* are notable because they lack any lobed leaves
- *Digitalis* in central part of woods escaped from cultivation
- *Torilis japonica* scattered throughout

### Kirk-Cummings-Sinclair Complex

Michigan Natural Plant Community: Southern Shrub-carr

Description: Shrub thickets at the N end of the property along and to the N of Fleming Creek, with occasional trees and a few wet meadow openings and seeps

- Cleared areas W of Cummings fen regenerating with coarser native wet meadow species (*Eutrochium maculatum*, *Thalictrum dasycarpum*, *Impatiens capensis*, *Lobelia siphilitica*, *Solidago patula* dominant forbs, and *Symplocarpus foetidus* in mucky areas)
- Area W of clearings with small trees of *Carpinus caroliniana*, *Acer negundo*, *Rhamnus cathartica* with mucky areas of *Symplocarpus foetidus*, *Packera aurea*, *Hesperis matronalis*
- N of Cummings Fen *Lonicera* spp. and *Rhamnus cathartica* are dominant
- NE area with several seeps\* on N side feeding into Fleming Creek on S side
  - *Rhamnus cathartica* and *Acer negundo* dominant as small trees, with *Alliaria petiolata* most frequent groundcover, but native herbs present, mostly *Symplocarpus foetidus*
  - Occasional openings with various native plants dominant, including *Arisaema triphyllum*, *Eupatorium perfoliatum*, *Carex stricta*
  - One seepy depression at N end with ridges 2 ft. higher on either side probably man made
- Just E of Cummings Fen an open meadow is dominated by *Carex lacustris* in the N end and *Symplocarpus foetidus* in the S
  - Old barbed wire fence along W side\*
  - Open area is less than 1 acre
  - Few shrubs or invasive species here
- A higher quality shrubby area with fewer invasive species\* is just N of Fleming creek

### Marilyn Bland Prairie

Michigan Natural Plant Community: None

Description: Well established and diverse prairie planting with *Andropogon gerardii* dominant; includes some midwestern prairie species not native to SE Michigan

- In SE corner *Solidago canadensis* appears somewhat aggressive
- A few woodland species occur in NE corner by Kirk Woods: *Carex cephalophora*, *Persicaria virginiana*, *Parthenocissus quinquefolia*, *Galium triflorum*
- Areas at S end recently converted from lawn vegetated with predominantly native species
- *Centaurea stoebe*\* and *Saponaria officinalis*\* present in small numbers
- Potential threats *Carduus* spp.\* and *Cirsium arvense* especially at S end

### Parker Brook Floodplain

Michigan Natural Plant Community: Floodplain Forest

Description: Disturbed shrubby forest along Parker Brook and to the S, with fairly open canopy dominated by *Populus deltoides* and *Acer negundo*; occasional wet meadow openings

- *Micranthes pennsylvanica*\* observed in only one place
- Large *Quercus alba* and *Salix* (probably *S. alba*) by Dixboro Road\*
- Wet meadow areas mostly invaded with *Lythrum salicaria*

**Parker Brook Wet Meadow**

Michigan Natural Plant Community: Southern Wet Meadow

Description: Open wet meadow areas W of Willow Pond, W areas degraded ecologically but E area with higher quality vegetation

- Slope immediately N of Willow Pond with a fen component, a few calciphiles present especially nearer pond
  - Level area above slope with *Carex pellita* and *Juncus dudleyi* dominant
  - Very few invasive species present (*Lythrum salicaria* and *Frangula alnus*)
- Area W of Willow pond is dominated by *Lythrum salicaria*, but native plants are persisting underneath
- One *Epilobium hirsutum* observed by trail
- SW area has some seepage along edge with a few fen plants *Dasiphora fruticosa* and *Solidago riddellii*\*

**Radrick Fen**

Michigan Natural Plant Community: Prairie Fen

Description: High quality open fen at S end of property, dominated by sedges, with some mossy hummocks in the S and E; a large open marly area at the N end

- Nice populations of *Cypripedium reginae*\* on E edge, *Triantha glutinosa*\* and *Calopogon tuberosus*\* in central area
- *Hydrocotyle americana*\* occurs occasionally on mossy hummocks and is locally uncommon
- Just a single *Lilium philadelphicum*\* was seen in flower
- *Valeriana uliginosa*\* and *Micranthes pensylvanica* occasional at S end
- *Phragmites australis*\* in the SE corner is the native variety
- *Carex prairea* and *Schoenoplectus acutus* are the most common sedges
- S end shrubbier
- Excessive trampling a serious threat
- Some conifers encroaching but otherwise invasive species are present but not problematic
  - Some *Lythrum salicaria*\*, especially at N end
  - One larger *Pinus sylvestris*, which is seeding around, with *Elaeagnus umbellata* under it \*
  - Young *Rhamnus*, mostly *R. cathartica*, frequent around edges

**Radrick Floodplain Forest**

Michigan Natural Plant Community: Floodplain Forest

Description: Closed canopy floodplain forest between Fleming Creek and Radrick Fen, dominated by *Acer nigrum* and *Quercus macrocarpa* and interlaced with seepage channels from Radrick Fen

- Central area fairly open beneath closed tree canopy, with fewer invasive species
  - Many native species such as *Phlox divaricata*\*, *Trillium flexipes* and *Maianthemum stellatum*
  - One large *Quercus muehlenbergii*, a locally uncommon tree, occurs here
- Wet meadow openings at S end with thin tree canopy, *Ulmus americana* and *Frangula alnus* common
- E side bordering Radrick Fen has many shrub thickets and wet meadow openings
- In NE area between road and fen mostly *Rhamnus cathartica* and *Carpinus caroliniana* with very few overstory trees
- N end mucky with *Symplocarpus foetidus*, *Packera aurea* and *Pilea* spp. locally dominant ground cover
- *Mimulus ringens*\* was not seen elsewhere on the property, and also *Eragrostis hypnoides*\* which is very rare in Washtenaw Co.
- Only one *Carya cordiformis*\* observed in NE
  - *Rhamnus cathartica* and *Ligustrum vulgare* common here
  - To the N many 8-24 in. in diameter trees, mostly oaks, with nearly closed canopy
- *Rhamnus cathartica* and *Carpinus caroliniana* dominant in understory with *Ligustrum* spp.\* and *Celastrus orbiculatus*\* frequent
- One old tree stand observed in N end

**Radrick Forest**

Michigan Natural Plant Community: Dry-mesic Southern Forest

Description: Closed canopy forest at SE corner of property, dominated by *Quercus* spp. in overstory and *Acer* spp. in understory, few shrubs, groundcover sparse

- Low diversity of spring wildflowers, primarily *Podophyllum peltatum* and *Claytonia virginica*
- The locally uncommon native parasite *Conopholis americana*\* is frequent in the E portion of the forest
- The grass *Poa sylvestris*\* has only been documented in Washtenaw Co. by 2 collections made in the 1930's

\* Feature Mapped

- Canopy gap\* in central area is dominated by *Rubus allegheniensis*
- Disturbance from soil pits and tree plots
- Shrubs, scattered throughout, mostly 3-5 ft. tall
  - SW corner has highest concentration of larger invasive species 10-15 ft. tall
  - *Ligustrum vulgare* and *Lonicera* spp. most frequent
  - Shrubs on E side are mostly young *Prunus* spp.
- Herbaceous invasive species scattered throughout
  - Worst infestation of *Alliaria petiolata* and *Cardamine impatiens* about 100 ft. W of NE corner
  - Small amount of *Torilis japonica* in SE corner & along S edge by golf course
  - Concentration of *Alliaria petiolata* along E edge by gate

### Radrick Forest West

Michigan Natural Plant Community: Dry-mesic Southern Forest

Description: Oak forest between Radrick Forest and Radrick Fen more open than adjacent forest, with good diversity of savanna indicator species present; past disturbance from gravel mining evident in areas

- Canopy cover about 85% in the portion adjacent to Radrick Forest where the slope to the W was removed so there is good light penetration
- Dominant native shrub *Viburnum rafinesquianum*
- Good population of *Ranunculus fascicularis*\* on E central ridge and adjacent S-facing slope
- Unnatural ravine between road and fen possibly an old roadbed or gravel removal area
  - Quite open with some boulders\* scattered about
  - Good populations of *Taenidia integerrima*\* and *Hepatica americana*\* here
- Most of the mesic species occur in the areas adjacent to Radrick Fen
- Good diversity of spring wildflowers with *Claytonia virginica* and *Carex pensylvanica* dominant groundcover, *Trillium grandiflorum* observed only in the NE corner by Radrick Forest
- *Desmodium canescens*\* by the parking area is rare in Washtenaw Co.
- SW end with dense *Rhamnus cathartica*, but high quality native plants underneath: *Pedicularis canadensis*\*, *Maianthemum stellatum*, *Actaea pachypoda*, *Anemone virginiana*, *Rhus aromatica*\*
- *Ligustrum vulgare* and *Lonicera* spp. most common invasive shrubs
- *Alliaria petiolata* and *Cardamine impatiens* most common invasive herbs
- In N end some large discarded chunks of concrete\* now covered with moss

### Radrick North Wetland

Michigan Natural Plant Community: Prairie Fen

Description: Very degraded and ditched fen W of Fleming Creek, S of the buildings, dominated by *Typha* spp. and *Lythrum salicaria* but with significant pockets of high quality native fen species; one small open marly area toward S end

- Edges very shrubby, especially on east side by Fleming Creek, mostly mixed *Salix* spp. and *Cornus* spp.
- A few open wet meadow areas along Fleming Creek with less *Typha* spp. present
  - Dominated by *Carex stricta* with typical wet meadow species
  - *Hydrocotyle americana* and *Hypericum ascyron*\* found here are very uncommon locally
- S end with more *Carex* spp. and less *Typha* spp. but quite shrubbed in
- Open marly area at S end\* with *Eleocharis quinqueflora*, *Triglochin palustris* and *Drosera rotundifolia*
- Opening in NW dominated by *Eleocharis rostellata*\* has some native fen plants present: *Parnassia glauca*, *Solidago ohioensis*
- Several 4-6 ft. deep seeping gullies\* draining into Fleming creek probably indicate past attempts to drain area
- Seeps and rivulets throughout area
- Woodland species present under trees by creek
- Wet meadow openings\* on W side dominated by *Symphotrichum firmum*, *Solidago* spp. and *Rumex orbiculatus*
- *Lythrum salicaria* and *Typha* spp. have overrun most of the area, *Frangula alnus* common
- Area to the west is a mature population of *Rhamnus cathartica*

**Radrick Wet Meadow**

Michigan Natural Plant Community: Southern Wet Meadow

Description: Shrubby wet meadow dominated by *Carex lacustris* and coarser wetland forbs, N of Radrick fen and otherwise bordered by floodplain forest

- Many *Micranthes pensylvanica*\* observed but vegetative only
- Slight raise in elevation on E side with dead trees
  - Now dominated by *Rhamnus cathartica* and *Frangula alnus*
  - Some woodland species persisting here: *Trillium* sp., *Maianthemum racemosum*
- N end very shrubby
  - With *Viburnum lentago*, *Frangula alnus* 5-8 ft. tall, and some larger *Rhamnus cathartica*
  - Sparse canopy of *Populus tremuloides*
- Some mucky patches where *Symplocarpus foetidus* is dominant
- Seepy fen pocket\* in middle with *Liparis loeselii*, *Dasiphora fruticosa*; with *Conioselinum chinense*\* and *Allium cernuum*\* nearby

**Sanford Woods**

Michigan Natural Plant Community: Dry-mesic Southern Forest

Description: Small open oak forest SW of Dix Pond, with some larger trees and spring wildflowers but infested with *Aesculus hippocastanum*

- Shrubs recently cleared so now fairly open
- 1958 map of MBG indicates this area was part of the hardwood plantings but this is doubtful
  - Area has native tree species in contrast to the odd cultivars planted in adjacent area to S
  - Label data from a specimen at UM Herbarium (*Prenanthes alba*, Shetler 1030) indicates that this area is a natural occurrence: "In small oak stand southwest of large pond, which bisects hardwood plantings."
- *Aesculus hippocastanum* especially prevalent at N end, other invasive species present in lower numbers

**Sinclair Meadow North**

Michigan Natural Plant Community: Southern Wet Meadow

Description: Open moist meadow by Fleming Creek at N end of property, dominated by native *Solidago* spp. but with a variety of invasive species present

- Some moisture availability evidenced by presence of *Carex stricta* and *Dasiphora fruticosa* in middle
- W end has highest concentration of invasive species including *Securigera varia*\*, *Euphorbia virgata*\*, *Pastinaca sativa*\*

**Sinclair Meadow South**

Michigan Natural Plant Community: Southern Wet Meadow

Description: Open wetland in old creek channel at N end of property, dominated by *Acorus americanus*\* in the wetter E end and *Iris virginica* in the W end

- Large population of *Glyceria grandis* at NE corner
- *Acorus americanus* in the SE is region is a large population of a locally uncommon species
- Just to the N a strip of *Rhamnus cathartica* is growing between here and Sinclair Meadow North
- Only a small amount of *Lythrum salicaria* at E end and one patch of *Phalaris arundinacea*\*

**Willow Pond Marsh**

Michigan Natural Plant Community: Emergent Marsh

Description: Cat-tail marsh at the edge of man-made pond with a few other forbs around drier edges, adjacent to degraded floodplain forest and lawn

- *Rhus copallina*, *Rhus aromatica* planted at N edge but *Rhus copallina* appears to also be regenerating in the area
- In Jun 2012 after a dry spring had lowered pond levels the cat-tails at the outer edges were dying (or herbicided?)

\* Feature Mapped

**Notes on areas not included in the botanical inventory at Matthaei Botanical Garden****Hardwood Plantings**

- Located SW of Dix Pond
- According to a 1958 map of the Gardens this area was planted with hardwood trees
- Trees appear to be some odd cultivar of *Quercus macrocarpa* or *Q. bicolor*
- Shrubbed in with *Rhamnus cathartica* except where restoration clearing has been done – lots of reprofiting shrubs

**Old Growth Buckthorn**

- Located NW of Radrick North Wetland
  - Adjacent to a degraded fen and may formerly have been part of it
  - Mucky soil with seeps
- 15 ft. tall trees of *Rhamnus cathartica* form closed canopy overstory
- Understory very open, few shrubs, very low plant diversity
- Groundcover *Impatiens capensis* and *Symplocarpus foetidus* almost exclusively

**West Uplands**

- Row of very large trees perched above the Tamarack Swamp to the W
- Some trees up to 3 ft. in diameter
- Includes *Juglans nigra*, *Quercus rubra*, *Q. macrocarpa*, *Q. alba*

**White Oak Woods**

- Small area of forested uplands on NW spur of property, N of a tall fence, which restricts access from the south
- Residence to E, and area could appear to be private property, but an old “Property of UMBG” sign is on the fence along Dixboro Rd.
- *Quercus alba* dominant tree, *Carex pensylvanica* dominant groundcover
- *Quercus velutina*, *Juglans nigra*, *Tilia americana*, *Prunus serotina* also present in overstory
- Understory with moderately dense *Cornus foemina* and *Lonicera* spp.

**Woods E of Helen Smith Wildflower garden**

- *Quercus macrocarpa* dominant tree with scattered *Q. rubra* and *Q. alba*
- In drier areas *Carex pensylvanica* is the dominant groundcover; in wetter area by Tamarack Swamp *Symplocarpus foetidus* is dominant
- Likely some plantings in this area: *Actaea racemosa*, *Asimina triloba*\*
- Some invasive species present, *Lapsana communis* is a non-native waif not seen elsewhere on the property
- Large leaf pile dumped probably smothering wildflowers

## **Mud Lake Bog**

### **Big Oak Island**

Michigan Natural Plant Community: Dry-mesic Southern Forest

Description: Open oak woods on an island surrounded by sedge meadow in the SW corner of the property

- This island is the largest of the Wet Meadow islands and has the highest elevation
- Several very large *Quercus alba* dominate the overstory, while groundcover is mostly *Carex pensylvanica* and *Poa compressa*
- Savanna species include *Euphorbia corollata*, *Lathyrus venosus*, *Vicia caroliniana*\*, *Vaccinium pallidum*\*
- Small buttonbush swale on N side
  - Entirely dried up in fall of 2012 drought year
  - *Carex tuckermanii*\* found here is rare in Washtenaw Co., *Carex alopecoidea*\* uncommon
- Area is quite free from invasive species
  - Ecological restoration conducted here by Washtenaw Co. Parks & Recreation (Toni Spear, pers. comm.)
  - One *Rhamnus cathartica*\* in middle and also some along wet edges
  - Several small patches of *Alliaria petiolata*\* observed

### **Black Spruce Bog**

Michigan Natural Plant Community: Poor Conifer Swamp

Description: Swamp forest N of bog, with dense closed canopy of *Picea mariana* and with the ground carpeted with springy sphagnum moss

- Trees all about the same age; 4-10 in. in diameter
- Fairly low plant diversity
- Several small patches of *Woodwardia virginica* present
- Shrubber at edges with interior quite open
- Just a few young *Frangula alnus* seen, no other invasive species present

### **Bog North**

Michigan Natural Plant Community: Bog

Description: Open floating bog mat on NE side of Mud Lake with stunted conifers among lush mossy hummocks

- *Larix laricina*\* dominant tree with some *Picea mariana*\*
- Shrub layer mostly dense patches of *Chamaedaphne calyculata*\* or *Decodon verticillatus*
- Large hummocks covered with sphagnum mosses are occupied by *Sarracenia purpurea*, *Menyanthes trifoliata*\* and *Drosera rotundifolia*\*
- Small pools near edge of open water with aquatic plants: *Brasenia schreberi* and *Utricularia gibba*\*
- Both the native and non-native cat-tails are present, and their hybrid
- Sedges of interest include *Carex billingsii*, *Carex limosa*, *Carex diandra*\* and *Eriophorum gracile*
- Numerous species preferring or requiring acidic substrate present: *Xyris difformis*, *Eriophorum virginianum*\*, *Carex trisperma*, *Carex billingsii*
- At W end *Chamaedaphne calyculata* thins out and *Dulichium arundinaceum* is dominant species under *Larix*
- Lake edge dominated by *Typha* spp., just a few places where sedges or *Calamagrostis canadensis* extends to open water
  - The native *T. latifolia* is most common cat-tail
  - *Typha angustifolia*\* and *T. xglauca* were the only non-native species observed at this site
  - Areas dominated by *Typha* spp. were not included in the area inventoried

### **Bog South**

Michigan Natural Plant Community: Bog

Description: On S and W end of Mud Lake, open floating bog mat of *Carex lasiocarpa*, with shrubby hummocks amidst small *Larix laricina* toward outer edges

- Areas dominated by *Typha* spp. were not included in the area inventoried
- Mat of *Carex lasiocarpa* very thin closer to open water
- Several species of orchids seen: *Cypripedium acaule*\*, *Platanthera clavellata*\*, *Spiranthes cernua*\* and *Calopogon tuberosus*
- W end flat with no hummocks and few shrubs, dominated by *Carex lasiocarpa* and *Thelypteris palustris*, with *Eriophorum gracile* present

\* Feature Mapped



- S side has shrubby hummocks\* with *Dasiphora fruticosa*\* and *Chamaedaphne calyculata* and some sphagnum moss underneath
- Evidently some groundwater influence
  - Acid loving plants present in Bog North are absent here and calciphiles, such as *Dasiphora fruticosa*, are present
  - Sphagnum moss thin on hummocks, not developing into thick layer
- As in Bog North, *Typha* spp. is most significant threat, but *Lythrum salicaria* also present in small amounts
- Abandoned old duck boat\* NW of Mud Lake had a young *Populus tremuloides* growing in it

### Hardwood Swamp

Michigan Natural Plant Community: Hardwood Swamp

Description: Large wetland areas, mostly in N part of the property, composed of a mosaic of shrub thickets and sedge meadows in a thinly forested wetland

- Comprises most of the NE area of the property with a long finger projecting west to Horseshoe Island and an unconnected area W of Horseshoe Island, adjacent to the Prairie Fen
- Tree canopy is thin due to ash/elm die off evidenced by many standing snags and fallen tree trunks
- NE swamp is the largest contiguous area
  - *Acer saccharinum* is dominant with a few *A. rubrum* present, trees mostly less than 18 in. in diameter
  - Larger openings dominated by *Carex lacustris*, *Bidens cernua*\* or *Osmunda cinnamomea*\*
  - Thickets of *Ilex verticillata* and *Vaccinium corymbosum*\* common, occasional individuals of *Lindera benzoin*\* in E
  - In NE corner a small area is a bit drier and dominated by young *Acer rubrum*\* (less than 6 in. in diameter), more open understory and with mossy hummocks but no conifers
- Swamp S of Horseshoe Island is small but more diverse
  - Swamp is quiet open with very few trees, mostly *Acer saccharinum* and *Larix laricina*
  - Plants seen here but not in other areas of hardwood swamp include *Micranthes pensylvanica*\* and *Liparis loeselii*\*
  - 20 ft. wide patch of *Typha angustifolia*\* at N end
- Swamp adjacent to Prairie Fen
  - More open here than in NE swamp with fewer shrub thickets, less *Ilex verticillata* and more *Dasiphora fruticosa*
  - *Quercus bicolor*\* is the dominant tree with occasional *Larix laricina*\* present
  - Herbaceous species composition very similar to NE swamp
  - A bit drier than other swamp areas, no mossy hummocks
- Overall few invasive species present, but young *Frangula alnus*\* are poised to be a future problem

### Hardwood-conifer Swamp

Michigan Natural Plant Community: Hardwood-conifer Swamp

Description: Closed canopy forest N of Mud Lake dominated by *Acer rubrum* with occasional *Picea mariana*\* and *Larix laricina*

- Situated between Black Spruce Bog and Hardwood Swamp
- Relatively young forest, no evidence of recent logging (no stumps), all trees less than 10 in. in diameter
- Many of larger conifers dead, conifer regeneration sparse
- Tip and mound topography, much drier than surrounding Hardwood Swamp
- Interior areas next to Black Spruce Bog fairly open with few shrubs
- N end shrubbier with large *Vaccinium corymbosum*\* thickets
- *Frangula alnus*\* is the only non-native plant observed, mostly infrequent
- E of and adjacent to Black Spruce Bog
  - More mossy hummocks with greater species diversity than on W side, with some *Woodwardia virginica*, *Maianthemum trifolium*\*, *Trientalis borealis*\* and one *Cypripedium acaule*\*
  - A few openings dominated by *Osmunda cinnamomea*\*
- Unconnected area to E
  - With *Picea mariana* and mossy hummocks
  - Very shrubbed in with *Vaccinium corymbosum*\*
  - Numerous young *Frangula alnus*\* here are a large threat

**Horseshoe Island**

Michigan Natural Plant Community: Dry-mesic Southern Forest

Description: Small open island NW of Mud Lake with widely spaced oaks and *Carex pensylvanica* groundcover, mostly surrounded by wet meadow but with hardwood swamp to the SW

- Lowest elevation of the Wet Meadow islands
- *Quercus macrocarpa* and *Q. bicolor* co-dominant, some *Q. alba* in the middle
- Occurrence of *Rhus aromatica*\* at W end is probably a natural occurrence
- Interesting large oak in SE leg of island probably a hybrid\* - has characteristics of black, red and northern pin oaks
- Lots of *Rhamnus cathartica* saplings, especially in the NE corner
- Patch of *Cirsium arvense* in low SE corner has potential to spread

**Juniper Hill**

Michigan Natural Plant Community: Dry-mesic Southern Forest

Description: Degraded mixed forest regrowth in old field NW of Mud Lake with grassy openings at N end

- Area about 6 ft. higher in elevation than Swamp White Oak Woods to the E
- On W side *Juniperus virginiana* (one large) and *Prunus serotina* dominant
- On E side *Quercus rubra* and *Acer rubrum* dominant, 4 in. or less in diameter
- Very few spring wildflowers, *Rhamnus cathartica*\* common
- N end with more oaks
  - In NW area overstory of *Quercus bicolor* and *Carya ovata* with *Rhamnus cathartica* understory
  - Grassy openings with *Andropogon gerardii*\* and *Liatris spicata*\*

**Little Oak Island**

Michigan Natural Plant Community: Dry-mesic Southern Forest

Description: A small upland island toward W end of property, surrounded by wet meadow and shrub-carr and covered with oak-hickory forest

- *Quercus alba* and *Carya ovata* dominant trees
- *Poa compressa* and *P. pratensis* dominant groundcover
- Weediest and smallest of the Wet Meadow islands
- Greatest threat is *Elaeagnus umbellata*\*

**North Island**

Michigan Natural Plant Community: Dry-mesic Southern Forest

Description: Island with open oak forest, situated in N end of the Wet Meadow with some open hardwood swamp to the SW

- Dominant tree is *Quercus rubra*; all trees on island less than 20 in. in diameter
- Dominant groundcover *Brachyelytrum erectum*\*, *Carex pensylvanica* and *Elymus hystrix*
- *Vicia caroliniana*\* in N end is a locally uncommon savanna indicator
- Some *Elaeagnus umbellata* around edges, but central area fairly free of shrubs

**Oak Woods SE**

Michigan Natural Plant Community: Dry-mesic Southern Forest

Description: Open oak woods in ESE corner of property, adjacent to similarly forested private property to S and E and wetlands to N and W

- Dominant groundcover *Carex pensylvanica*, with occasional low shrubs of *Rubus* spp., *Ribes cynosbati* and *Vaccinium pallidum*\*
- Dominant tree *Quercus alba* with *Q. rubra* and *Q. velutina* also present
- N side sloping down to Hardwood Swamp has lower elevation area with *Acer saccharinum* and *Populus deltoides*
- Small amount of *Elaeagnus umbellata* and *Ligustrum vulgare* not currently a significant problem
- Roll of old fencing at approximately property line
- Used by local hunters who have erected a deer blind\* and tree stand\*

**Oak-Hickory North**

Michigan Natural Plant Community: Dry-mesic Southern Forest

Description: Oak-hickory woods at N end of property, with disturbance from power line cut through level N side and higher quality S side gradually sloping down to wetlands

\* Feature Mapped

- *Quercus bicolor* is dominant in the N, *Carya ovata* in the S
- Many glacial erratics
- A N-S trail runs from road to wetland between old field area and woods, many weeds but native *Geum vernum* common here, though uncommon in Washtenaw Co.
- NW corner is moister and quite disturbed
  - One *Tilia americana* and a *Salix amygdaloides* each about 2 ft. in diameter
  - *Rosa multiflora* and *Celastrus orbiculatus* frequent here
- Power line cut area in N
  - Two vernal pools, one\* with large thicket of *Zanthoxylum americanum* nearby
  - Vegetation was cleared under power line in 2012, mostly shrubs
  - Invasive shrubs here include *Lonicera* spp. and *Elaeagnus umbellata*
  - *Hylotelephium telephium* NW of larger vernal pool appears to be spreading vigorously
  - Small amount of *Lysimachia nummularia* also present in moister areas, may be a future threat
- S of power line cut woods is more open, fewer shrubs, with several large open grown *Quercus alba*, but most trees less than 10 in. in diameter
- Gentle slope just N of wetlands has more open tree canopy
  - Greater diversity including plants that occur in dry open woods or prairies include *Sisyrinchium albidum\**, *Euphorbia corollata*, *Lespedeza frutescens*, *Hylodesmum glutinosum*, *Symphotrichum oolentangiense*
  - *Poa compressa* is the dominant groundcover
- W edge has a line of larger oaks that grew up in an old fencerow
- SW corner is mostly *Cornus foemina* thickets with few trees and old field weeds
- *Alliaria petiolata* is sporadic throughout woods, *Torilis japonica* common
- Some trash in area (metal springs,\* old tires\*, tub\*, teapot, etc.)
- Two tree stands\* and hunter orange hat indicate deer hunting in area
- A large new tree stand\* and two track\* from Barker Road are very close to E property line (location of old farm fence W of two-track does not match property line location in GIS)

### Prairie Fen

Michigan Natural Plant Community: Prairie Fen

Description: Degraded prairie fen in NW end of property, about one foot higher than surrounding wet meadow, with some native fen plants persisting

- Gradually grades into Hardwood Swamp to N
- South central area open and fairly shrub free, most other places with occasional shrubs or trees, mostly of *Larix laricina* and *Juniperus virginiana*
- *Carex stricta* dominant on W side
- Good populations of *Liatris spicata\**, *Rhamnus alnifolia* and *Dasiphora fruticosa*; some *Carex buxbaumii\**, *Carex sartwellii*, and *Lysimachia quadriflora\**; very little *Hypoxis hirsuta* and *Valeriana uliginosa\**
- Peat mound\* on E side about 3 ft. higher in elevation with some woodland species: *Podophyllum peltatum*, *Maianthemum canadense*
- Many young *Frangula alnus\** sprouts a very significant threat; the one *Lythrum salicaria* observed was removed
- The native *Juniperus virginiana\** and *Phalaris arundinacea\** are also problematic

### Shrub-carr

Michigan Natural Plant Community: Shrub-carr

Description: Areas of shrub thickets occurring throughout the property, with occasional trees of *Acer* spp. and *Larix laricina* and wet meadow openings

- Generally low plant diversity underneath closely spaced shrubs
- In areas closer to the Bog and Tamarack Swamp
  - *Ilex verticillata* and *Vaccinium corymbosum* dominant shrubs, with *Toxicodendron vernix* frequent
  - Mossy hummocks with *Coptis trifolia* and *Trientalis borealis* common
  - Dead ash snags common
- In areas associated with the Wet Meadow
  - *Salix* spp. are dominant species with occasional thickets of *Cornus* spp.
  - Frequent openings with *Carex lacustris* or *Osmunda* spp. dominant
  - Fewer dead trees standing
- No invasive species observed

### Swamp White Oak Woods

Michigan Natural Plant Community: Mesic Southern Forest

Description: Mesic forest NW of Mud Lake, dominated by *Quercus bicolor* with fairly open understory; bordered by wet meadow to S and E, uplands to N and W

- Spring wildflowers present but not abundant, not many shrubs
- Most of area was tilled in the past
  - Evident from historical aerial photographs
  - Large trees only around S and E edge adjacent to Wet Meadow
  - Rock piles around edges
- A few openings with prairie or fen associates: *Penstemon digitalis*, *Liatris spicata*\* and *Doellingeria umbellata*
- The *Geum vernum*\* and *Carex scabrata*\* found here are uncommon in Washtenaw Co.
- Old farm fence on N edge of property, with large open food plot hunting area to N
- Some invasive species present but not in great numbers, much less *Torilis japonica* than in Oak-Hickory North

### Tamarack Swamp

Michigan Natural Plant Community: Rich Tamarack Swamp

Description: Shady forest around bog with dominant *Larix laricina* growing on mossy hummocks with shrubs; channels between hummocks an open slurry of peat and muck

- Largest areas E and W of Bog with just a thin strand adjacent to the S side of Bog South
- To W grades gradually into open shrub-carr
- E end towards the bog with many *Typha latifolia* and the native variety of *Phragmites australis*
- Several orchids encountered here are not common in Washtenaw Co. (*Liparis loeselii*, *Cypripedium acaule*, *Platanthera clavellata*), and *Platanthera flava*\* is very rare, being known from only one other site in the county
- *Frangula alnus* and *Lythrum salicaria* are both present, but are currently not a significant problem in most places

### Wet Meadow

Michigan Natural Plant Community: Southern Wet Meadow

Description: Large open wet meadow, usually inundated, situated between Mud Lake and surrounding uplands, very diverse in some places but mostly dominated by *Carex lacustris*

- Occasional trees of *Acer rubrum*, *Ulmus americana* or *Larix laricina*\*, with scattered shrub thickets of *Salix* spp.
- Small grove of *Populus tremuloides* on edge W of Prairie Fen
- Just S of bog there is a slightly elevated area dominated by *Calamagrostis canadensis* that is more diverse, with *Symphotrichum boreale*\*, *Muhlenbergia glomerata*\*, *Carex sartwellii*, *Carex prairea*\* and *Doellingeria umbellata*
- *Sparganium eurycarpum*\*, *Spartina pectinata*\* and *Carex lasiocarpa* were seen only between Big Oak Island and the Prairie Fen
- Most of the *Phragmites australis* is the native variety\*, but there is one population of the non-native\* at the southern edge
- Several invasive species, such as *Lythrum salicaria*\*, are present but the largest threats are from the large adjacent areas of *Typha* spp.
- Areas dominated by *Typha* spp. were not included in the area inventoried

\* Feature Mapped

**Notes on areas not included in the plant inventory for Mud Lake Bog****Buttonbush Swamps**

- Several small wetland areas at edge of uplands, partly standing water with *Lemna* spp. and *Wolffia* sp.
- *Cephalanthus occidentalis* dominant shrub, with a few emergent forbs

**Cattails**

- Large low diversity wetland areas overrun by *Typha* spp.
- Primarily located in two areas
  - Between bog areas and open water of Mud Lake
  - Between intact wet meadow and uplands especially around Elaeagnus Island

**Elaeagnus Island**

- Very small degraded island in SW wetlands
- Overstory just a few trees of *Quercus velutina* and *Carya ovata*
- Understory with *Elaeagnus umbellata*\* dominant
- Surrounding wetland dominated by *Typha* spp.

**Mud Lake**

- Located in center of bog areas, fairly inaccessible
- Open water with *Nuphar advena* dominant floating aquatic plant

**Northeast Upland**

- Small area in NE corner of property that has *Salix* sp., *Populus deltoides* and *Acer saccharinum* on lower edges and a few *Quercus* sp. in the interior
- Possible encroachment from neighbor to N, with canine greeter

**Northwest Old Field**

- Old field areas W of Oak-Hickory North are dominated by large *Elaeagnus umbellata*
- Surrounded by oak-hickory woods

**South Island**

- Small island with some large oaks
- Large *Quercus alba* on N side with old farm fence intertwined is probably the property line
- Good place to access south side of bog

**Southwest Property Line (from W to E)**

- In the very SW corner, SW of the Big Oak Island, is a very small area of *Calamagrostis canadensis* with some trees of *Populus tremuloides*
- Also in SW corner, a bit of dry-mesic forest adjacent to Independence Park is probably included in their restoration efforts
- A small peninsula has shrubs and some widely scattered *Juniperus virginiana*\* with openings of old field and prairie species\*

## Nichols Arboretum

### Alex Dow Field – Prairie

Michigan Natural Plant Community: Dry-mesic Prairie

Description: Open prairie at E end of property dominated by *Andropogon gerardii* with a homogeneous mix of native prairie forbs, both naturally occurring and planted

- Dominant forbs include *Solidago speciosa*, *Symphotrichum oolentangiense* and *Solidago juncea*
- Some of the showy prairie species were very uncommon: *Asclepias tuberosa*, *Silphium terebinthinaceum*, *Vernonia missurica* and *Lespedeza capitata*
- The *Castanea dentata*\* sprouts certainly have seeded in from a tree planted in Magnolia Glade
- *Coreopsis palmata*, *Silphium integrifolium* and *Baptisia australis*\* are not native to SE Michigan and presumably were planted
- The *Rhus* population at the W end is probably a hybrid or cultivar
- *Taenidia integerrima*\* occurrence was only one plant seen at W end
- The thicket of very showy *Prunus* in the NE corner is sterile and probably a cultivar of *P. americana*
- Larger areas of common invasive species in process of being eradicated (*Celastrus orbiculatus*, *Cirsium arvense*), the single *Alliaria petiolata* observed was removed
- Small patches of less common potential invasive species include *Saponaria officinalis*\*, *Vicia tetrasperma*\*, *Ligustrum vulgare*, *Cardamine impatiens*\* (especially in E end), *Myosotis arvensis*\* and *Geum urbanum*\* (along trail in SE)
- Scattered patches of *Elymus repens* could prove problematic
  - This is an aggressive Eurasian grass that blends in with the prairie grasses
  - Easiest to spot in July when in flower

### Alex Dow Field - Savanna

Michigan Natural Plant Community: Oak Openings

Description: Oak forest between Dow Field Prairie and railroad tracks, with open canopy, interspersed with small areas of prairie and shrub thickets

- Overstory mixed oak species with a few larger *Ulmus americana* and *Tilia americana*
- *Celastrus orbiculatus* prevalent, some small *Rhamnus cathartica* and *Lonicera* spp.
- *Convallaria majalis* population NE of Norway spruce
- Some plants present that were not observed in the prairie include: *Lechea mucronata*, *Lespedeza frutescens*, *Triosteum aurantiacum* and *Lupinus perennis*\*
- Population of *Taenidia integerrima*\* is the biggest known locally
  - With about 50 plants it could be a good seed source
  - Has some serious competition from shrubs and *Apocynum androsaemifolium*
- Areas of conifer plantation were not included in the inventory

### East Oak Woodlands

Michigan Natural Plant Community: Dry-mesic Southern Forest

Description: Open rich oak forest situated on the hillsides and ridges of a glacial moraine S of Dow Field Prairie

- *Quercus rubra* and *Carya glabra* dominant trees, with closed canopy
- Areas of recent extensive shrub clearing and brush piles look like an ecological restoration battleground
- Native groundcover a mix of wildflowers with *Podophyllum peltatum* and *Geranium maculatum* locally dominant

Description of subunits going E to W:

- Eastern end
  - With very few early spring wildflowers, just a bit of *Erythronium americanum*, followed later by a large display of *Trillium grandiflorum*
  - *Aralia nudicaulis*\* frequent here, only area it was found in the East Oak Woodlands
  - *Tilia cordata* occasional in here, especially toward N
- Large ravine oriented north-south with ornamental plantings
  - This is the only place *Poa alsodes*, a grass typically found in high quality woodlands, was observed
  - Woody plants include *Halesia carolina*\*, *Rhododendron*\*, *Phellodendron amurense*\*, *Cornus kousa*\*, *Euonymus europaea*\*
  - Large population of *Vinca minor* at bottom growing with *Impatiens* sp. and *Symplocarpus foetidus*, indicating some groundwater influence at base of slope

\* Feature Mapped

- *Mertensia virginica*\* also at bottom of ravine growing with *Forsythia* and *Narcissus* so evidently planted here
- Woods between large ravine and W to top of ridge above Magnolia Glade
  - Good diversity of typical woodland plants (*Ranunculus* spp., *Symphytotrichum* spp., *Carex* spp.) along S end of trail next to ravine
  - *Trillium grandiflorum* sparse except where protected by shrubs\*
  - Intensive shrub removal in progress, several brush piles at S end
  - Only one *Populus grandidentata*\* observed, about 10" in diameter
  - *Mertensia virginica*\*, *Adiantum pedatum*\* along S fence
  - *Ranunculus fascicularis*\* also near S fence and along trail just to W and elsewhere
  - Just W of ravine area is infested with *Alliaria petiolata* and *Hesperis matronalis*; *Galium odoratum*\* and *Vinca minor*\* occasional
  - North edge with many cultivated or adventive species: *Clematis terniflora*\*, *Tilia cordata*, *Syringa*\*tree, *Aesculus*
  - Large population of *Euonymus fortunei*\* both as groundcover and climbing into trees
  - A few *Acer platanoides* (to 12" diameter) located; also *Prunus avium* and other unusual *Prunus* species
  - The non-native *Viola odorata* is the most common violet
- Slope just E of Magnolia Glade
  - Large *Castanea dentata*\* next to other ornamental trees and likely was planted also.
  - Native species present in good numbers: *Boechnera laevigata*\* and *Podophyllum peltatum* with a few *Uvularia sessilifolia*\*
  - Several species found only in area immediately adjacent to Magnolia Glade: *Pyrola elliptica*, *Penstemon hirsutus*, *Hypoxis hirsuta*\*, *Potentilla simplex*
  - Many re-sprouted shrubs in cleared area, 2-4 ft. tall, especially *Ligustrum vulgare*
  - Many invasive species on cleared slopes: *Hesperis matronalis*, *Cardamine impatiens*, *Ligustrum vulgare*, *Convallaria majalis*, *Chelidonium majus*\*
- Woods on knoll just W of prairie
  - Area quite degraded with *Robinia pseudoacacia* locally dominant
  - Many trees dead and the canopy more open than in oak dominated areas of the East Oak Woodlands
  - Good populations of *Hydrophyllum virginianum*\* and *Viola pubescens*\*
  - *Trillium recurvatum*\* located here is not native to SE Michigan and probably seeded in from plantings
  - *Lonicera* spp. is the dominant shrub, *Hesperis matronalis* is the dominant forb
  - One *Catalpa speciosa*\* leaning over trail on the N end is a hazard tree
- Woods in NW corner
  - Small grove of *Fagus grandifolia*\* here
  - W edge an open oak forest with *Carex pensylvanica*, *Hamamelis virginiana*, *Dichanthelium latifolium*, *Uvularia sessilifolia*\*, *Hepatica americana*\*
  - Not cleared, but few invasive shrubs present
  - The pink flowered form of *Thalictrum thalictroides* occurs here
- Woods in SW leg
  - Fairly degraded area with plantings (*Taxus*, *Leucothoe*)
  - *Lindera benzoin* may be a planting – unlikely habitat
  - *Hepatica acutiloba*\*, which is rare in the immediate Ann Arbor area, occurs here

### Forest Hills Woods

Michigan Natural Plant Community: Dry-mesic Southern Forest

Description: Very disturbed oak forest on ridge and east-facing slope just E of Forest Hills Cemetery

- Slope just above road has more native species: *Cystopteris fragilis*, *Cryptotaenia canadensis*, *Osmorhiza longistylis*
- Several large *Juglans nigra*\* about 3 ft. in diameter on W side
- Top of ridge is very disturbed, open in places, with few native species and many invasive ones, especially *Lonicera* spp., *Chelidonium majalis* and *Hesperis matronalis*
- A few scattered *Pinus sylvestris* on W ridge
- *Euonymus europaea* is common in SE above road
- *Hedera helix* and *Euonymus fortunei*\* frequent groundcover

**Forested Wetland**

Michigan Natural Plant Community: Floodplain Forest

Description: Forest in center of property along intermittent stream running N to the Huron River

- Mixed forest of *Acer saccharinum*, *Tilia americana*, *Juglans nigra*, *Carya* spp., *Acer negundo*
- Includes some small open pockets of sedge meadow with only a few invasive species: *Iris pseudacorus* and *Ligustrum vulgare*
- Recent shrub removal
- *Trillium recurvatum*\* located here is not native to SE Michigan and probably seeded in from plantings
- S end very degraded with *Celastrus orbiculatus*, *Ailanthus altissima*, *Phellodendron amurense*\*, *Robinia pseudoacacia*\*, *Ampelopsis brevipedunculata*\*
  - One *Phellodendron* about 18 in. in diameter was observed fruiting and is probably the seed source for infestations here and elsewhere at the Arboretum
  - 3 large *Robinia pseudoacacia* present
  - *Populus* here is probably a cultivar
- Large infestation of *Vinca minor*\* with *Convallaria majalis* and *Celastrus orbiculatus* nearby
- *Ligustrum* is mostly *L. obtusifolium* with a few *L. vulgare*
- *Iris pseudacorus* grows by intermittent stream
- Cultivars of *Cornus*, *Viburnum*\* and *Betula* present

**Heathdale**

Michigan Natural Plant Community: Dry-mesic Southern Forest

Description: Open oak forest in sheltered east-facing ravine SE of Peony Garden, implemented as a backdrop landscape for ornamental plantings, with a more open knoll to the S

- *Aralia racemosa* on SE facing slope may not be a natural occurrence
- Open south knoll probably did not have ornamental plantings, *Kalopanax septemlobus*\* and *Ampelopsis brevipedunculata*\* here probably escaped from plantings elsewhere on the property
- Area planted with *Tsuga canadensis* not included in botanical survey
- *Celastrus orbiculatus* and *Convallaria majalis* frequent, *Euonymus fortunei*\* dominant groundcover in places
- *Lonicera* spp. and *Celastrus orbiculatus* along road at SE end (at base of knoll)

**Magnolia Glade**

Michigan Natural Plant Community: Savanna (groundcover)

Description: Small open magnolia planting in center of property between lawns and East Oak Woodlands, serving as a refuge for a diverse mix of savanna species

- Some notable savanna associates here are *Hypoxis hirsuta*, *Sisyrinchium albidum*, *Erigeron pulchellus*, *Lespedeza capitata*, *L. hirta*, *Ranunculus fascicularis*, *Lechea mucronata* and *Carex laxiculmis*
- Some prairie grasses present: *Sorghastrum nutans*, *Schizachyrium scoparium*
- *Celastrus orbiculatus* infestation at N end the most significant threat

**Maple Glen**

Michigan Natural Plant Community: Dry-mesic Southern Forest

Description: Disturbed closed canopy maple forest and plantings by caretaker's cottage with some native woodland species persisting

- Dominant tree *Acer saccharum* with scattered patches of planted conifers
- *Rhamnus cathartica* dominant at S end by cottage
- Two *Aesculus glabra*\* just E of a *Pinus strobus* stand probably also planted
- Other ornamentals planted or escaped here include low bushes of *Leucothoe* and small trees of *Taxus*

**North Floodplain Prairie Remnant**

Michigan Natural Plant Community: Dry-mesic Prairie

Description: North of Huron River, openings of prairie grasses and forbs surrounded by invasive shrubs

- Large population of *Asplenium platyneuron* along S edge
- *Rhamnus cathartica*, *Ailanthus altissima* and *Pinus sylvestris* encroaching into openings
- *Yucca flaccida* established and spreading
- Evidence of occasional human occupation: tent, sleeping bag\*, fire pit\* with log seating

\* Feature Mapped



### North Floodplain Swale

Michigan Natural Plant Community: Southern Wet Meadow

Description: North of the Huron River, an inundated old river channel running parallel to Huron River forms a narrow wet meadow

- *Leersia oryzoides*, *Galium obtusum* and *Persicaria maculata* locally dominant in patches at the E end
- *Carex lacustris* and *Carex stricta* co-dominant in the middle portions with a nice diversity of wetland forbs
- W end with *Calamagrostis canadensis* and *Typha latifolia* locally dominant
- *Symplocarpus foetidus* tucked in under perimeter shrubs and, in shadier W end, with an occasional *Arisaema dracontium*\* and a patch of *Symphyotrichum ontarionis*\*
- Usually with several inches of water, but totally dried up in 2012 drought year
- Some young dead ash snags
- *Rhamnus cathartica* and *Fragula alnus* surround the area and are the largest threats
- *Catalpa speciosa* at E end may eventually be problematic

### South Floodplain Woods

Michigan Natural Plant Community: Floodplain Forest

Description: Floodplain forest just S of the Huron River and W of railroad tracks, with canopy openings and a wet meadow area in the E end

- Tree species a mix of *Populus deltoides*, *Tilia americana*, *Quercus macrocarpa*, *Carya* spp. and *Acer* spp.
- Inventory includes a small wet meadow with sedges by river at E end under power lines
- Some species just seen on riverbank W of landing: *Lilium michiganense*\*, *Maianthemum stellatum*, *Symphyotrichum cordifolium*, *Stachys hispidus*
- *Celastrus orbiculatus* the most significant threat, especially just E of the landing and at E end
- *Phellodendron amurense*\* at E end also problematic, some 10-12 ft. tall

### West Oak Woodlands

Michigan Natural Plant Community: Dry-mesic Southern Forest

Description: Oak forest at W end of property just S of the Huron River, on a morainal ridge with steep N-facing slope with seeps at the base and a ravine (School Girls Glen) at the W end

- Ridge top mossy and quite bare of herbaceous vegetation in fall
- Some wetland species occur in seepy areas at the base of the N-facing slope: *Cephalanthus occidentalis*, *Epilobium coloratum*
- Just a few *Mitella diphylla* on N-facing slope, one *Taenidia integerrima* on ridge top, one *Aralia racemosa*\* in School Girls Glen
- Has a small valley with *Taxus*\*, both trees and shrubs, with *Aralia nudicaulis*, *Asarum canadense* and *Adiantum pedatum*
- At top of School Girls Glen *Helianthus strumosus* occurrence is probably seeded in from planting to S
- *Ailanthus altissima*, *Prunus avium*, *Rhodotypos scandens*, *Pachysandra* and *Hedera helix* have potential to spread
- Most significant threats are *Lonicera* spp., common on ridge top, and *Celastrus orbiculatus*, sporadic throughout

**Notes on areas not included in the plant inventory for Nichols Arboretum**

**North Floodplain**

- Includes areas N of the Huron River that are outside the Swale and Prairie Remnant, dominated primarily by *Rhamnus cathartica* and *Celastrus orbiculatus*
- N of Swale occasional larger trees of *Juglans nigra*, *Quercus velutina*, *Q. bicolor*, *Carya cordiformis* and *Acer nigrum*
- On N side are 22 trees of *Gymnocladus dioica*
  - Planted in a row
  - Range in size from 3-12 in. in diameter
- Between Huron River and Swale
  - Mostly *Rhamnus cathartica*, *Lonicera* spp., *Ligustrum vulgare*; some *Salix* and *Populus deltoides*
  - One large *Populus deltoides* is about 6 ft. in diameter, split into 4 trunks above 8 ft.
- Most of the locally common invasive species occur here in significant numbers

**Openings SW of Dow Prairie**

- Open area of former lawn
- Dominant species include *Celastrus orbiculatus*, *Poa pratensis*, and *Rubus* sp.

**West of Magnolia Glade**

- *Ranunculus fascicularis* plentiful in lawn from Magnolia Glade W almost to Forested Wetland
- On knoll to SW of Magnolia Glade
  - 3 large *Celtis occidentalis* 11-26 in. in diameter are probably planted since the site is drier than where it occurs naturally
  - With *Lonicera* sprouts and *Ranunculus fascicularis*, *R. abortivus*, *Viola odorata*

# Plant Inventories and Floristic Quality Assessment

## Horner-McLaughlin Woods

### Central Wetland

Compiled by Bev Walters, 2011-2012

#### Michigan Natural Plant Community: Inundated Shrub Swamp

Small wetland inside the trail loop, surrounded by oak forest and dominated by sedges and duckweed, with some shrubs around edges

#### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 55    | Total Species        | 4.02 | NATIVE MEAN C |
| 53    | Total Native Species | 3.87 | W/Adventives  |
| 96.4  | % Native Species     | -2.9 | NATIVE MEAN W |
| 29.26 | NATIVE FQI           | -2.8 | W/Adventives  |
| 28.72 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                             | COMMON NAME               | W  | LISTED |
|---|---|---------------------------|----|--------|
| 1 | <i>Acer rubrum</i>                          | RED MAPLE                 | 0  |        |
| 5 | <i>Amphicarpaea bracteata</i>               | HOG-PEANUT                | 0  |        |
| 5 | <i>Bidens comosa</i>                        | SWAMP TICKSEED            | -3 |        |
| 5 | <i>Bidens connata</i>                       | PURPLE-STEMMED TICKSEED   | -3 |        |
| 1 | <i>Bidens frondosa</i>                      | COMMON BEGGAR-TICKS       | -3 |        |
| 5 | <i>Boehmeria cylindrica</i>                 | FALSE NETTLE              | -5 |        |
| 3 | <i>Calamagrostis canadensis</i>             | BLUE-JOINT                | -5 |        |
| 1 | <i>Cardamine pensylvanica</i>               | PENNSYLVANIA BITTER CRESS | -3 |        |
| 5 | <i>Carex comosa</i>                         | SEDGE                     | -5 |        |
| 3 | <i>Carex cristatella</i>                    | SEDGE                     | -3 |        |
| 4 | <i>Carex gracillima</i>                     | SEDGE                     | 3  |        |
| 4 | <i>Carex lupulina</i>                       | SEDGE                     | -5 |        |
| 4 | <i>Carex scoparia</i>                       | SEDGE                     | -3 |        |
| 1 | <i>Carex stipata</i>                        | SEDGE                     | -5 |        |
| 4 | <i>Carex stricta</i>                        | SEDGE                     | -5 |        |
| 3 | <i>Carex tribuloides</i>                    | SEDGE                     | -3 |        |
| 7 | <i>Cephalanthus occidentalis</i>            | BUTTONBUSH                | -5 |        |
| 7 | <i>Cinna arundinacea</i>                    | WOOD REEDGRASS            | -3 |        |
| 8 | <i>Collinsonia canadensis</i>               | RICHWEED                  | 0  |        |
| 3 | <i>Epilobium coloratum</i>                  | CINNAMON WILLOW-HERB      | -5 |        |
| 2 | <i>Fraxinus pennsylvanica</i>               | RED ASH                   | -3 |        |
| 5 | <i>Galium tinctorium</i>                    | STIFF BEDSTRAW            | -5 |        |
| 1 | <i>Geum canadense</i>                       | WHITE AVENS               | 0  |        |
| 4 | <i>Glyceria striata</i>                     | FOWL MANNA GRASS          | -5 |        |
| 5 | <i>Ilex verticillata</i>                    | MICHIGAN HOLLY            | -3 |        |
| 2 | <i>Impatiens capensis</i>                   | SPOTTED TOUCH-ME-NOT      | -3 |        |
| 3 | <i>Leersia oryzoides</i>                    | CUT GRASS                 | -5 |        |
| 5 | <i>Leersia virginica</i>                    | WHITE GRASS               | -3 |        |
| 5 | <i>Lemna minor</i>                          | COMMON DUCKWEED           | -5 |        |
| 6 | <i>Lemna trisulca</i>                       | STAR DUCKWEED             | -5 |        |
| 5 | <i>Lemna turionifera</i> (L. minor)         | RED DUCKWEED              | -5 |        |
| 4 | <i>Lobelia siphilitica</i>                  | GREAT BLUE LOBELIA        | -3 |        |
| 5 | <i>Mimulus ringens</i>                      | MONKEY-FLOWER             | -5 |        |
| 2 | <i>Onoclea sensibilis</i>                   | SENSITIVE FERN            | -3 |        |
| 5 | <i>Packera aurea</i> (Senecio a.)           | GOLDEN RAGWORT            | -3 |        |
| 6 | <i>Persicaria amphibia</i> (Polygonum a.)   | WATER SMARTWEED           | -5 |        |
| 4 | <i>Persicaria virginiana</i> (Polygonum v.) | JUMPSEED                  | 0  |        |
| 5 | <i>Pilea pumila</i>                         | CLEARWEED                 | -3 |        |
| 8 | <i>Quercus bicolor</i>                      | SWAMP WHITE OAK           | -3 |        |
| 5 | <i>Quercus macrocarpa</i>                   | BUR OAK                   | 3  |        |
| * | RHAMNUS CATHARTICA                          | COMMON BUCKTHORN          | 0  |        |
| 2 | <i>Rhus typhina</i>                         | STAGHORN SUMAC            | 3  |        |
| 5 | <i>Rosa palustris</i>                       | SWAMP ROSE                | -5 |        |

|   |  |                        |    |
|---|--|------------------------|----|
| 4 | Rubus pubescens                                  | DWARF RASPBERRY        | -3 |
| 4 | Schoenoplectus tabernaemontani (Scirpus validus) | SOFTSTEM BULRUSH       | -5 |
| 5 | Scutellaria lateriflora                          | MAD-DOG SKULLCAP       | -5 |
| 5 | Sium suave                                       | WATER-PARSNIP          | -5 |
| * | SOLANUM DULCAMARA                                | BITTERSWEET NIGHTSHADE | 0  |
| 4 | Spiraea alba                                     | MEADOWSWEET            | -3 |
| 2 | Symphotrichum lateriflorum (Aster l.)            | CALICO ASTER           | 0  |
| 2 | Thelypteris palustris                            | MARSH FERN             | -3 |
| 5 | Tilia americana                                  | BASSWOOD               | 3  |
| 2 | Toxicodendron radicans                           | POISON-IVY             | 0  |
| 1 | Ulmus americana                                  | AMERICAN ELM           | -3 |
| 6 | Utricularia vulgaris                             | COMMON BLADDERWORT     | -5 |

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# Horner-McLaughlin Woods

## Mesic Forest East

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Mesic Southern Forest

A fairly open rich forest dominated by *Acer saccharinum* and *Quercus bicolor*, with lush herbaceous groundcover, an intermittent stream flows N into North Wetland

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 103   | Total Species        | 4.27 | NATIVE MEAN C |
| 98    | Total Native Species | 4.06 | W/Adventives  |
| 95.1  | % Native Species     | 0.1  | NATIVE MEAN W |
| 42.22 | NATIVE FQI           | 0.2  | W/Adventives  |
| 41.19 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME  | COMMON NAME                | W  | LISTED |
|---|--|----------------------------|----|--------|
| 2 | <i>Acer saccharinum</i>                                    | SILVER MAPLE               | -3 |        |
| 5 | <i>Acer saccharum</i>                                      | SUGAR MAPLE                | 3  |        |
| 7 | <i>Actaea pachypoda</i>                                    | DOLL'S-EYES                | 5  |        |
| 2 | <i>Agrimonia gryposepala</i>                               | TALL AGRIMONY              | 3  |        |
| * | ALLIARIA PETIOLATA   | GARLIC MUSTARD             | 3  |        |
| 5 | <i>Amphicarpaea bracteata</i>                              | HOG-PEANUT                 | 0  |        |
| 5 | <i>Anemone quinquefolia</i>                                | WOOD ANEMONE               | 3  |        |
| 5 | <i>Arisaema triphyllum</i>                                 | JACK-IN-THE-PULPIT         | 0  |        |
| 5 | <i>Asarum canadense</i>                                    | WILD-GINGER                | 5  |        |
| * | BERBERIS THUNBERGII  | JAPANESE BARBERRY          | 3  |        |
| 3 | <i>Bidens cernua</i>                                       | NODDING BEGGAR-TICKS       | -5 |        |
| 5 | <i>Boehmeria cylindrica</i>                                | FALSE NETTLE               | -5 |        |
| 5 | <i>Bromus pubescens</i>                                    | CANADA BROME               | 3  |        |
| 5 | <i>Cardamine concatenata</i> ( <i>Dentaria laciniata</i> ) | CUT-LEAVED TOOTHWORT       | 3  |        |
| 6 | <i>Cardamine douglassii</i>                                | PINK SPRING CRESS          | -3 |        |
| 1 | <i>Cardamine pensylvanica</i>                              | PENNSYLVANIA BITTER CRESS  | -3 |        |
| 4 | <i>Carex crinita</i>                                       | SEDGE                      | -5 |        |
| 4 | <i>Carex gracillima</i>                                    | SEDGE                      | 3  |        |
| 3 | <i>Carex grisea</i> ( <i>C. amphibola</i> )                | SEDGE                      | 0  |        |
| 5 | <i>Carex hirtifolia</i>                                    | SEDGE                      | 3  |        |
| 3 | <i>Carex intumescens</i>                                   | SEDGE                      | -3 |        |
| 8 | <i>Carex jamesii</i>                                       | JAMES' SEDGE               | 5  |        |
| 4 | <i>Carex lupulina</i>                                      | SEDGE                      | -5 |        |
| 2 | <i>Carex radiata</i> ( <i>C. rosea</i> )                   | STRAIGHT-STYLED WOOD SEDGE | 0  |        |
| 3 | <i>Carex tribuloides</i>                                   | SEDGE                      | -3 |        |
| 6 | <i>Carpinus caroliniana</i>                                | BLUE-BEECH                 | 0  |        |
| 5 | <i>Carya cordiformis</i>                                   | BITTERNUT HICKORY          | 0  |        |
| 5 | <i>Carya glabra</i>  | PIGNET HICKORY             | 3  |        |
| 5 | <i>Carya ovata</i>   | SHAGBARK HICKORY           | 3  |        |
| 7 | <i>Cephalanthus occidentalis</i>                           | BUTTONBUSH                 | -5 |        |
| 7 | <i>Chelone glabra</i>                                      | TURTLEHEAD                 | -5 |        |
| 7 | <i>Cinna arundinacea</i>                                   | WOOD REEDGRASS             | -3 |        |
| 2 | <i>Circaea canadensis</i> ( <i>C. lutetiana</i> )          | ENCHANTER'S-NIGHTSHADE     | 3  |        |
| 4 | <i>Claytonia virginica</i>                                 | SPRING-BEAUTY              | 3  |        |
| 2 | <i>Cryptotaenia canadensis</i>                             | HONEWORT                   | 0  |        |
| 4 | <i>Dioscorea villosa</i> ( <i>Dioscorea villosa</i> )      | WILD YAM                   | 0  |        |
| 5 | <i>Dryopteris carthusiana</i>                              | SPINULOSE WOODFERN         | -3 |        |
| * | ELAEAGNUS UMBELLATA  | AUTUMN-OLIVE               | 3  |        |
| 5 | <i>Elymus hystrix</i> ( <i>Hystrix patula</i> )            | BOTTLEBRUSH GRASS          | 3  |        |
| 5 | <i>Elymus villosus</i>                                     | SILKY WILD-RYE             | 3  |        |
| 4 | <i>Elymus virginicus</i>                                   | VIRGINIA WILD-RYE          | -3 |        |
| 2 | <i>Erigeron philadelphicus</i>                             | PHILADELPHIA FLEABANE      | 0  |        |
| 5 | <i>Erythronium americanum</i>                              | YELLOW TROUT LILY          | 5  |        |

|   |  |                               |    |
|---|--|-------------------------------|----|
| 5 | <i>Festuca subverticillata</i> (F. obtusa)       | NODDING FESCUE                | 3  |
| * | FRANGULA ALNUS (RHAMNUS FRANGULA)                | GLOSSY BUCKTHORN              | 0  |
| 5 | <i>Fraxinus americana</i>                        | WHITE ASH                     | 3  |
| 6 | <i>Fraxinus nigra</i>                            | BLACK ASH                     | -3 |
| 2 | <i>Fraxinus pennsylvanica</i>                    | RED ASH                       | -3 |
| 0 | <i>Galium aparine</i>                            | ANNUAL BEDSTRAW               | 3  |
| 4 | <i>Galium triflorum</i>                          | FRAGRANT BEDSTRAW             | 3  |
| 4 | <i>Geranium maculatum</i>                        | WILD GERANIUM                 | 3  |
| 1 | <i>Geum canadense</i>                            | WHITE AVENS                   | 0  |
| 7 | <i>Glyceria septentrionalis</i>                  | FLOATING MANNA GRASS          | -5 |
| 4 | <i>Glyceria striata</i>                          | FOWL MANNA GRASS              | -5 |
| 1 | <i>Hackelia virginiana</i>                       | BEGGAR'S LICE                 | 3  |
| 7 | <i>Hydrophyllum appendiculatum</i>               | GREAT WATERLEAF               | 3  |
| 5 | <i>Hylodesmum glutinosum</i> (Desmodium g.)      | CLUSTERED-LEAVED TICK-TREFOIL | 5  |
| 2 | <i>Impatiens capensis</i>                        | SPOTTED TOUCH-ME-NOT          | -3 |
| 5 | <i>Iris virginica</i>                            | SOUTHERN BLUE FLAG            | -5 |
| 5 | <i>Juglans nigra</i>                             | BLACK WALNUT                  | 3  |
| 3 | <i>Juncus effusus</i>                            | SOFT-STEMMED RUSH             | -5 |
| 4 | <i>Laportea canadensis</i>                       | WOOD NETTLE                   | -3 |
| 5 | <i>Leersia virginica</i>                         | WHITE GRASS                   | -3 |
| 5 | <i>Lilium michiganense</i>                       | MICHIGAN LILY                 | -3 |
| 5 | <i>Lonicera dioica</i>                           | RED HONEYSUCKLE               | 3  |
| 2 | <i>Lycopus uniflorus</i>                         | NORTHERN BUGLE WEED           | -5 |
| 5 | <i>Maianthemum racemosum</i> (Smilacina r.)      | FALSE SPIKENARD               | 3  |
| 5 | <i>Menispermum canadense</i>                     | MOONSEED                      | 0  |
| 2 | <i>Onoclea sensibilis</i>                        | SENSITIVE FERN                | -3 |
| 5 | <i>Ostrya virginiana</i>                         | IRONWOOD; HOP-HORNBEAM        | 3  |
| 5 | <i>Packera aurea</i> (Senecio a.)                | GOLDEN RAGWORT                | -3 |
| 5 | <i>Parthenocissus quinquefolia</i>               | VIRGINIA CREEPER              | 3  |
| 4 | <i>Persicaria virginiana</i> (Polygonum v.)      | JUMPSEED                      | 0  |
| 5 | <i>Phlox divaricata</i>                          | WILD BLUE PHLOX               | 3  |
| 0 | <i>Prunella vulgaris</i>                         | SELF-HEAL                     | 0  |
| 8 | <i>Quercus bicolor</i>                           | SWAMP WHITE OAK               | -3 |
| 5 | <i>Quercus macrocarpa</i>                        | BUR OAK                       | 3  |
| 5 | <i>Ranunculus hispidus</i>                       | SWAMP BUTTERCUP               | 0  |
| 5 | <i>Ranunculus recurvatus</i>                     | HOOKED CROWFOOT               | -3 |
| 6 | <i>Ribes americanum</i>                          | WILD BLACK CURRANT            | -3 |
| 4 | <i>Ribes cynosbati</i>                           | PRICKLY or WILD GOOSEBERRY    | 3  |
| 1 | <i>Rubus occidentalis</i>                        | BLACK RASPBERRY               | 5  |
| 4 | <i>Rubus pubescens</i>                           | DWARF RASPBERRY               | -3 |
| 5 | <i>Scutellaria lateriflora</i>                   | MAD-DOG SKULLCAP              | -5 |
| 5 | <i>Smilax hispida</i> (S. tamnoides)             | BRISTLY GREENBRIER            | 0  |
| 6 | <i>Solidago caesia</i>                           | BLUESTEM GOLDENROD SLENDER    | 3  |
| 4 | <i>Sphenopholis intermedia</i> Symphyotrichum    | WEDGEGRASS                    | 0  |
| 2 | lateriflorum (Aster l.) <i>Thalictrum</i>        | CALICO ASTER                  | 0  |
| 8 | thalictroides (Anemonella t.) <i>Thelypteris</i> | RUE-ANEMONE                   | 3  |
| 2 | palustris  | MARSH FERN                    | -3 |
| 5 | <i>Tilia americana</i>                           | BASSWOOD                      | 3  |
| 2 | <i>Toxicodendron radicans</i>                    | POISON-IVY                    | 0  |
| 5 | <i>Trillium grandiflorum</i>                     | COMMON TRILLIUM               | 3  |
| 5 | <i>Triosteum aurantiacum</i>                     | HORSE-GENTIAN                 | 5  |
| 2 | <i>Ulmus rubra</i>                               | SLIPPERY ELM                  | 0  |
| 4 | <i>Verbena urticifolia</i>                       | WHITE VERVAIN                 | 0  |
| 4 | <i>Viburnum lentago</i>                          | NANNYBERRY                    | 0  |
| * | VIBURNUM OPULUS                                  | EUROPEAN Highbush-CRANBERRY   | -3 |
| 5 | <i>Viburnum rafinesquianum</i>                   | DOWNY ARROW-WOOD              | 5  |
| 2 | <i>Viola affinis</i>                             | LE CONTE'S VIOLET             | -3 |
| 1 | <i>Viola sororia</i>                             | COMMON BLUE VIOLET            | 0  |
| 3 | <i>Vitis riparia</i>                             | RIVER-BANK GRAPE              | 0  |

Also: *Apocynum* sp., *Crataegus* sp., *Prunus* sp.

# Horner-McLaughlin Woods

## Mesic Forest West

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Mesic Southern Forest

In W-central area, a disturbed forest in bowl depression considerably wetter than surrounding oak forest; fairly dense herbaceous ground cover

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 80    | Total Species        | 3.61 | NATIVE MEAN C |
| 71    | Total Native Species | 3.20 | W/Adventives  |
| 88.8  | % Native Species     | 0.4  | NATIVE MEAN W |
| 30.38 | NATIVE FQI           | 0.5  | W/Adventives  |
| 28.62 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                              | COMMON NAME                   | W  | LISTED |
|---|--|-------------------------------|----|--------|
| 0 | <i>Acer negundo</i>                          | BOX-ELDER                     | 0  |        |
| 5 | <i>Acer saccharum</i>                        | SUGAR MAPLE                   | 3  |        |
| 7 | <i>Actaea pachypoda</i>                      | DOLL'S-EYES                   | 5  |        |
| 4 | <i>Agrimonia parviflora</i>                  | SWAMP AGRIMONY                | 0  |        |
| 8 | <i>Agrimonia rostellata</i>                  | BEAKED AGRIMONY               | 3  | T      |
| 5 | <i>Agrostis perennans</i>                    | AUTUMN BENT                   | 3  |        |
| * | ALLIARIA PETIOLATA                           | GARLIC MUSTARD                | 3  |        |
| 3 | <i>Anemone virginiana</i>                    | THIMBLEWEED                   | 3  |        |
| 5 | <i>Arisaema triphyllum</i>                   | JACK-IN-THE-PULPIT            | 0  |        |
| 5 | <i>Boehmeria cylindrica</i>                  | FALSE NETTLE                  | -5 |        |
| 1 | <i>Carex blanda</i>                          | SEDGE                         | 0  |        |
| 4 | <i>Carex crinita</i>                         | SEDGE                         | -5 |        |
| 3 | <i>Carex cristatella</i>                     | SEDGE                         | -3 |        |
| 5 | <i>Carex hirtifolia</i>                      | SEDGE                         | 3  |        |
| 4 | <i>Carex tenera</i>                          | SEDGE                         | 0  |        |
| 1 | <i>Carex vulpinoidea</i>                     | SEDGE                         | -5 |        |
| 5 | <i>Carya ovata</i>                           | SHAGBARK HICKORY              | 3  |        |
| 7 | <i>Cinna arundinacea</i>                     | WOOD REEDGRASS                | -3 |        |
| 2 | <i>Circaea canadensis</i> (C. lutetiana)     | ENCHANTER'S-NIGHTSHADE        | 3  |        |
| * | CIRSIUM VULGARE                              | BULL THISTLE                  | 3  |        |
| 4 | <i>Claytonia virginica</i>                   | SPRING-BEAUTY                 | 3  |        |
| 3 | <i>Dichanthelium implicatum</i> (Panicum i.) | PANIC GRASS                   | 0  |        |
| 4 | <i>Dioscorea villosa</i> (Dioscorea villosa) | WILD YAM                      | 0  |        |
| 5 | <i>Dryopteris carthusiana</i>                | SPINULOSE WOODFERN            | -3 |        |
| 5 | <i>Elymus hystrix</i> (Hystrix patula)       | BOTTLEBRUSH GRASS             | 3  |        |
| 3 | <i>Epilobium coloratum</i>                   | CINNAMON WILLOW-HERB          | -5 |        |
| 2 | <i>Erigeron philadelphicus</i>               | PHILADELPHIA FLEABANE         | 0  |        |
| 5 | <i>Erythronium americanum</i>                | YELLOW TROUT LILY             | 5  |        |
| 2 | <i>Fragaria virginiana</i>                   | WILD STRAWBERRY               | 3  |        |
| * | FRANGULA ALNUS (RHAMNUS FRANGULA)            | GLOSSY BUCKTHORN              | 0  |        |
| 5 | <i>Fraxinus americana</i>                    | WHITE ASH                     | 3  |        |
| 0 | <i>Galium aparine</i>                        | ANNUAL BEDSTRAW               | 3  |        |
| 4 | <i>Galium triflorum</i>                      | FRAGRANT BEDSTRAW             | 3  |        |
| 4 | <i>Geranium maculatum</i>                    | WILD GERANIUM                 | 3  |        |
| 1 | <i>Geum canadense</i>                        | WHITE AVENS                   | 0  |        |
| 4 | <i>Glyceria striata</i>                      | FOWL MANNA GRASS              | -5 |        |
| 1 | <i>Hackelia virginiana</i>                   | BEGGAR'S LICE                 | 3  |        |
| 5 | <i>Hylodesmum glutinosum</i> (Desmodium g.)  | CLUSTERED-LEAVED TICK-TREFOIL | 5  |        |
| 2 | <i>Impatiens capensis</i>                    | SPOTTED TOUCH-ME-NOT          | -3 |        |
| 5 | <i>Juglans nigra</i>                         | BLACK WALNUT                  | 3  |        |
| 1 | <i>Juncus tenuis</i>                         | PATH RUSH                     | 0  |        |
| 5 | <i>Leersia virginica</i>                     | WHITE GRASS                   | -3 |        |
| 9 | <i>Liriodendron tulipifera</i>               | TULIP TREE                    | 3  |        |

|   |   |                             |    |
|---|---|-----------------------------|----|
| 4 | <i>Lobelia siphilitica</i>                            | GREAT BLUE LOBELIA          | -3 |
| 5 | <i>Luzula multiflora</i>                              | COMMON WOOD RUSH            | 3  |
| 5 | <i>Mimulus ringens</i>                                | MONKEY-FLOWER               | -5 |
| 2 | <i>Onoclea sensibilis</i>                             | SENSITIVE FERN              | -3 |
| 5 | <i>Packera aurea</i> (Senecio a.)                     | GOLDEN RAGWORT              | -3 |
| 5 | <i>Parthenocissus quinquefolia</i>                    | VIRGINIA CREEPER            | 3  |
| 4 | <i>Persicaria virginiana</i> ( <i>Polygonum v.</i> )  | JUMPSEED                    | 0  |
| 3 | <i>Picea glauca</i>                                   | WHITE SPRUCE                | 3  |
| 3 | <i>Pinus strobus</i>                                  | WHITE PINE                  | 3  |
| 1 | <i>Populus deltoides</i>                              | COTTONWOOD                  | 0  |
| 0 | <i>Prunella vulgaris</i>                              | SELF-HEAL                   | 0  |
| 5 | <i>Quercus alba</i>                                   | WHITE OAK                   | 3  |
| 8 | <i>Quercus bicolor</i>                                | SWAMP WHITE OAK             | -3 |
| 5 | <i>Quercus macrocarpa</i>                             | BUR OAK                     | 3  |
| 0 | <i>Ranunculus abortivus</i>                           | SMALL-FLOWERED BUTTERCUP    | 0  |
| 5 | <i>Ranunculus hispidus</i>                            | SWAMP BUTTERCUP             | 0  |
| 5 | <i>Ranunculus recurvatus</i>                          | HOOKEED CROWFOOT            | -3 |
| * | RHAMNUS CATHARTICA                                    | COMMON BUCKTHORN            | 0  |
| 4 | <i>Ribes cynosbati</i>                                | PRICKLY or WILD GOOSEBERRY  | 3  |
| * | ROSA MULTIFLORA                                       | MULTIFLORA ROSE             | 3  |
| 1 | <i>Rubus occidentalis</i>                             | BLACK RASPBERRY             | 5  |
| 3 | <i>Scirpus atrovirens</i>                             | BULRUSH                     | -5 |
| 3 | <i>Scirpus pendulus</i>                               | BULRUSH                     | -5 |
| 5 | <i>Scutellaria lateriflora</i>                        | MAD-DOG SKULLCAP            | -5 |
| * | SOLANUM DULCAMARA                                     | BITTERSWEET NIGHTSHADE      | 0  |
| 1 | <i>Solidago canadensis</i>                            | CANADA GOLDENROD            | 3  |
| 2 | <i>Symphotrichum lateriflorum</i> (Aster l.)          | CALICO ASTER                | 0  |
| 2 | <i>Symphotrichum urophyllum</i> (Aster sagittifolius) | ARROW-LEAVED ASTER          | 5  |
| * | TARAXACUM OFFICINALE                                  | COMMON DANDELION            | 3  |
| * | TORILIS JAPONICA                                      | HEDGE-PARSLEY               | 3  |
| 2 | <i>Toxicodendron radicans</i>                         | POISON-IVY                  | 0  |
| 5 | <i>Trillium grandiflorum</i>                          | COMMON TRILLIUM             | 3  |
| 1 | <i>Ulmus americana</i>                                | AMERICAN ELM                | -3 |
| 2 | <i>Ulmus rubra</i>                                    | SLIPPERY ELM                | 0  |
| 4 | <i>Verbena urticifolia</i>                            | WHITE VERVAIN               | 0  |
| * | VIBURNUM OPULUS                                       | EUROPEAN Highbush-CRANBERRY | -3 |
| 3 | <i>Vitis riparia</i>                                  | RIVER-BANK GRAPE            | 0  |

Also: *Apocynum* sp.



# Horner-McLaughlin Woods

## North Wetland

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Inundated Shrub Swamp

Wetland in NE corner of property, with mucky soil, dominant shrub *Cephalanthus occidentalis* with *Acer saccharinum* occasional

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 61    | Total Species        | 4.31 | NATIVE MEAN C |
| 58    | Total Native Species | 4.10 | W/Adventives  |
| 95.1  | % Native Species     | -4.2 | NATIVE MEAN W |
| 32.83 | NATIVE FQI           | -4.0 | W/Adventives  |
| 32.01 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME   | COMMON NAME             | W  | LISTED |
|---|---|-------------------------|----|--------|
| 2 | <i>Acer saccharinum</i>                                   | SILVER MAPLE            | -3 |        |
| 5 | <i>Agrostis perennans</i>                                 | AUTUMN BENT             | 3  |        |
| 1 | <i>Alisma triviale</i> ( <i>A. plantago-aquatica</i> )    | NORTHERN WATER-PLANTAIN | -5 |        |
| 5 | <i>Amphicarpaea bracteata</i>                             | HOG-PEANUT              | 0  |        |
| 6 | <i>Asclepias incarnata</i>                                | SWAMP MILKWEED          | -5 |        |
| 3 | <i>Bidens cernua</i>                                      | NODDING BEGGAR-TICKS    | -5 |        |
| 5 | <i>Bidens comosa</i>                                      | SWAMP TICKSEED          | -3 |        |
| 1 | <i>Bidens frondosa</i>                                    | COMMON BEGGAR-TICKS     | -3 |        |
| 5 | <i>Boehmeria cylindrica</i>                               | FALSE NETTLE            | -5 |        |
| 3 | <i>Calamagrostis canadensis</i>                           | BLUE-JOINT              | -5 |        |
| 5 | <i>Carex comosa</i>                                       | SEDGE                   | -5 |        |
| 4 | <i>Carex crinita</i>                                      | SEDGE                   | -5 |        |
| 3 | <i>Carex cristatella</i>                                  | SEDGE                   | -3 |        |
| 4 | <i>Carex lupulina</i>                                     | SEDGE                   | -5 |        |
| 1 | <i>Carex stipata</i>                                      | SEDGE                   | -5 |        |
| 3 | <i>Carex tribuloides</i>                                  | SEDGE                   | -3 |        |
| 7 | <i>Cephalanthus occidentalis</i>                          | BUTTONBUSH              | -5 |        |
| 7 | <i>Chelone glabra</i>                                     | TURTLEHEAD              | -5 |        |
| 5 | <i>Cicuta bulbifera</i>                                   | WATER HEMLOCK           | -5 |        |
| 4 | <i>Cicuta maculata</i>                                    | WATER HEMLOCK           | -5 |        |
| 3 | <i>Dichanthelium implicatum</i> ( <i>Panicum i.</i> )     | PANIC GRASS             | 0  |        |
| 6 | <i>Dryopteris cristata</i>                                | CRESTED SHIELD FERN     | -5 |        |
| 3 | <i>Eleocharis obtusa</i>                                  | SPIKE-RUSH              | -5 |        |
| 4 | <i>Eupatorium perfoliatum</i>                             | BONESET                 | -3 |        |
| * | FRANGULA ALNUS ( <i>RHAMNUS FRANGULA</i> )                | GLOSSY BUCKTHORN        | 0  |        |
| 5 | <i>Ilex verticillata</i>                                  | MICHIGAN HOLLY          | -3 |        |
| 5 | <i>Iris virginica</i>                                     | SOUTHERN BLUE FLAG      | -5 |        |
| 3 | <i>Leersia oryzoides</i>                                  | CUT GRASS               | -5 |        |
| 5 | <i>Leersia virginica</i>                                  | WHITE GRASS             | -3 |        |
| 6 | <i>Lemna trisulca</i>                                     | STAR DUCKWEED           | -5 |        |
| 5 | <i>Lemna turionifera</i> ( <i>L. minor</i> )              | RED DUCKWEED            | -5 |        |
| 4 | <i>Ludwigia palustris</i>                                 | WATER-PURSLANE          | -5 |        |
| 8 | <i>Lycopus rubellus</i>                                   | STALKED WATER HOREHOUND | -5 |        |
| 2 | <i>Lycopus uniflorus</i>                                  | NORTHERN BUGLE WEED     | -5 |        |
| 6 | <i>Lysimachia thysiflora</i>                              | TUFTED LOOSESTRIFE      | -5 |        |
| * | LYTHRUM SALICARIA   | PURPLE LOOSESTRIFE      | -5 |        |
| 5 | <i>Mimulus ringens</i>                                    | MONKEY-FLOWER           | -5 |        |
| 2 | <i>Onoclea sensibilis</i>                                 | SENSITIVE FERN          | -3 |        |
| 3 | <i>Penthorum sedoides</i>                                 | DITCH STONECROP         | -5 |        |
| 6 | <i>Persicaria amphibia</i> ( <i>Polygonum a.</i> )        | WATER SMARTWEED         | -5 |        |
| 5 | <i>Persicaria hydropiperoides</i> ( <i>Polygonum h.</i> ) | MILD WATER-PEPPER       | -5 |        |
| 0 | <i>Phalaris arundinacea</i>                               | REED CANARY GRASS       | -3 |        |
| 5 | <i>Pilea pumila</i>                                       | CLEARWEED               | -3 |        |
| 8 | <i>Quercus bicolor</i>                                    | SWAMP WHITE OAK         | -3 |        |

|    |  |                        |    |
|----|--|------------------------|----|
| 10 | Ranunculus flabellaris (Ranunculus lapponicus) | YELLOW WATER CROWFOOT  | -5 |
| 1  | Ranunculus sceleratus                          | CURSED CROWFOOT        | -5 |
| 5  | Rosa palustris                                 | SWAMP ROSE             | -5 |
| 4  | Rubus pubescens                                | DWARF RASPBERRY        | -3 |
| 5  | Salix nigra                                    | BLACK WILLOW           | -5 |
| 5  | Scirpus cyperinus                              | WOOL-GRASS             | -5 |
| 5  | Scutellaria galericulata                       | MARSH SKULLCAP         | -5 |
| 5  | Sium suave                                     | WATER-PARSNIP          | -5 |
| *  | SOLANUM DULCAMARA                              | BITTERSWEET NIGHTSHADE | 0  |
| 6  | Sparganium emersum (S. chlorocarpum)           | GREEN-FRUITED BUR-REED | -5 |
| 5  | Sparganium eurycarpum                          | COMMON BUR-REED        | -5 |
| 2  | Thelypteris palustris                          | MARSH FERN             | -3 |
| 6  | Triadenum fraseri                              | MARSH ST. JOHN'S-WORT  | -5 |
| 1  | Typha latifolia                                | BROAD-LEAVED CAT-TAIL  | -5 |
| 1  | Ulmus americana                                | AMERICAN ELM           | -3 |
| 6  | Veronica scutellata                            | MARSH SPEEDWELL        | -5 |
| 5  | Wolffia columbiana                             | COMMON WATER MEAL      | -5 |

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# Horner-McLaughlin Woods

## Northwest Wetland

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Southern Hardwood Swamp

Small mostly forested wetland at W edge of property dominated by *Acer saccharinum*; more open inundated areas in N end dominated by *Cephalanthus occidentalis* and *Rosa palustris*

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 52    | Total Species        | 3.73 | NATIVE MEAN C |
| 48    | Total Native Species | 3.44 | W/Adventives  |
| 92.3  | % Native Species     | -2.5 | NATIVE MEAN W |
| 25.84 | NATIVE FQI           | -2.2 | W/Adventives  |
| 24.82 | W/Adventives         |      |               |

| C  | SCIENTIFIC NAME  | COMMON NAME                | W  | LISTED |
|----|--|----------------------------|----|--------|
| 1  | <i>Acer rubrum</i>   | RED MAPLE                  | 0  |        |
| 2  | <i>Acer saccharinum</i>  | SILVER MAPLE               | -3 |        |
| 5  | <i>Acer saccharum</i>  | SUGAR MAPLE                | 3  |        |
| 2  | <i>Agrimonia gryposepala</i>                                   | TALL AGRIMONY              | 3  |        |
| 6  | <i>Asclepias incarnata</i>                                     | SWAMP MILKWEED             | -5 |        |
| *  | BERBERIS THUNBERGII  | JAPANESE BARBERRY          | 3  |        |
| 1  | <i>Bidens frondosa</i>   | COMMON BEGGAR-TICKS        | -3 |        |
| 5  | <i>Boehmeria cylindrica</i>                                    | FALSE NETTLE               | -5 |        |
| 4  | <i>Carex bebbii</i>  | SEDGE                      | -5 |        |
| 1  | <i>Carex blanda</i>  | SEDGE                      | 0  |        |
| 5  | <i>Carex comosa</i>  | SEDGE                      | -5 |        |
| 3  | <i>Carex cristatella</i>                                       | SEDGE                      | -3 |        |
| 4  | <i>Carex gracillima</i>  | SEDGE                      | 3  |        |
| 2  | <i>Carex granularis</i>  | SEDGE                      | -3 |        |
| 4  | <i>Carex lupulina</i>  | SEDGE                      | -5 |        |
| 2  | <i>Carex radiata</i> (C. rosea)                                | STRAIGHT-STYLED WOOD SEDGE | 0  |        |
| 1  | <i>Carex stipata</i>   | SEDGE                      | -5 |        |
| 3  | <i>Carex tribuloides</i>                                       | SEDGE                      | -3 |        |
| 8  | <i>Carex tuckermanii</i>                                       | SEDGE                      | -5 |        |
| 1  | <i>Carex vulpinoidea</i>                                       | SEDGE                      | -5 |        |
| 7  | <i>Chelone glabra</i>  | TURTLEHEAD                 | -5 |        |
| 7  | <i>Cinna arundinacea</i>                                       | WOOD REEDGRASS             | -3 |        |
| 2  | <i>Erigeron philadelphicus</i>                                 | PHILADELPHIA FLEABANE      | 0  |        |
| *  | FRANGULA ALNUS (RHAMNUS FRANGULA)                              | GLOSSY BUCKTHORN           | 0  |        |
| 2  | <i>Fraxinus pennsylvanica</i>                                  | RED ASH                    | -3 |        |
| 7  | <i>Glyceria septentrionalis</i>                                | FLOATING MANNA GRASS       | -5 |        |
| 4  | <i>Glyceria striata</i>  | FOWL MANNA GRASS           | -5 |        |
| 2  | <i>Impatiens capensis</i>                                      | SPOTTED TOUCH-ME-NOT       | -3 |        |
| 5  | <i>Iris virginica</i>  | SOUTHERN BLUE FLAG         | -5 |        |
| 1  | <i>Juncus dudleyi</i>  | DUDLEY'S RUSH              | -3 |        |
| 3  | <i>Leersia oryzoides</i>                                       | CUT GRASS                  | -5 |        |
| 5  | <i>Leersia virginica</i>                                       | WHITE GRASS                | -3 |        |
| 6  | <i>Lemna trisulca</i>  | STAR DUCKWEED              | -5 |        |
| 9  | <i>Liriodendron tulipifera</i>                                 | TULIP TREE                 | 3  |        |
| 4  | <i>Lobelia siphilitica</i>                                     | GREAT BLUE LOBELIA         | -3 |        |
| 5  | <i>Parthenocissus quinquefolia</i>                             | VIRGINIA CREEPER           | 3  |        |
| 4  | <i>Persicaria virginiana</i> ( <i>Polygonum</i> v.)            | JUMPSEED                   | 0  |        |
| 0  | <i>Phalaris arundinacea</i>                                    | REED CANARY GRASS          | -3 |        |
| 1  | <i>Populus deltoides</i>                                       | COTTONWOOD                 | 0  |        |
| 8  | <i>Quercus bicolor</i>   | SWAMP WHITE OAK            | -3 |        |
| 10 | <i>Ranunculus flabellaris</i> ( <i>Ranunculus lapponicus</i> ) | YELLOW WATER CROWFOOT      | -5 |        |
| *  | RHAMNUS CATHARTICA   | COMMON BUCKTHORN           | 0  |        |
| *  | ROSA MULTIFLORA  | MULTIFLORA ROSE            | 3  |        |

|   |                                      |                  |    |
|---|--------------------------------------|------------------|----|
| 5 | Rosa palustris                       | SWAMP ROSE       | -5 |
| 3 | Scirpus atrovirens                   | BULRUSH          | -5 |
| 3 | Scirpus pendulus                     | BULRUSH          | -5 |
| 5 | Sium suave                           | WATER-PARSNIP    | -5 |
| 2 | Symphotrichum lanceolatum (Aster l.) | PANICLED ASTER   | -3 |
| 2 | Toxicodendron radicans               | POISON-IVY       | 0  |
| 1 | Ulmus americana                      | AMERICAN ELM     | -3 |
| 3 | Vitis riparia                        | RIVER-BANK GRAPE | 0  |
| 3 | Zanthoxylum americanum               | PRICKLY-ASH      | 3  |

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# Horner-McLaughlin Woods

## Oak Woodlands

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Southern Forest

Fairly open oak forest on rolling hills covering most of the property, diverse in E portions but W section with a dense *Acer saccharum* understory and few forbs

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 177   | Total Species        | 4.12 | NATIVE MEAN C |
| 150   | Total Native Species | 3.49 | W/Adventives  |
| 84.7  | % Native Species     | 1.7  | NATIVE MEAN W |
| 50.46 | NATIVE FQI           | 1.9  | W/Adventives  |
| 46.45 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME  | COMMON NAME                | W  | LISTED |
|---|--|----------------------------|----|--------|
| 1 | <i>Acer rubrum</i>   | RED MAPLE                  | 0  |        |
| 5 | <i>Acer saccharum</i>                                      | SUGAR MAPLE                | 3  |        |
| 7 | <i>Actaea pachypoda</i>                                    | DOLL'S-EYES                | 5  |        |
| 6 | <i>Adiantum pedatum</i>                                    | MAIDENHAIR FERN            | 3  |        |
| 2 | <i>Agrimonia gryposepala</i>                               | TALL AGRIMONY              | 3  |        |
| 5 | <i>Agrimonia pubescens</i>                                 | SOFT AGRIMONY              | 5  |        |
| 5 | <i>Agrostis perennans</i>                                  | AUTUMN BENT                | 3  |        |
| * | <i>ALLIARIA PETIOLATA</i>                                  | GARLIC MUSTARD             | 3  |        |
| 5 | <i>Allium tricoccum</i>                                    | WILD LEEK                  | 3  |        |
| 4 | <i>Amelanchier arborea</i>                                 | JUNEBERRY                  | 3  |        |
| 5 | <i>Amphicarpaea bracteata</i>                              | HOG-PEANUT                 | 0  |        |
| 5 | <i>Anemone quinquefolia</i>                                | WOOD ANEMONE               | 3  |        |
| 3 | <i>Anemone virginiana</i>                                  | THIMBLEWEED                | 3  |        |
| 2 | <i>Antennaria parlinii</i>                                 | SMOOTH PUSSYTOES           | 5  |        |
| 3 | <i>Apocynum androsaemifolium</i>                           | SPREADING DOGBANE          | 5  |        |
| * | <i>ARCTIUM MINUS</i>                                       | COMMON BURDOCK             | 3  |        |
| 5 | <i>Arisaema triphyllum</i>                                 | JACK-IN-THE-PULPIT         | 0  |        |
| 6 | <i>Asclepias exaltata</i>                                  | POKE MILKWEED              | 5  |        |
| 2 | <i>Asplenium platyneuron</i>                               | EBONY SPLEENWORT           | 3  |        |
| 4 | <i>Athyrium filix-femina</i>                               | LADY FERN                  | 0  |        |
| * | <i>BERBERIS THUNBERGII</i>                                 | JAPANESE BARBERRY          | 3  |        |
| 5 | <i>Bromus pubescens</i>                                    | CANADA BROME               | 3  |        |
| 5 | <i>Cardamine concatenata</i> ( <i>Dentaria laciniata</i> ) | CUT-LEAVED TOOTHWORT       | 3  |        |
| 5 | <i>Cardamine diphylla</i> ( <i>Dentaria d.</i> )           | TWO-LEAVED TOOTHWORT       | 3  |        |
| 6 | <i>Cardamine douglassii</i>                                | PINK SPRING CRESS          | -3 |        |
| 1 | <i>Carex blanda</i>  | SEDGE                      | 0  |        |
| 3 | <i>Carex cephalophora</i>                                  | SEDGE                      | 3  |        |
| 5 | <i>Carex digitalis</i>                                     | SEDGE                      | 5  |        |
| 4 | <i>Carex gracillima</i>                                    | SEDGE                      | 3  |        |
| 2 | <i>Carex granularis</i>                                    | SEDGE                      | -3 |        |
| 3 | <i>Carex grisea</i> ( <i>C. amphibola</i> )                | SEDGE                      | 0  |        |
| 3 | <i>Carex hirsutella</i>                                    | SEDGE                      | 3  |        |
| 5 | <i>Carex hirtifolia</i>                                    | SEDGE                      | 3  |        |
| 8 | <i>Carex jamesii</i>                                       | JAMES' SEDGE               | 5  |        |
| 6 | <i>Carex lacustris</i>                                     | SEDGE                      | -5 |        |
| 4 | <i>Carex pennsylvanica</i>                                 | SEDGE                      | 5  |        |
| 2 | <i>Carex radiata</i> ( <i>C. rosea</i> )                   | STRAIGHT-STYLED WOOD SEDGE | 0  |        |
| 2 | <i>Carex rosea</i> ( <i>C. convoluta</i> )                 | CURLY-STYLED WOOD SEDGE    | 5  |        |
| 1 | <i>Carex stipata</i>                                       | SEDGE                      | -5 |        |
| 4 | <i>Carex tenera</i>  | SEDGE                      | 0  |        |
| 1 | <i>Carex vulpinoidea</i>                                   | SEDGE                      | -5 |        |
| 6 | <i>Carpinus caroliniana</i>                                | BLUE-BEECH                 | 0  |        |
| 5 | <i>Carya glabra</i>  | PIGNUT HICKORY             | 3  |        |

|    |   |                               |    |    |
|----|---|-------------------------------|----|----|
| 5  | <i>Carya ovata</i>                                    | SHAGBARK HICKORY              | 3  |    |
| *  | CELASTRUS ORBICULATUS                                 | ORIENTAL BITTERSWEET          | 5  |    |
| 3  | <i>Celastrus scandens</i>                             | AMERICAN BITTERSWEET          | 3  |    |
| *  | CERASTIUM FONTANUM                                    | MOUSE-EAR CHICKWEED           | 3  |    |
| 7  | <i>Cinna arundinacea</i>                              | WOOD REEDGRASS                | -3 |    |
| 2  | <i>Circaea canadensis</i> (C. <i>lutetiana</i> )      | ENCHANTER'S-NIGHTSHADE        | 3  |    |
| 4  | <i>Claytonia virginica</i>                            | SPRING-BEAUTY                 | 3  |    |
| 8  | <i>Collinsonia canadensis</i>                         | RICHWEED                      | 0  |    |
| *  | CONVALLARIA MAJALIS                                   | LILY-OF-THE-VALLEY            | 5  |    |
| 8  | <i>Cornus florida</i>                                 | FLOWERING DOGWOOD             | 3  |    |
| 1  | <i>Cornus foemina</i>                                 | GRAY DOGWOOD                  | 0  |    |
| 2  | <i>Cryptotaenia canadensis</i>                        | HONEWORT                      | 0  |    |
| 4  | <i>Danthonia spicata</i>                              | POVERTY GRASS; OATGRASS       | 5  |    |
| 3  | <i>Dichanthelium implicatum</i> ( <i>Panicum</i> i.)  | PANIC GRASS                   | 0  |    |
| 4  | <i>Dioscorea villosa</i> ( <i>Dioscorea villosa</i> ) | WILD YAM                      | 0  |    |
| 5  | <i>Dryopteris carthusiana</i>                         | SPINULOSE WOODFERN            | -3 |    |
| *  | ELAEAGNUS UMBELLATA                                   | AUTUMN-OLIVE                  | 3  |    |
| 5  | <i>Elymus hystrix</i> ( <i>Hystrix patula</i> )       | BOTTLEBRUSH GRASS             | 3  |    |
| 5  | <i>Elymus villosus</i>                                | SILKY WILD-RYE                | 3  |    |
| 10 | <i>Epifagus virginiana</i>                            | BEECH-DROPS                   | 5  |    |
| *  | EPIPACTIS HELLEBORINE                                 | HELLEBORINE                   | 0  |    |
| 0  | <i>Erigeron annuus</i>                                | DAISY FLEABANE                | 3  |    |
| 5  | <i>Erythronium americanum</i>                         | YELLOW TROUT LILY             | 5  |    |
| *  | EUONYMUS ALATA  | WINGED EUONYMUS               | 5  |    |
| *  | EUONYMUS FORTUNEI                                     | WINTERCREEPER                 | 5  |    |
| 5  | <i>Euonymus obovata</i>                               | RUNNING STRAWBERRY-BUSH       | 3  |    |
| 4  | <i>Eurybia macrophylla</i> ( <i>Aster</i> m.)         | BIG-LEAVED ASTER              | 5  |    |
| 6  | <i>Fagus grandifolia</i>                              | AMERICAN BEECH                | 3  |    |
| 5  | <i>Festuca subverticillata</i> ( <i>F. obtusa</i> )   | NODDING FESCUE                | 3  |    |
| 2  | <i>Fragaria virginiana</i>                            | WILD STRAWBERRY               | 3  |    |
| *  | FRANGULA ALNUS (RHAMNUS FRANGULA)                     | GLOSSY BUCKTHORN              | 0  |    |
| 5  | <i>Fraxinus americana</i>                             | WHITE ASH                     | 3  |    |
| 6  | <i>Fraxinus nigra</i>                                 | BLACK ASH                     | -3 |    |
| 2  | <i>Fraxinus pennsylvanica</i>                         | RED ASH                       | -3 |    |
| 0  | <i>Galium aparine</i>                                 | ANNUAL BEDSTRAW               | 3  |    |
| 5  | <i>Galium concinnum</i>                               | SHINING BEDSTRAW              | 3  |    |
| *  | GALIUM ODORATUM                                       | SWEET WOODRUFF                | 5  |    |
| 4  | <i>Galium triflorum</i>                               | FRAGRANT BEDSTRAW             | 3  |    |
| 4  | <i>Geranium maculatum</i>                             | WILD GERANIUM                 | 3  |    |
| 1  | <i>Geum canadense</i>                                 | WHITE AVENS                   | 0  |    |
| 4  | <i>Glyceria striata</i>                               | FOWL MANNA GRASS              | -5 |    |
| 1  | <i>Hackelia virginiana</i>                            | BEGGAR'S LICE                 | 3  |    |
| 5  | <i>Hamamelis virginiana</i>                           | WITCH-HAZEL                   | 3  |    |
| *  | HIERACIUM AURANTIACUM                                 | ORANGE HAWKWEED               | 5  |    |
| *  | HIERACIUM CAESPITOSUM                                 | KING DEVIL                    | 5  |    |
| 5  | <i>Hylodesmum glutinosum</i> ( <i>Desmodium</i> g.)   | CLUSTERED-LEAVED TICK-TREFOIL | 5  |    |
| 5  | <i>Ilex verticillata</i>                              | MICHIGAN HOLLY                | -3 |    |
| 9  | <i>Jeffersonia diphylla</i>                           | TWINLEAF                      | 3  | SC |
| 5  | <i>Juglans nigra</i>                                  | BLACK WALNUT                  | 3  |    |
| 1  | <i>Juncus tenuis</i>                                  | PATH RUSH                     | 0  |    |
| 4  | <i>Juniperus communis</i>                             | COMMON or GROUND JUNIPER      | 3  |    |
| 4  | <i>Laportea canadensis</i>                            | WOOD NETTLE                   | -3 |    |
| 5  | <i>Leersia virginica</i>                              | WHITE GRASS                   | -3 |    |
| *  | LIGUSTRUM VULGARE                                     | COMMON PRIVET                 | 3  |    |
| 7  | <i>Lindera benzoin</i>                                | SPICEBUSH                     | -3 |    |
| 9  | <i>Liriodendron tulipifera</i>                        | TULIP TREE                    | 3  |    |
| 5  | <i>Lonicera dioica</i>                                | RED HONEYSUCKLE               | 3  |    |
| 4  | <i>Luzula multiflora</i>                              | COMMON WOOD RUSH              | 3  |    |
| 4  | <i>Maianthemum canadense</i>                          | CANADA MAYFLOWER              | 3  |    |
| 5  | <i>Maianthemum racemosum</i> ( <i>Smilacina</i> r.)   | FALSE SPIKENARD               | 3  |    |

|   |  |                            |    |
|---|--|----------------------------|----|
| * | MALUS SIEBOLDII                                | SIEBOLD CRAB; TORINGO CRAB | 5  |
| 5 | Menispermum canadense                          | MOONSEED                   | 0  |
| 5 | Mimulus ringens                                | MONKEY-FLOWER              | -5 |
| 5 | Mitchella repens                               | PARTRIDGE-BERRY            | 3  |
| 2 | Onoclea sensibilis                             | SENSITIVE FERN             | -3 |
| 5 | Ostrya virginiana                              | IRONWOOD; HOP-HORNBEAM     | 3  |
| 0 | Oxalis stricta (O. fontana)                    | YELLOW WOOD-SORREL         | 3  |
| 5 | Parthenocissus quinquefolia                    | VIRGINIA CREEPER           | 3  |
| 4 | Phryma leptostachya                            | LOPSEED                    | 3  |
| * | PICEA ABIES                                    | NORWAY SPRUCE              | 5  |
| * | PINUS SYLVESTRIS                               | SCOTCH PINE                | 3  |
| * | POA COMPRESSA                                  | CANADA BLUEGRASS           | 3  |
| 6 | Poa languida                                   | BLUEGRASS                  | 5  |
| * | POA PRATENSIS                                  | KENTUCKY BLUEGRASS         | 3  |
| 3 | Podophyllum peltatum                           | MAY-APPLE                  | 3  |
| 5 | Polygonatum pubescens                          | DOWNY SOLOMON SEAL         | 5  |
| 6 | Polystichum acrostichoides                     | CHRISTMAS FERN             | 3  |
| 2 | Potentilla simplex                             | OLD-FIELD CINQUEFOIL       | 3  |
| 5 | Prenanthes altissima                           | TALL WHITE LETTUCE         | 3  |
| 0 | Prunella vulgaris                              | SELF-HEAL                  | 0  |
| 2 | Prunus serotina                                | WILD BLACK CHERRY          | 3  |
| 2 | Prunus virginiana                              | CHOKE CHERRY               | 3  |
| 4 | Ptelea trifoliata                              | HOP-TREE                   | 3  |
| 0 | Pteridium aquilinum                            | BRACKEN FERN               | 3  |
| 5 | Quercus alba                                   | WHITE OAK                  | 3  |
| 5 | Quercus macrocarpa                             | BUR OAK                    | 3  |
| 5 | Quercus rubra                                  | RED OAK                    | 3  |
| 6 | Quercus velutina                               | BLACK OAK                  | 5  |
| 0 | Ranunculus abortivus                           | SMALL-FLOWERED BUTTERCUP   | 0  |
| 5 | Ranunculus hispidus                            | SWAMP BUTTERCUP            | 0  |
| 5 | Ranunculus recurvatus                          | HOKED CROWFOOT             | -3 |
| * | RHAMNUS CATHARTICA                             | COMMON BUCKTHORN           | 0  |
| 4 | Ribes cynosbati                                | PRICKLY or WILD GOOSEBERRY | 3  |
| * | ROBINIA PSEUDOACACIA                           | BLACK LOCUST               | 3  |
| 4 | Rosa carolina                                  | PASTURE ROSE               | 3  |
| 5 | Rosa palustris                                 | SWAMP ROSE                 | -5 |
| 1 | Rubus allegheniensis                           | COMMON BLACKBERRY          | 3  |
| 1 | Rubus flagellaris                              | NORTHERN DEWBERRY          | 3  |
| 1 | Rubus occidentalis                             | BLACK RASPBERRY            | 5  |
| 3 | Rubus setosus                                  | BRISTLY BLACKBERRY         | -3 |
| 1 | Rudbeckia hirta                                | BLACK-EYED SUSAN           | 3  |
| 5 | Sanguinaria canadensis                         | BLOODROOT                  | 3  |
| 3 | Scirpus atrovirens                             | BULRUSH                    | -5 |
| 3 | Scirpus pendulus                               | BULRUSH                    | -5 |
| * | SOLANUM DULCAMARA                              | BITTERSWEET NIGHTSHADE     | 0  |
| 6 | Solidago caesia                                | BLUESTEM GOLDENROD         | 3  |
| 1 | Solidago canadensis                            | CANADA GOLDENROD           | 3  |
| 9 | Staphylea trifolia                             | BLADDERNUT                 | 0  |
| 2 | Symphotrichum lanceolatum (Aster l.)           | PANICLED ASTER             | -3 |
| 2 | Symphotrichum lateriflorum (Aster l.)          | CALICO ASTER               | 0  |
| 6 | Symphotrichum ontarionis (Aster o.)            | LAKE ONTARIO ASTER         | 0  |
| 2 | Symphotrichum urophyllum (Aster sagittifolius) | ARROW-LEAVED ASTER         | 5  |
| * | TARAXACUM OFFICINALE                           | COMMON DANDELION           | 3  |
| 6 | Thalictrum dioicum                             | EARLY MEADOW-RUE           | 3  |
| 8 | Thalictrum thalictroides (Anemonella t.)       | RUE-ANEMONE                | 3  |
| 9 | Tiarella cordifolia                            | FOAMFLOWER                 | 3  |
| 5 | Tilia americana                                | BASSWOOD                   | 3  |
| 2 | Toxicodendron radicans                         | POISON-IVY                 | 0  |
| 7 | Trillium flexipes                              | DROOPING TRILLIUM          | 0  |
| 5 | Trillium grandiflorum                          | COMMON TRILLIUM            | 3  |

|   |                                  |                             |    |
|---|----------------------------------|-----------------------------|----|
| 5 | Triosteum aurantiacum            | HORSE-GENTIAN               | 5  |
| 5 | Tsuga canadensis                 | HEMLOCK                     | 3  |
| 1 | Ulmus americana                  | AMERICAN ELM                | -3 |
| 7 | Vaccinium pallidum               | HILLSIDE BLUEBERRY          | 5  |
| 4 | Verbena urticifolia              | WHITE VERVAIN               | 0  |
| * | VERONICA OFFICINALIS             | COMMON SPEEDWELL            | 3  |
| 4 | Viburnum lentago                 | NANNYBERRY                  | 0  |
| * | VIBURNUM OPULUS                  | EUROPEAN Highbush-Cranberry | -3 |
| 5 | Viburnum rafinesquianum          | Downy Arrow-wood            | 5  |
| * | VINCA MINOR                      | PERIWINKLE                  | 5  |
| 3 | Viola labradorica (V. conspersa) | DOG VIOLET                  | 0  |
| 3 | Vitis riparia                    | RIVER-BANK GRAPE            | 0  |
| 3 | Zanthoxylum americanum           | PRICKLY-ASH                 | 3  |
| 6 | Zizia aurea                      | GOLDEN ALEXANDERS           | 0  |

Also: Crataegus sp., Smilax sp., Malus sp.



# Horner-McLaughlin Woods

## South Wetland

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Inundated Shrub Swamp

Wetland in SE corner of property, with mucky soil, dominant shrub *Cephalanthus occidentalis*, with *Acer saccharinum* an occasional tree; patches along S edge dominated by *Carex* spp. or *Salix* spp.

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 79    | Total Species        | 3.92 | NATIVE MEAN C |
| 71    | Total Native Species | 3.52 | W/Adventives  |
| 89.9  | % Native Species     | -3.1 | NATIVE MEAN W |
| 32.99 | NATIVE FQI           | -2.8 | W/Adventives  |
| 31.28 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                                       | COMMON NAME             | W  | LISTED |
|---|---|-------------------------|----|--------|
| 1 | <i>Acer rubrum</i>                                    | RED MAPLE               | 0  |        |
| 2 | <i>Acer saccharinum</i>                               | SILVER MAPLE            | -3 |        |
| 5 | <i>Agrostis perennans</i>                             | AUTUMN BENT             | 3  |        |
| 1 | <i>Alisma triviale</i> (A. <i>plantago-aquatica</i> ) | NORTHERN WATER-PLANTAIN | -5 |        |
| 0 | <i>Ambrosia artemisiifolia</i>                        | COMMON RAGWEED          | 3  |        |
| 4 | <i>Amelanchier arborea</i>                            | JUNE BERRY              | 3  |        |
| 6 | <i>Asclepias incarnata</i>                            | SWAMP MILKWEED          | -5 |        |
| 4 | <i>Athyrium filix-femina</i>                          | LADY FERN               | 0  |        |
| 3 | <i>Bidens cernua</i>                                  | NODDING BEGGAR-TICKS    | -5 |        |
| 5 | <i>Bidens comosa</i>                                  | SWAMP TICKSEED          | -3 |        |
| 5 | <i>Bidens connata</i>                                 | PURPLE-STEMMED TICKSEED | -3 |        |
| 7 | <i>Bidens discoidea</i>                               | SWAMP BEGGAR-TICKS      | -3 |        |
| 1 | <i>Bidens frondosa</i>                                | COMMON BEGGAR-TICKS     | -3 |        |
| 5 | <i>Boehmeria cylindrica</i>                           | FALSE NETTLE            | -5 |        |
| 5 | <i>Carex comosa</i>                                   | SEDGE                   | -5 |        |
| 3 | <i>Carex cristatella</i>                              | SEDGE                   | -3 |        |
| 6 | <i>Carex lacustris</i>                                | SEDGE                   | -5 |        |
| 4 | <i>Carex lupulina</i>                                 | SEDGE                   | -5 |        |
| 1 | <i>Carex stipata</i>                                  | SEDGE                   | -5 |        |
| 3 | <i>Carex tribuloides</i>                              | SEDGE                   | -3 |        |
| 5 | <i>Carex utriculata</i> (C. <i>rostrata</i> )         | SEDGE                   | -5 |        |
| 1 | <i>Carex vulpinoidea</i>                              | SEDGE                   | -5 |        |
| 7 | <i>Cephalanthus occidentalis</i>                      | BUTTONBUSH              | -5 |        |
| * | CERASTIUM FONTANUM                                    | MOUSE-EAR CHICKWEED     | 3  |        |
| 5 | <i>Cicuta bulbifera</i>                               | WATER HEMLOCK           | -5 |        |
| 4 | <i>Cicuta maculata</i>                                | WATER HEMLOCK           | -5 |        |
| 7 | <i>Cinna arundinacea</i>                              | WOOD REEDGRASS          | -3 |        |
| 1 | <i>Cornus foemina</i>                                 | GRAY DOGWOOD            | 0  |        |
| 5 | <i>Dryopteris carthusiana</i>                         | SPINULOSE WOODFERN      | -3 |        |
| * | ELAEAGNUS UMBELLATA                                   | AUTUMN-OLIVE            | 3  |        |
| 3 | <i>Epilobium coloratum</i>                            | CINNAMON WILLOW-HERB    | -5 |        |
| * | FRANGULA ALNUS (RHAMNUS FRANGULA)                     | GLOSSY BUCKTHORN        | 0  |        |
| 2 | <i>Fraxinus pennsylvanica</i>                         | RED ASH                 | -3 |        |
| 5 | <i>Galium tinctorium</i>                              | STIFF BEDSTRAW          | -5 |        |
| 4 | <i>Galium triflorum</i>                               | FRAGRANT BEDSTRAW       | 3  |        |
| 6 | <i>Glyceria grandis</i>                               | REED MANNA GRASS        | -5 |        |
| 4 | <i>Glyceria striata</i>                               | FOWL MANNA GRASS        | -5 |        |
| 5 | <i>Ilex verticillata</i>                              | MICHIGAN HOLLY          | -3 |        |
| 2 | <i>Impatiens capensis</i>                             | SPOTTED TOUCH-ME-NOT    | -3 |        |
| 3 | <i>Juncus effusus</i>                                 | SOFT-STEMMED RUSH       | -5 |        |
| 3 | <i>Leersia oryzoides</i>                              | CUT GRASS               | -5 |        |
| 5 | <i>Lemna minor</i>                                    | COMMON DUCKWEED         | -5 |        |
| 6 | <i>Lemna trisulca</i>                                 | STAR DUCKWEED           | -5 |        |

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|   |  |                        |    |
|---|--|------------------------|----|
| 5 | Lemna turionifera (L. minor)           | RED DUCKWEED           | -5 |
| 2 | Lycopus uniflorus                      | NORTHERN BUGLE WEED    | -5 |
| 6 | Lysimachia thysiflora                  | TUFTED LOOSESTRIFE     | -5 |
| 2 | Onoclea sensibilis                     | SENSITIVE FERN         | -3 |
| 6 | Osmunda claytoniana                    | INTERRUPTED FERN       | 0  |
| 5 | Parthenocissus quinquefolia            | VIRGINIA CREEPER       | 3  |
| 3 | Penthorum sedoides                     | DITCH STONECROP        | -5 |
| 6 | Persicaria amphibia (Polygonum a.)     | WATER SMARTWEED        | -5 |
| 5 | Pilea pumila                           | CLEARWEED              | -3 |
| * | POA COMPRESSA                          | CANADA BLUEGRASS       | 3  |
| 5 | Quercus alba                           | WHITE OAK              | 3  |
| 1 | Ranunculus sceleratus                  | CURSED CROWFOOT        | -5 |
| * | RHAMNUS CATHARTICA                     | COMMON BUCKTHORN       | 0  |
| 5 | Rosa palustris                         | SWAMP ROSE             | -5 |
| 1 | Rubus occidentalis                     | BLACK RASPBERRY        | 5  |
| 3 | Salix lucida                           | SHINING WILLOW         | -3 |
| 5 | Salix nigra                            | BLACK WILLOW           | -5 |
| 1 | Salix petiolaris                       | SLENDER WILLOW         | -3 |
| 5 | Scirpus cyperinus                      | WOOL-GRASS             | -5 |
| 5 | Scutellaria galericulata               | MARSH SKULLCAP         | -5 |
| 5 | Scutellaria lateriflora                | MAD-DOG SKULLCAP       | -5 |
| 5 | Sium suave                             | WATER-PARSNIP          | -5 |
| * | SOLANUM DULCAMARA                      | BITTERSWEET NIGHTSHADE | 0  |
| 5 | Sparganium eurycarpum                  | COMMON BUR-REED        | -5 |
| 4 | Spiraea alba                           | MEADOWSWEET            | -3 |
| 2 | Symphyotrichum lateriflorum (Aster l.) | CALICO ASTER           | 0  |
| 6 | Thalictrum dioicum                     | EARLY MEADOW-RUE       | 3  |
| 2 | Thelypteris palustris                  | MARSH FERN             | -3 |
| 2 | Toxicodendron radicans                 | POISON-IVY             | 0  |
| 6 | Triadenum fraseri                      | MARSH ST. JOHN'S-WORT  | -5 |
| * | TYPHA xGLAUCA                          | HYBRID CAT-TAIL        | -5 |
| * | TYPHA ANGUSTIFOLIA                     | NARROW-LEAVED CAT-TAIL | -5 |
| 1 | Typha latifolia                        | BROAD-LEAVED CAT-TAIL  | -5 |
| 4 | Verbena hastata                        | BLUE VERVAIN           | -3 |
| 6 | Veronica scutellata                    | MARSH SPEEDWELL        | -5 |
| 5 | Wolffia columbiana                     | COMMON WATER MEAL      | -5 |

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# Horner-McLaughlin Woods

## Southwest Wetland

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Inundated Shrub Swamp

Small wetland in central part of property, dominated by *Cephalanthus occidentalis* and ringed by *Quercus bicolor*

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 48    | Total Species        | 3.93 | NATIVE MEAN C |
| 44    | Total Native Species | 3.60 | W/Adventives  |
| 91.7  | % Native Species     | -0.8 | NATIVE MEAN W |
| 26.08 | NATIVE FQI           | -0.6 | W/Adventives  |
| 24.97 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                                       | COMMON NAME              | W  | LISTED |
|---|---|--------------------------|----|--------|
| 1 | <i>Acer rubrum</i>                                    | RED MAPLE                | 0  |        |
| 5 | <i>Acer saccharum</i>                                 | SUGAR MAPLE              | 3  |        |
| 4 | <i>Amelanchier interior</i>                           | SERVICEBERRY             | 5  |        |
| 5 | <i>Arisaema triphyllum</i>                            | JACK-IN-THE-PULPIT       | 0  |        |
| 1 | <i>Bidens frondosa</i>                                | COMMON BEGGAR-TICKS      | -3 |        |
| 1 | <i>Carex blanda</i>                                   | SEDGE                    | 0  |        |
| 4 | <i>Carex gracillima</i>                               | SEDGE                    | 3  |        |
| 4 | <i>Carex tenera</i>                                   | SEDGE                    | 0  |        |
| 7 | <i>Cephalanthus occidentalis</i>                      | BUTTONBUSH               | -5 |        |
| 7 | <i>Cinna arundinacea</i>                              | WOOD REEDGRASS           | -3 |        |
| 8 | <i>Collinsonia canadensis</i>                         | RICHWEED                 | 0  |        |
| 4 | <i>Dioscorea villosa</i> ( <i>Dioscorea villosa</i> ) | WILD YAM                 | 0  |        |
| * | ELAEAGNUS UMBELLATA                                   | AUTUMN-OLIVE             | 3  |        |
| 3 | <i>Euthamia graminifolia</i>                          | GRASS-LEAVED GOLDENROD   | 0  |        |
| 5 | <i>Fraxinus americana</i>                             | WHITE ASH                | 3  |        |
| 6 | <i>Fraxinus nigra</i>                                 | BLACK ASH                | -3 |        |
| 4 | <i>Galium triflorum</i>                               | FRAGRANT BEDSTRAW        | 3  |        |
| 1 | <i>Geum canadense</i>                                 | WHITE AVENS              | 0  |        |
| 7 | <i>Glyceria septentrionalis</i>                       | FLOATING MANNA GRASS     | -5 |        |
| 4 | <i>Glyceria striata</i>                               | FOWL MANNA GRASS         | -5 |        |
| 5 | <i>Ilex verticillata</i>                              | MICHIGAN HOLLY           | -3 |        |
| 5 | <i>Leersia virginica</i>                              | WHITE GRASS              | -3 |        |
| 5 | <i>Lemna turionifera</i> ( <i>L. minor</i> )          | RED DUCKWEED             | -5 |        |
| 8 | <i>Lycopus rubellus</i>                               | STALKED WATER HOREHOUND  | -5 |        |
| 2 | <i>Onoclea sensibilis</i>                             | SENSITIVE FERN           | -3 |        |
| 5 | <i>Ostrya virginiana</i>                              | IRONWOOD; HOP-HORNBEAM   | 3  |        |
| 4 | <i>Persicaria virginiana</i> ( <i>Polygonum v.</i> )  | JUMPSEED                 | 0  |        |
| 5 | <i>Pilea pumila</i>                                   | CLEARWEED                | -3 |        |
| * | POA COMPRESSA   | CANADA BLUEGRASS         | 3  |        |
| 2 | <i>Potentilla simplex</i>                             | OLD-FIELD CINQUEFOIL     | 3  |        |
| 8 | <i>Quercus bicolor</i>                                | SWAMP WHITE OAK          | -3 |        |
| 0 | <i>Ranunculus abortivus</i>                           | SMALL-FLOWERED BUTTERCUP | 0  |        |
| 5 | <i>Ranunculus recurvatus</i>                          | HOOKED CROWFOOT          | -3 |        |
| 1 | <i>Ranunculus sceleratus</i>                          | CURSED CROWFOOT          | -5 |        |
| 2 | <i>Rhus typhina</i>                                   | STAGHORN SUMAC           | 3  |        |
| 6 | <i>Ribes americanum</i>                               | WILD BLACK CURRANT       | -3 |        |
| 1 | <i>Rubus allegheniensis</i>                           | COMMON BLACKBERRY        | 3  |        |
| 1 | <i>Rubus occidentalis</i>                             | BLACK RASPBERRY          | 5  |        |
| 5 | <i>Scutellaria lateriflora</i>                        | MAD-DOG SKULLCAP         | -5 |        |
| 5 | <i>Sium suave</i>                                     | WATER-PARSNIP            | -5 |        |
| * | SOLANUM DULCAMARA                                     | BITTERSWEET NIGHTSHADE   | 0  |        |
| 2 | <i>Symphotrichum lateriflorum</i> ( <i>Aster l.</i> ) | CALICO ASTER             | 0  |        |
| * | TARAXACUM OFFICINALE                                  | COMMON DANDELION         | 3  |        |
| 5 | <i>Tilia americana</i>                                | BASSWOOD                 | 3  |        |

|   |                        |                  |    |
|---|------------------------|------------------|----|
| 2 | Toxicodendron radicans | POISON-IVY       | 0  |
| 1 | Ulmus americana        | AMERICAN ELM     | -3 |
| 4 | Viburnum lentago       | NANNYBERRY       | 0  |
| 3 | Vitis riparia          | RIVER-BANK GRAPE | 0  |

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Also: Amelanchier sp.

# Matthaei Botanical Gardens

## Clements-Osgood Woods

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Floodplain Forest

Large forest along Fleming Creek, with sparse overstory tree canopy and *Rhamnus cathartica* frequent in understory (especially in areas nearest buildings), occasional wet mucky areas

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 219   | Total Species        | 3.95 | NATIVE MEAN C |
| 173   | Total Native Species | 3.12 | W/Adventives  |
| 79.0  | % Native Species     | -0.8 | NATIVE MEAN W |
| 52.00 | NATIVE FQI           | -0.2 | W/Adventives  |
| 46.22 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME  | COMMON NAME                | W  | LISTED |
|---|--|----------------------------|----|--------|
| 0 | <i>Acer negundo</i>                                      | BOX-ELDER                  | 0  |        |
| 4 | <i>Acer nigrum</i> (A. <i>saccharum</i> )                | BLACK MAPLE                | 3  |        |
| 2 | <i>Acer saccharinum</i>                                  | SILVER MAPLE               | -3 |        |
| 5 | <i>Acer saccharum</i>                                    | SUGAR MAPLE                | 3  |        |
| * | <i>AESCULUS HIPPOCASTANUM</i>                            | HORSE-CHESTNUT             | 5  |        |
| 4 | <i>Ageratina altissima</i> ( <i>Eupatorium rugosum</i> ) | WHITE SNAKEROOT            | 3  |        |
| 4 | <i>Agrimonia parviflora</i>                              | SWAMP AGRIMONY             | 0  |        |
| * | <i>AILANTHUS ALTISSIMA</i>                               | TREE-OF-HEAVEN             | 5  |        |
| * | <i>AJUGA REPTANS</i>                                     | CARPET BUGLE               | 5  |        |
| * | <i>ALLIARIA PETIOLATA</i>                                | GARLIC MUSTARD             | 3  |        |
| 4 | <i>Allium canadense</i>                                  | WILD GARLIC                | 3  |        |
| 0 | <i>Ambrosia artemisiifolia</i>                           | COMMON RAGWEED             | 3  |        |
| 0 | <i>Ambrosia trifida</i>                                  | GIANT RAGWEED              | 0  |        |
| 5 | <i>Amphicarpaea bracteata</i>                            | HOG-PEANUT                 | 0  |        |
| 4 | <i>Anemone canadensis</i>                                | CANADA ANEMONE             | -3 |        |
| 5 | <i>Anemone quinquefolia</i>                              | WOOD ANEMONE               | 3  |        |
| 3 | <i>Anemone virginiana</i>                                | THIMBLEWEED                | 3  |        |
| 3 | <i>Apocynum cannabinum</i> (A. <i>sibiricum</i> )        | INDIAN-HEMP                | 0  |        |
| * | <i>ARCTIUM MINUS</i>                                     | COMMON BURDOCK             | 3  |        |
| 8 | <i>Arisaema dracontium</i>                               | GREEN DRAGON               | -3 |        |
| 5 | <i>Arisaema triphyllum</i>                               | JACK-IN-THE-PULPIT         | 0  |        |
| 5 | <i>Asarum canadense</i>                                  | WILD-GINGER                | 5  |        |
| 1 | <i>Asclepias syriaca</i>                                 | COMMON MILKWEED            | 5  |        |
| 9 | <i>Asimina triloba</i>                                   | PAWPAW                     | 0  |        |
| 4 | <i>Athyrium filix-femina</i>                             | LADY FERN                  | 0  |        |
| * | <i>BARBAREA VULGARIS</i>                                 | YELLOW ROCKET              | 0  |        |
| * | <i>BERBERIS THUNBERGII</i>                               | JAPANESE BARBERRY          | 3  |        |
| 3 | <i>Bidens cernua</i>                                     | NODDING BEGGAR-TICKS       | -5 |        |
| 1 | <i>Bidens frondosa</i>                                   | COMMON BEGGAR-TICKS        | -3 |        |
| 5 | <i>Boehmeria cylindrica</i>                              | FALSE NETTLE               | -5 |        |
| 6 | <i>Bromus latiglumis</i>                                 | EAR-LEAVED BROME           | -3 |        |
| 6 | <i>Caltha palustris</i>                                  | MARSH-MARIGOLD             | -5 |        |
| 2 | <i>Calystegia sepium</i>                                 | HEDGE BINDWEED             | 0  |        |
| 4 | <i>Cardamine bulbosa</i>                                 | SPRING CRESS               | -5 |        |
| 6 | <i>Cardamine douglassii</i>                              | PINK SPRING CRESS          | -3 |        |
| * | <i>CARDAMINE IMPATIENS</i>                               | BITTER CRESS               | 3  |        |
| 1 | <i>Cardamine pensylvanica</i>                            | PENNSYLVANIA BITTER CRESS  | -3 |        |
| 5 | <i>Carex gracilescens</i>                                | SEDGE                      | 3  |        |
| 6 | <i>Carex lacustris</i>                                   | SEDGE                      | -5 |        |
| 3 | <i>Carex lurida</i>                                      | SEDGE                      | -5 |        |
| 2 | <i>Carex radiata</i> (C. <i>rosea</i> )                  | STRAIGHT-STYLED WOOD SEDGE | 0  |        |
| 4 | <i>Carex stricta</i>                                     | SEDGE                      | -5 |        |
| 6 | <i>Carpinus caroliniana</i>                              | BLUE-BEECH                 | 0  |        |

|   |  |                          |    |
|---|--|--------------------------|----|
| 5 | <i>Caulophyllum thalictroides</i>            | BLUE COHOSH              | 5  |
| * | <i>CELASTRUS ORBICULATUS</i>                 | ORIENTAL BITTERSWEET     | 5  |
| 5 | <i>Celtis occidentalis</i>                   | HACKBERRY                | 0  |
| 8 | <i>Cercis canadensis</i>                     | REDBUD                   | 3  |
| * | <i>CHELIDONIUM MAJUS</i>                     | CELANDINE                | 5  |
| 7 | <i>Chelone glabra</i>                        | TURTLEHEAD               | -5 |
| * | <i>CICHORIUM INTYBUS</i>                     | CHICORY                  | 3  |
| 5 | <i>Cicuta bulbifera</i>                      | WATER HEMLOCK            | -5 |
| 4 | <i>Cicuta maculata</i>                       | WATER HEMLOCK            | -5 |
| 7 | <i>Cinna arundinacea</i>                     | WOOD REEDGRASS           | -3 |
| 2 | <i>Circaea canadensis</i> (C. lutetiana)     | ENCHANTER'S-NIGHTSHADE   | 3  |
| * | <i>CIRSIUM ARVENSE</i>                       | CANADA THISTLE           | 3  |
| 6 | <i>Cirsium muticum</i>                       | SWAMP THISTLE            | -5 |
| 4 | <i>Claytonia virginica</i>                   | SPRING-BEAUTY            | 3  |
| 4 | <i>Clematis virginiana</i>                   | VIRGIN'S BOWER           | 0  |
| * | <i>CONVALLARIA MAJALIS</i>                   | LILY-OF-THE-VALLEY       | 5  |
| * | <i>CONVOLVULUS ARVENSIS</i>                  | FIELD BINDWEED           | 5  |
| 5 | <i>Cornus alternifolia</i>                   | ALTERNATE-LEAVED DOGWOOD | 3  |
| 2 | <i>Cornus amomum</i>                         | SILKY DOGWOOD            | -3 |
| 1 | <i>Cornus foemina</i>                        | GRAY DOGWOOD             | 0  |
| 2 | <i>Cornus sericea</i> (C. stolonifera)       | RED-OSIER                | -3 |
| 5 | <i>Corylus americana</i>                     | HAZELNUT                 | 3  |
| 2 | <i>Cryptotaenia canadensis</i>               | HONEWORT                 | 0  |
| 3 | <i>Cuscuta gronovii</i>                      | COMMON DODDER            | -3 |
| * | <i>DACTYLIS GLOMERATA</i>                    | ORCHARD GRASS            | 3  |
| 3 | <i>Dichanthelium implicatum</i> (Panicum i.) | PANIC GRASS              | 0  |
| 4 | <i>Dioscorea villosa</i> (Dioscorea villosa) | WILD YAM                 | 0  |
| 5 | <i>Doellingeria umbellata</i> (Aster u.)     | FLAT-TOPPED WHITE ASTER  | -3 |
| 5 | <i>Dryopteris carthusiana</i>                | SPINULOSE WOODFERN       | -3 |
| 6 | <i>Dryopteris cristata</i>                   | CRESTED SHIELD FERN      | -5 |
| 2 | <i>Echinocystis lobata</i>                   | WILD-CUCUMBER            | -3 |
| * | <i>ELYMUS REPENS</i> (AGROPYRON R.)          | QUACK GRASS              | 3  |
| 5 | <i>Elymus villosus</i>                       | SILKY WILD-RYE           | 3  |
| 4 | <i>Elymus virginicus</i>                     | VIRGINIA WILD-RYE        | -3 |
| 0 | <i>Equisetum arvense</i>                     | COMMON HORSETAIL         | 0  |
| 2 | <i>Erechtites hieracifolius</i>              | FIREWEED                 | 3  |
| 0 | <i>Erigeron annuus</i>                       | DAISY FLEABANE           | 3  |
| 5 | <i>Erythronium americanum</i>                | YELLOW TROUT LILY        | 5  |
| * | <i>EUONYMUS ALATA</i>                        | WINGED EUONYMUS          | 5  |
| 4 | <i>Eupatorium perfoliatum</i>                | BONESET                  | -3 |
| 4 | <i>Eutrochium maculatum</i> (Eupatorium m.)  | JOE-PYE-WEED             | -5 |
| 2 | <i>Fallopia scandens</i> (Polygonum s.)      | FALSE BUCKWHEAT          | 0  |
| 5 | <i>Festuca subverticillata</i> (F. obtusa)   | NODDING FESCUE           | 3  |
| * | <i>FICARIA VERNA</i> (RANUNCULUS FICARIA)    | LESSER CELANDINE         | -3 |
| 7 | <i>Floerkea proserpinacoides</i>             | FALSE MERMAID            | 0  |
| 2 | <i>Fragaria virginiana</i>                   | WILD STRAWBERRY          | 3  |
| * | <i>FRANGULA ALNUS</i> (RHAMNUS FRANGULA)     | GLOSSY BUCKTHORN         | 0  |
| 2 | <i>Fraxinus pennsylvanica</i>                | RED ASH                  | -3 |
| 0 | <i>Galium aparine</i>                        | ANNUAL BEDSTRAW          | 3  |
| 5 | <i>Galium asprellum</i>                      | ROUGH BEDSTRAW           | -5 |
| 4 | <i>Galium triflorum</i>                      | FRAGRANT BEDSTRAW        | 3  |
| 4 | <i>Geranium maculatum</i>                    | WILD GERANIUM            | 3  |
| 1 | <i>Geum canadense</i>                        | WHITE AVENS              | 0  |
| 4 | <i>Geum vernum</i>                           | SPRING AVENS             | 3  |
| 8 | <i>Gleditsia triacanthos</i>                 | HONEY LOCUST             | 0  |
| 4 | <i>Glyceria striata</i>                      | FOWL MANNA GRASS         | -5 |
| 1 | <i>Hackelia virginiana</i>                   | BEGGAR'S LICE            | 3  |
| 5 | <i>Heliopsis helianthoides</i>               | FALSE SUNFLOWER          | 3  |
| 3 | <i>Heracleum maximum</i>                     | COW-PARSNIP              | -3 |
| * | <i>HESPERIS MATRONALIS</i>                   | DAME'S ROCKET            | 3  |

|   |  |                           |    |
|---|--|---------------------------|----|
| * | HOLOSTEUM UMBELLATUM                                 | JAGGED CHICKWEED          | 5  |
| 3 | Humulus lupulus                                      | COMMON HOPS               | 3  |
| 4 | Hydrophyllum virginianum                             | VIRGINIA WATERLEAF        | 0  |
| 5 | Hypericum prolificum                                 | SHRUBBY ST. JOHN'S-WORT   | 3  |
| 4 | Hypericum punctatum                                  | SPOTTED ST. JOHN'S-WORT   | 0  |
| 5 | Iris virginica                                       | SOUTHERN BLUE FLAG        | -5 |
| 5 | Juglans nigra  | BLACK WALNUT              | 3  |
| 1 | Juncus dudleyi                                       | DUDLEY'S RUSH             | -3 |
| * | LAMIUM PURPUREUM                                     | PURPLE DEAD-NETTLE        | 5  |
| 4 | Laportea canadensis                                  | WOOD NETTLE               | -3 |
| 5 | Larix laricina                                       | TAMARACK                  | -3 |
| 3 | Leersia oryzoides                                    | CUT GRASS                 | -5 |
| 5 | Lemna minor  | COMMON DUCKWEED           | -5 |
| 5 | Lemna turionifera (L. minor)                         | RED DUCKWEED              | -5 |
| * | LEONURUS CARDIACA                                    | MOTHERWORT                | 5  |
| * | LEUCANTHEMUM VULGARE (CHRYSANTHEMUM<br>LEUCANTHEMUM) | OX-EYE DAISY              | 5  |
| * | LIGUSTRUM OBTUSIFOLIUM                               | BORDER PRIVET             | 3  |
| * | LIGUSTRUM VULGARE                                    | COMMON PRIVET             | 3  |
| 5 | Lilium michiganense                                  | MICHIGAN LILY             | -3 |
| 9 | Liriodendron tulipifera                              | TULIP TREE                | 3  |
| 4 | Lobelia siphilitica                                  | GREAT BLUE LOBELIA        | -3 |
| * | LONICERA xBELLA                                      | HYBRID HONEYSUCKLE        | 3  |
| * | LONICERA MAACKII                                     | AMUR HONEYSUCKLE          | 5  |
| * | LONICERA MORROWII                                    | MORROW HONEYSUCKLE        | 3  |
| 2 | Lycopus americanus                                   | COMMON WATER HOREHOUND    | -5 |
| 4 | Lysimachia ciliata                                   | FRINGED LOOSESTRIFE       | -3 |
| * | LYTHRUM SALICARIA                                    | PURPLE LOOSESTRIFE        | -5 |
| 5 | Maianthemum racemosum (Smilacina r.)                 | FALSE SPIKENARD           | 3  |
| 5 | Maianthemum stellatum (Smilacina s.)                 | STARRY FALSE SOLOMON-SEAL | 0  |
| 5 | Menispermum canadense                                | MOONSEED                  | 0  |
| 3 | Mentha canadensis (M. arvensis)                      | WILD MINT                 | -3 |
| * | MYOSOTIS SCORPIOIDES                                 | FORGET-ME-NOT             | -5 |
| * | NASTURTIUM MICROPHYLLUM (N. OFFICINALE)              | WATERCRESS                | -5 |
| 8 | Nuphar advena  | YELLOW POND-LILY          | -5 |
| 2 | Onoclea sensibilis                                   | SENSITIVE FERN            | -3 |
| 0 | Oxalis stricta (O. fontana)                          | YELLOW WOOD-SORREL        | 3  |
| 6 | Oxypolis rigidior                                    | COWBANE                   | -5 |
| 5 | Packera aurea (Senecio a.)                           | GOLDEN RAGWORT            | -3 |
| 5 | Parthenocissus quinquefolia                          | VIRGINIA CREEPER          | 3  |
| 5 | Persicaria punctata (Polygonum p.)                   | SMARTWEED                 | -5 |
| 5 | Persicaria sagittata (Polygonum s.)                  | ARROW-LEAVED TEAR-THUMB   | -5 |
| 4 | Persicaria virginiana (Polygonum v.)                 | JUMPSEED                  | 0  |
| 0 | Phalaris arundinacea                                 | REED CANARY GRASS         | -3 |
| * | PHLEUM PRATENSE                                      | TIMOTHY                   | 3  |
| 4 | Physocarpus opulifolius                              | NINEBARK                  | -3 |
| 2 | Phytolacca americana                                 | POKEWEED                  | 3  |
| 5 | Pilea fontana  | BOG CLEARWEED             | -3 |
| 5 | Pilea pumila   | CLEARWEED                 | -3 |
| 3 | Pinus strobus  | WHITE PINE                | 3  |
| 7 | Platanus occidentalis                                | SYCAMORE                  | -3 |
| * | POA COMPRESSA  | CANADA BLUEGRASS          | 3  |
| * | POA PRATENSIS  | KENTUCKY BLUEGRASS        | 3  |
| 1 | Populus deltoides                                    | COTTONWOOD                | 0  |
| * | POTAMOGETON CRISPUS                                  | PONDWEED                  | -5 |
| 0 | Prunella vulgaris                                    | SELF-HEAL                 | 0  |
| 2 | Prunus serotina                                      | WILD BLACK CHERRY         | 3  |
| 2 | Prunus virginiana                                    | CHOKE CHERRY              | 3  |
| 4 | Ptelea trifoliata                                    | HOP-TREE                  | 3  |
| 5 | Quercus alba   | WHITE OAK                 | 3  |

|   |  |                             |    |
|---|--|-----------------------------|----|
| 8 | <i>Quercus bicolor</i>                       | SWAMP WHITE OAK             | -3 |
| 5 | <i>Quercus macrocarpa</i>                    | BUR OAK                     | 3  |
| 5 | <i>Quercus rubra</i>                         | RED OAK                     | 3  |
| 0 | <i>Ranunculus abortivus</i>                  | SMALL-FLOWERED BUTTERCUP    | 0  |
| 5 | <i>Ranunculus hispidus</i>                   | SWAMP BUTTERCUP             | 0  |
| * | RHAMNUS CATHARTICA                           | COMMON BUCKTHORN            | 0  |
| 6 | <i>Ribes americanum</i>                      | WILD BLACK CURRANT          | -3 |
| * | ROSA MULTIFLORA                              | MULTIFLORA ROSE             | 3  |
| 1 | <i>Rubus occidentalis</i>                    | BLACK RASPBERRY             | 5  |
| 6 | <i>Rudbeckia laciniata</i>                   | CUT-LEAF CONEFLOWER         | -3 |
| * | RUMEX CRISPUS                                | CURLY DOCK                  | 0  |
| * | RUMEX OBTUSIFOLIUS                           | BITTER DOCK                 | 0  |
| 9 | <i>Rumex orbiculatus</i>                     | GREAT WATER DOCK            | -5 |
| 3 | <i>Salix amygdaloides</i>                    | PEACH-LEAVED WILLOW         | -3 |
| 1 | <i>Salix exigua</i>                          | SANDBAR WILLOW              | -3 |
| 5 | <i>Salix nigra</i>                           | BLACK WILLOW                | -5 |
| 3 | <i>Sambucus canadensis</i>                   | ELDERBERRY                  | -3 |
| 3 | <i>Scirpus atrovirens</i>                    | BULRUSH                     | -5 |
| 5 | <i>Scrophularia marilandica</i>              | LATE FIGWORT                | 3  |
| 5 | <i>Scutellaria lateriflora</i>               | MAD-DOG SKULLCAP            | -5 |
| 5 | <i>Sium suave</i>                            | WATER-PARSNIP               | -5 |
| * | SOLANUM DULCAMARA                            | BITTERSWEET NIGHTSHADE      | 0  |
| 3 | <i>Solidago gigantea</i>                     | LATE GOLDENROD              | -3 |
| 6 | <i>Solidago patula</i>                       | SWAMP GOLDENROD             | -5 |
| 3 | <i>Solidago rugosa</i>                       | ROUGH-LEAVED GOLDENROD      | 0  |
| 6 | <i>Sparganium emersum</i> (S. chlorocarpum)  | GREEN-FRUITED BUR-REED      | -5 |
| 9 | <i>Staphylea trifolia</i>                    | BLADDERNUT                  | 0  |
| 4 | <i>Symphotrichum cordifolium</i> (Aster c.)  | HEART-LEAVED ASTER          | 5  |
| 2 | <i>Symphotrichum lanceolatum</i> (Aster l.)  | PANICLED ASTER              | -3 |
| 2 | <i>Symphotrichum lateriflorum</i> (Aster l.) | CALICO ASTER                | 0  |
| 6 | <i>Symplocarpus foetidus</i>                 | SKUNK-CABBAGE               | -5 |
| * | TARAXACUM OFFICINALE                         | COMMON DANDELION            | 3  |
| 4 | <i>Teucrium canadense</i>                    | WOOD-SAGE                   | -3 |
| 3 | <i>Thalictrum dasycarpum</i>                 | PURPLE MEADOW-RUE           | -3 |
| 2 | <i>Thelypteris palustris</i>                 | MARSH FERN                  | -3 |
| 5 | <i>Tilia americana</i>                       | BASSWOOD                    | 3  |
| * | TORILIS JAPONICA                             | HEDGE-PARSLEY               | 3  |
| 7 | <i>Torreyochloa pallida</i> (Puccinellia p.) | PALE FALSE MANNAGRASS       | -5 |
| 2 | <i>Toxicodendron radicans</i>                | POISON-IVY                  | 0  |
| * | TRIFOLIUM PRATENSE                           | RED CLOVER                  | 3  |
| * | TRIFOLIUM REPENS                             | WHITE CLOVER                | 3  |
| 5 | <i>Triosteum aurantiacum</i>                 | HORSE-GENTIAN               | 5  |
| 1 | <i>Ulmus americana</i>                       | AMERICAN ELM                | -3 |
| 1 | <i>Urtica dioica</i>                         | STINGING NETTLE             | 0  |
| 7 | <i>Vallisneria americana</i>                 | EEL-GRASS                   | -5 |
| 4 | <i>Verbena hastata</i>                       | BLUE VERVAIN                | -3 |
| 4 | <i>Verbena urticifolia</i>                   | WHITE VERVAIN               | 0  |
| * | VERONICA HEDERIFOLIA                         | IVY-LEAVED SPEEDWELL        | 5  |
| 4 | <i>Viburnum lentago</i>                      | NANNYBERRY                  | 0  |
| 5 | <i>Viburnum rafinesquianum</i>               | DOWNY ARROW-WOOD            | 5  |
| 5 | <i>Viburnum trilobum</i> (V. opulus)         | AMERICAN Highbush-CRANBERRY | -3 |
| 2 | <i>Viola affinis</i>                         | LE CONTE'S VIOLET           | -3 |
| 5 | <i>Viola cucullata</i>                       | MARSH VIOLET                | -5 |
| 3 | <i>Viola labradorica</i> (V. conspersa)      | DOG VIOLET                  | 0  |
| 4 | <i>Viola pubescens</i>                       | YELLOW VIOLET               | 3  |
| 3 | <i>Vitis riparia</i>                         | RIVER-BANK GRAPE            | 0  |
| 3 | <i>Zanthoxylum americanum</i>                | PRICKLY-ASH                 | 3  |

Also: *Sagittaria* sp.



# Matthaei Botanical Gardens

## Clements-Osgood Woods - Oak Opening

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Southern Forest

Small knoll with some larger oaks, Fleming Creek to the W and otherwise bordered by floodplain forest

#### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 60    | Total Species        | 3.90 | NATIVE MEAN C |
| 48    | Total Native Species | 3.12 | W/Adventives  |
| 80.0  | % Native Species     | 1.6  | NATIVE MEAN W |
| 26.99 | NATIVE FQI           | 1.9  | W/Adventives  |
| 24.14 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                                      | COMMON NAME               | W  | LISTED |
|---|--|---------------------------|----|--------|
| 4 | <i>Acer nigrum</i> ( <i>A. saccharum</i> )           | BLACK MAPLE               | 3  |        |
| * | ACER PLATANOIDES                                     | NORWAY MAPLE              | 5  |        |
| 1 | <i>Achillea millefolium</i>                          | YARROW                    | 3  |        |
| 5 | <i>Agrimonia pubescens</i>                           | SOFT AGRIMONY             | 5  |        |
| * | ALLIARIA PETIOLATA                                   | GARLIC MUSTARD            | 3  |        |
| 5 | <i>Amphicarpaea bracteata</i>                        | HOG-PEANUT                | 0  |        |
| 5 | <i>Anemone quinquefolia</i>                          | WOOD ANEMONE              | 3  |        |
| * | BERBERIS THUNBERGII                                  | JAPANESE BARBERRY         | 3  |        |
| 3 | <i>Carex cephalophora</i>                            | SEDGE                     | 3  |        |
| 8 | <i>Carex laxiculmis</i>                              | SEDGE                     | 3  |        |
| 4 | <i>Carex pensylvanica</i>                            | SEDGE                     | 5  |        |
| 2 | <i>Carex rosea</i> ( <i>C. convoluta</i> )           | CURLY-STYLED WOOD SEDGE   | 5  |        |
| 6 | <i>Carpinus caroliniana</i>                          | BLUE-BEECH                | 0  |        |
| 5 | <i>Carya cordiformis</i>                             | BITTERNUT HICKORY         | 0  |        |
| 5 | <i>Carya glabra</i>                                  | PIGNUT HICKORY            | 3  |        |
| 4 | <i>Claytonia virginica</i>                           | SPRING-BEAUTY             | 3  |        |
| * | DACTYLIS GLOMERATA                                   | ORCHARD GRASS             | 3  |        |
| 4 | <i>Danthonia spicata</i>                             | POVERTY GRASS; OATGRASS   | 5  |        |
| 3 | <i>Dichanthelium implicatum</i> ( <i>Panicum</i> i.) | PANIC GRASS               | 0  |        |
| 4 | <i>Elymus virginicus</i>                             | VIRGINIA WILD-RYE         | -3 |        |
| 5 | <i>Erythronium americanum</i>                        | YELLOW TROUT LILY         | 5  |        |
| 5 | <i>Fraxinus americana</i>                            | WHITE ASH                 | 3  |        |
| 2 | <i>Fraxinus pennsylvanica</i>                        | RED ASH                   | -3 |        |
| 1 | <i>Geum canadense</i>                                | WHITE AVENS               | 0  |        |
| * | HESPERIS MATRONALIS                                  | DAME'S ROCKET             | 3  |        |
| 1 | <i>Juncus tenuis</i>                                 | PATH RUSH                 | 0  |        |
| 5 | <i>Leersia virginica</i>                             | WHITE GRASS               | -3 |        |
| * | LIGUSTRUM VULGARE                                    | COMMON PRIVET             | 3  |        |
| 5 | <i>Luzula multiflora</i>                             | COMMON WOOD RUSH          | 3  |        |
| 5 | <i>Maianthemum stellatum</i> ( <i>Smilacina</i> s.)  | STARRY FALSE SOLOMON-SEAL | 0  |        |
| 0 | <i>Muhlenbergia schreberi</i>                        | NIMBLEWILL                | 0  |        |
| 0 | <i>Oxalis stricta</i> ( <i>O. fontana</i> )          | YELLOW WOOD-SORREL        | 3  |        |
| 5 | <i>Parthenocissus quinquefolia</i>                   | VIRGINIA CREEPER          | 3  |        |
| 4 | <i>Persicaria virginiana</i> ( <i>Polygonum</i> v.)  | JUMPSEED                  | 0  |        |
| * | PHLEUM PRATENSE                                      | TIMOTHY                   | 3  |        |
| * | POA COMPRESSA  | CANADA BLUEGRASS          | 3  |        |
| 5 | <i>Potentilla anserina</i>                           | SILVERWEED                | -3 |        |
| 4 | <i>Prunus nigra</i>                                  | CANADA PLUM               | 3  |        |
| 2 | <i>Prunus serotina</i>                               | WILD BLACK CHERRY         | 3  |        |
| 2 | <i>Prunus virginiana</i>                             | CHOKE CHERRY              | 3  |        |
| 5 | <i>Quercus alba</i>                                  | WHITE OAK                 | 3  |        |
| 5 | <i>Quercus macrocarpa</i>                            | BUR OAK                   | 3  |        |
| 5 | <i>Quercus muehlenbergii</i>                         | CHINQUAPIN OAK            | 3  |        |
| 5 | <i>Quercus rubra</i>                                 | RED OAK                   | 3  |        |

|   |   |                    |    |
|---|---|--------------------|----|
| 6 | <i>Quercus velutina</i>                       | BLACK OAK          | 5  |
| 5 | <i>Ranunculus recurvatus</i>                  | HOKED CROWFOOT     | -3 |
| * | RHAMNUS CATHARTICA                            | COMMON BUCKTHORN   | 0  |
| 4 | <i>Rosa carolina</i>                          | PASTURE ROSE       | 3  |
| * | ROSA MULTIFLORA                               | MULTIFLORA ROSE    | 3  |
| 5 | <i>Rosa palustris</i>                         | SWAMP ROSE         | -5 |
| 1 | <i>Rubus occidentalis</i>                     | BLACK RASPBERRY    | 5  |
| * | SECURIGERA VARIA (CORONILLA V.)               | CROWN-VETCH        | 5  |
| 4 | <i>Sphenopholis intermedia</i>                | SLENDER WEDGEGRASS | 0  |
| 2 | <i>Symphyotrichum lateriflorum</i> (Aster l.) | CALICO ASTER       | 0  |
| 6 | <i>Symplocarpus foetidus</i>                  | SKUNK-CABBAGE      | -5 |
| * | TARAXACUM OFFICINALE                          | COMMON DANDELION   | 3  |
| 5 | <i>Tilia americana</i>                        | BASSWOOD           | 3  |
| 2 | <i>Toxicodendron radicans</i>                 | POISON-IVY         | 0  |
| 5 | <i>Trillium grandiflorum</i>                  | COMMON TRILLIUM    | 3  |
| 3 | <i>Zanthoxylum americanum</i>                 | PRICKLY-ASH        | 3  |

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Also: *Heuchera* sp., *Cotoneaster* sp., *Lonicera* sp.

# Matthaei Botanical Gardens

## Clements-Osgood Woods - Tamarack Swamp

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Southern Wet Meadow

Swath of wet meadow along W edge of property N of buildings, with variable dominant species, both native and non-native; occasional young *Larix laricina* present with many older ones dead or dying

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 129   | Total Species        | 3.91 | NATIVE MEAN C |
| 111   | Total Native Species | 3.36 | W/Adventives  |
| 86.0  | % Native Species     | -2.2 | NATIVE MEAN W |
| 41.19 | NATIVE FQI           | -1.8 | W/Adventives  |
| 38.21 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                                     | COMMON NAME             | W  | LISTED |
|---|---|-------------------------|----|--------|
| 0 | <i>Acer negundo</i>                                 | BOX-ELDER               | 0  |        |
| 2 | <i>Acer saccharinum</i>                             | SILVER MAPLE            | -3 |        |
| 2 | <i>Agrimonia gryposepala</i>                        | TALL AGRIMONY           | 3  |        |
| 5 | <i>Amphicarpaea bracteata</i>                       | HOG-PEANUT              | 0  |        |
| 4 | <i>Anemone canadensis</i>                           | CANADA ANEMONE          | -3 |        |
| 3 | <i>Anemone virginiana</i>                           | THIMBLEWEED             | 3  |        |
| 3 | <i>Apios americana</i>                              | GROUNDNUT               | -3 |        |
| * | BARBAREA VULGARIS                                   | YELLOW ROCKET           | 0  |        |
| 3 | <i>Bidens cernua</i>                                | NODDING BEGGAR-TICKS    | -5 |        |
| 1 | <i>Bidens frondosa</i>                              | COMMON BEGGAR-TICKS     | -3 |        |
| 6 | <i>Bromus latiglumis</i>                            | EAR-LEAVED BROME        | -3 |        |
| 6 | <i>Caltha palustris</i>                             | MARSH-MARIGOLD          | -5 |        |
| 2 | <i>Calystegia sepium</i>                            | HEDGE BINDWEED          | 0  |        |
| 2 | <i>Carex hystericina</i>                            | SEDGE                   | -5 |        |
| 6 | <i>Carex lacustris</i>                              | SEDGE                   | -5 |        |
| 2 | <i>Carex pellita</i> ( <i>C. lanuginosa</i> )       | SEDGE                   | -5 |        |
| 4 | <i>Carex stricta</i>                                | SEDGE                   | -5 |        |
| 6 | <i>Carpinus caroliniana</i>                         | BLUE-BEECH              | 0  |        |
| * | CATALPA SPECIOSA                                    | NORTHERN CATALPA        | 3  |        |
| 7 | <i>Cephalanthus occidentalis</i>                    | BUTTONBUSH              | -5 |        |
| 7 | <i>Chelone glabra</i>                               | TURTLEHEAD              | -5 |        |
| 4 | <i>Cicuta maculata</i>                              | WATER HEMLOCK           | -5 |        |
| * | CIRSIUM ARVENSE                                     | CANADA THISTLE          | 3  |        |
| 6 | <i>Cirsium muticum</i>                              | SWAMP THISTLE           | -5 |        |
| 4 | <i>Clematis virginiana</i>                          | VIRGIN'S BOWER          | 0  |        |
| 2 | <i>Cornus amomum</i>                                | SILKY DOGWOOD           | -3 |        |
| 1 | <i>Cornus foemina</i>                               | GRAY DOGWOOD            | 0  |        |
| 2 | <i>Cornus sericea</i> ( <i>C. stolonifera</i> )     | RED-OSIER               | -3 |        |
| 5 | <i>Corylus americana</i>                            | HAZELNUT                | 3  |        |
| * | DAUCUS CAROTA                                       | QUEEN-ANNE'S-LACE       | 5  |        |
| 5 | <i>Doellingeria umbellata</i> ( <i>Aster</i> u.)    | FLAT-TOPPED WHITE ASTER | -3 |        |
| 6 | <i>Dryopteris cristata</i>                          | CRESTED SHIELD FERN     | -5 |        |
| * | ELAEAGNUS UMBELLATA                                 | AUTUMN-OLIVE            | 3  |        |
| 4 | <i>Eleocharis erythropoda</i>                       | SPIKE-RUSH              | -5 |        |
| 4 | <i>Elymus virginicus</i>                            | VIRGINIA WILD-RYE       | -3 |        |
| 3 | <i>Epilobium coloratum</i>                          | CINNAMON WILLOW-HERB    | -5 |        |
| 0 | <i>Equisetum arvense</i>                            | COMMON HORSETAIL        | 0  |        |
| 7 | <i>Equisetum fluviatile</i>                         | WATER HORSETAIL         | -5 |        |
| 2 | <i>Erigeron philadelphicus</i>                      | PHILADELPHIA FLEABANE   | 0  |        |
| 4 | <i>Eupatorium perfoliatum</i>                       | BONESET                 | -3 |        |
| 3 | <i>Euthamia graminifolia</i>                        | GRASS-LEAVED GOLDENROD  | 0  |        |
| 4 | <i>Eutrochium maculatum</i> ( <i>Eupatorium</i> m.) | JOE-PYE-WEED            | -5 |        |
| 2 | <i>Fallopia scandens</i> ( <i>Polygonum</i> s.)     | FALSE BUCKWHEAT         | 0  |        |

|    |  |                           |    |
|----|--|---------------------------|----|
| *  | FRANGULA ALNUS (RHAMNUS FRANGULA)      | GLOSSY BUCKTHORN          | 0  |
| 5  | Fraxinus americana                     | WHITE ASH                 | 3  |
| 6  | Fraxinus nigra                         | BLACK ASH                 | -3 |
| 5  | Galium asprellum                       | ROUGH BEDSTRAW            | -5 |
| 5  | Galium obtusum                         | WILD MADDER               | -3 |
| 4  | Galium triflorum                       | FRAGRANT BEDSTRAW         | 3  |
| 3  | Geum aleppicum                         | YELLOW AVENS              | 0  |
| 4  | Glyceria striata                       | FOWL MANNA GRASS          | -5 |
| 5  | Helianthus giganteus                   | TALL SUNFLOWER            | -3 |
| 5  | Heliopsis helianthoides                | FALSE SUNFLOWER           | 3  |
| 2  | Impatiens capensis                     | SPOTTED TOUCH-ME-NOT      | -3 |
| *  | IRIS PSEUDACORUS                       | YELLOW FLAG               | -5 |
| 5  | Iris virginica                         | SOUTHERN BLUE FLAG        | -5 |
| 5  | Juglans nigra                          | BLACK WALNUT              | 3  |
| 4  | Laportea canadensis                    | WOOD NETTLE               | -3 |
| 5  | Larix laricina                         | TAMARACK                  | -3 |
| 5  | Lemna turionifera (L. minor)           | RED DUCKWEED              | -5 |
| *  | LIGUSTRUM OBTUSIFOLIUM                 | BORDER PRIVET             | 3  |
| *  | LIGUSTRUM VULGARE                      | COMMON PRIVET             | 3  |
| 4  | Lobelia siphilitica                    | GREAT BLUE LOBELIA        | -3 |
| 2  | Lycopus americanus                     | COMMON WATER HOREHOUND    | -5 |
| 4  | Lysimachia ciliata                     | FRINGED LOOSESTRIFE       | -3 |
| *  | LYTHRUM SALICARIA                      | PURPLE LOOSESTRIFE        | -5 |
| 5  | Maianthemum stellatum (Smilacina s.)   | STARRY FALSE SOLOMON-SEAL | 0  |
| 3  | Mentha canadensis (M. arvensis)        | WILD MINT                 | -3 |
| 10 | Micranthes pensylvanica (Saxifraga p.) | SWAMP SAXIFRAGE           | -5 |
| *  | MYOSOTIS SCORPIOIDES                   | FORGET-ME-NOT             | -5 |
| 2  | Onoclea sensibilis                     | SENSITIVE FERN            | -3 |
| 6  | Oxypolis rigidior                      | COWBANE                   | -5 |
| 5  | Packera aurea (Senecio a.)             | GOLDEN RAGWORT            | -3 |
| 4  | Parthenocissus inserta                 | THICKET CREEPER           | 3  |
| 5  | Parthenocissus quinquefolia            | VIRGINIA CREEPER          | 3  |
| 8  | Pedicularis lanceolata                 | SWAMP-BETONY              | -3 |
| 4  | Persicaria virginiana (Polygonum v.)   | JUMPSEED                  | 0  |
| 5  | Phragmites australis var. americanus   | REED                      | -3 |
| 4  | Physocarpus opulifolius                | NINEBARK                  | -3 |
| 5  | Pilea fontana                          | BOG CLEARWEED             | -3 |
| *  | POA COMPRESSA                          | CANADA BLUEGRASS          | 3  |
| *  | POA PRATENSIS                          | KENTUCKY BLUEGRASS        | 3  |
| 1  | Populus deltoides                      | COTTONWOOD                | 0  |
| 1  | Populus tremuloides                    | QUAKING ASPEN             | 0  |
| 0  | Prunella vulgaris                      | SELF-HEAL                 | 0  |
| 5  | Pycnanthemum virginianum               | COMMON MOUNTAIN MINT      | -3 |
| 5  | Quercus macrocarpa                     | BUR OAK                   | 3  |
| 5  | Quercus rubra                          | RED OAK                   | 3  |
| 5  | Ranunculus hispidus                    | SWAMP BUTTERCUP           | 0  |
| 1  | Ranunculus sceleratus                  | CURSED CROWFOOT           | -5 |
| 8  | Rhamnus alnifolia                      | ALDER-LEAVED BUCKTHORN    | -5 |
| *  | RHAMNUS CATHARTICA                     | COMMON BUCKTHORN          | 0  |
| 6  | Ribes americanum                       | WILD BLACK CURRANT        | -3 |
| *  | ROSA MULTIFLORA                        | MULTIFLORA ROSE           | 3  |
| 2  | Rubus strigosus                        | WILD RED RASPBERRY        | 0  |
| 6  | Rudbeckia laciniata                    | CUT-LEAF CONEFLOWER       | -3 |
| 9  | Rumex orbiculatus                      | GREAT WATER DOCK          | -5 |
| 4  | Sagittaria latifolia                   | COMMON ARROWHEAD          | -5 |
| 1  | Salix discolor                         | PUSSY WILLOW              | -3 |
| 3  | Sambucus canadensis                    | ELDERBERRY                | -3 |
| 5  | Schoenoplectus acutus (Scirpus a.)     | HARDSTEM BULRUSH          | -5 |
| 3  | Scirpus atrovirens                     | BULRUSH                   | -5 |
| *  | SOLANUM DULCAMARA                      | BITTERSWEET NIGHTSHADE    | 0  |

|   |   |                             |    |
|---|---|-----------------------------|----|
| 1 | <i>Solidago altissima</i>                             | TALL GOLDENROD              | 3  |
| 1 | <i>Solidago canadensis</i>                            | CANADA GOLDENROD            | 3  |
| 3 | <i>Solidago gigantea</i>                              | LATE GOLDENROD              | -3 |
| 6 | <i>Solidago patula</i>                                | SWAMP GOLDENROD             | -5 |
| 3 | <i>Solidago rugosa</i>                                | ROUGH-LEAVED GOLDENROD      | 0  |
| 4 | <i>Sphenopholis intermedia</i>                        | SLENDER WEDGEGRASS          | 0  |
| 4 | <i>Symphotrichum firmum</i> ( <i>Aster puniceus</i> ) | SMOOTH SWAMP ASTER          | -3 |
| 2 | <i>Symphotrichum lanceolatum</i> ( <i>Aster l.</i> )  | PANICLED ASTER              | -3 |
| 2 | <i>Symphotrichum lateriflorum</i> ( <i>Aster l.</i> ) | CALICO ASTER                | 0  |
| 5 | <i>Symphotrichum puniceum</i> ( <i>Aster p.</i> )     | SWAMP ASTER                 | -5 |
| 6 | <i>Symplocarpus foetidus</i>                          | SKUNK-CABBAGE               | -5 |
| 4 | <i>Teucrium canadense</i>                             | WOOD-SAGE                   | -3 |
| 3 | <i>Thalictrum dasycarpum</i>                          | PURPLE MEADOW-RUE           | -3 |
| 2 | <i>Thelypteris palustris</i>                          | MARSH FERN                  | -3 |
| 4 | <i>Thuja occidentalis</i>                             | ARBOR VITAE                 | -3 |
| 5 | <i>Tilia americana</i>                                | BASSWOOD                    | 3  |
| 2 | <i>Toxicodendron radicans</i>                         | POISON-IVY                  | 0  |
| 6 | <i>Toxicodendron vernix</i>                           | POISON SUMAC                | -5 |
| * | TYPHA ANGUSTIFOLIA                                    | NARROW-LEAVED CAT-TAIL      | -5 |
| 1 | <i>Typha latifolia</i>                                | BROAD-LEAVED CAT-TAIL       | -5 |
| 1 | <i>Ulmus americana</i>                                | AMERICAN ELM                | -3 |
| * | VALERIANA OFFICINALIS                                 | GARDEN-HELIOTROPE           | 3  |
| 4 | <i>Verbena urticifolia</i>                            | WHITE VERVAIN               | 0  |
| 4 | <i>Viburnum lentago</i>                               | NANNYBERRY                  | 0  |
| 5 | <i>Viburnum trilobum</i> ( <i>V. opulus</i> )         | AMERICAN Highbush-CRANBERRY | -3 |
| 3 | <i>Vitis riparia</i>                                  | RIVER-BANK GRAPE            | 0  |

Also: *Sparganium* sp., *Lonicera* sp.



# Matthaei Botanical Gardens

## Clements-Osgood Woods - Wet Meadow A

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Southern Wet Meadow

Open wet meadow in center of floodplain forest, dominated by *Leersia oryzoides*, with *Caltha palustris* and *Symplocarpus foetidus* frequent

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 75    | Total Species        | 3.70 | NATIVE MEAN C |
| 67    | Total Native Species | 3.31 | W/Adventives  |
| 89.3  | % Native Species     | -3.0 | NATIVE MEAN W |
| 30.30 | NATIVE FQI           | -2.8 | W/Adventives  |
| 28.64 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                                     | COMMON NAME             | W  | LISTED |
|---|---|-------------------------|----|--------|
| 0 | <i>Acer negundo</i>                                 | BOX-ELDER               | 0  |        |
| 1 | <i>Acer rubrum</i>                                  | RED MAPLE               | 0  |        |
| 5 | <i>Amphicarpaea bracteata</i>                       | HOG-PEANUT              | 0  |        |
| 3 | <i>Bidens cernua</i>                                | NODDING BEGGAR-TICKS    | -5 |        |
| 1 | <i>Bidens frondosa</i>                              | COMMON BEGGAR-TICKS     | -3 |        |
| 5 | <i>Boehmeria cylindrica</i>                         | FALSE NETTLE            | -5 |        |
| 6 | <i>Caltha palustris</i>                             | MARSH-MARIGOLD          | -5 |        |
| 4 | <i>Carex bebbii</i>                                 | SEDGE                   | -5 |        |
| 5 | <i>Carex comosa</i>                                 | SEDGE                   | -5 |        |
| 3 | <i>Carex cristatella</i>                            | SEDGE                   | -3 |        |
| 3 | <i>Carex lurida</i>                                 | SEDGE                   | -5 |        |
| 2 | <i>Carex pellita</i> ( <i>C. lanuginosa</i> )       | SEDGE                   | -5 |        |
| 1 | <i>Carex stipata</i>                                | SEDGE                   | -5 |        |
| 4 | <i>Cicuta maculata</i>                              | WATER HEMLOCK           | -5 |        |
| 2 | <i>Cornus amomum</i>                                | SILKY DOGWOOD           | -3 |        |
| 2 | <i>Cornus sericea</i> ( <i>C. stolonifera</i> )     | RED-OSIER               | -3 |        |
| 2 | <i>Cryptotaenia canadensis</i>                      | HONEWORT                | 0  |        |
| 3 | <i>Cuscuta gronovii</i>                             | COMMON DODDER           | -3 |        |
| 6 | <i>Dryopteris cristata</i>                          | CRESTED SHIELD FERN     | -5 |        |
| 4 | <i>Eleocharis erythropoda</i>                       | SPIKE-RUSH              | -5 |        |
| 3 | <i>Epilobium coloratum</i>                          | CINNAMON WILLOW-HERB    | -5 |        |
| * | EPILOBIUM HIRSUTUM                                  | GREAT HAIRY WILLOW-HERB | -3 |        |
| 0 | <i>Equisetum arvense</i>                            | COMMON HORSETAIL        | 0  |        |
| 4 | <i>Eupatorium perfoliatum</i>                       | BONESET                 | -3 |        |
| 4 | <i>Eutrochium maculatum</i> ( <i>Eupatorium</i> m.) | JOE-PYE-WEED            | -5 |        |
| * | FRANGULA ALNUS (RHAMNUS FRANGULA)                   | GLOSSY BUCKTHORN        | 0  |        |
| 2 | <i>Fraxinus pennsylvanica</i>                       | RED ASH                 | -3 |        |
| 5 | <i>Galium asprellum</i>                             | ROUGH BEDSTRAW          | -5 |        |
| 4 | <i>Galium triflorum</i>                             | FRAGRANT BEDSTRAW       | 3  |        |
| 1 | <i>Geum canadense</i>                               | WHITE AVENS             | 0  |        |
| 6 | <i>Glyceria grandis</i>                             | REED MANNA GRASS        | -5 |        |
| 4 | <i>Glyceria striata</i>                             | FOWL MANNA GRASS        | -5 |        |
| * | HESPERIS MATRONALIS                                 | DAME'S ROCKET           | 3  |        |
| 2 | <i>Impatiens capensis</i>                           | SPOTTED TOUCH-ME-NOT    | -3 |        |
| 5 | <i>Iris virginica</i>                               | SOUTHERN BLUE FLAG      | -5 |        |
| 7 | <i>Juncus brachycephalus</i>                        | RUSH                    | -5 |        |
| 3 | <i>Leersia oryzoides</i>                            | CUT GRASS               | -5 |        |
| 5 | <i>Leersia virginica</i>                            | WHITE GRASS             | -3 |        |
| 5 | <i>Lemna turionifera</i> ( <i>L. minor</i> )        | RED DUCKWEED            | -5 |        |
| 4 | <i>Lobelia siphilitica</i>                          | GREAT BLUE LOBELIA      | -3 |        |
| * | LONICERA xBELLA                                     | HYBRID HONEYSUCKLE      | 3  |        |
| 2 | <i>Lycopus americanus</i>                           | COMMON WATER HOREHOUND  | -5 |        |
| * | LYTHRUM SALICARIA                                   | PURPLE LOOSESTRIFE      | -5 |        |

|   |   |                        |    |
|---|---|------------------------|----|
| 3 | <i>Mentha canadensis</i> ( <i>M. arvensis</i> )       | WILD MINT              | -3 |
| * | NASTURTIUM MICROPHYLLUM ( <i>N. OFFICINALE</i> )      | WATERCRESS             | -5 |
| 2 | <i>Onoclea sensibilis</i>                             | SENSITIVE FERN         | -3 |
| 6 | <i>Oxypolis rigidior</i>                              | COWBANE                | -5 |
| 5 | <i>Packera aurea</i> ( <i>Senecio a.</i> )            | GOLDEN RAGWORT         | -3 |
| 5 | <i>Parthenocissus quinquefolia</i>                    | VIRGINIA CREEPER       | 3  |
| 5 | <i>Persicaria punctata</i> ( <i>Polygonum p.</i> )    | SMARTWEED              | -5 |
| 0 | <i>Phalaris arundinacea</i>                           | REED CANARY GRASS      | -3 |
| 5 | <i>Quercus macrocarpa</i>                             | BUR OAK                | 3  |
| * | RHAMNUS CATHARTICA                                    | COMMON BUCKTHORN       | 0  |
| 6 | <i>Ribes americanum</i>                               | WILD BLACK CURRANT     | -3 |
| * | ROSA MULTIFLORA                                       | MULTIFLORA ROSE        | 3  |
| 9 | <i>Rumex orbiculatus</i>                              | GREAT WATER DOCK       | -5 |
| 3 | <i>Scirpus atrovirens</i>                             | BULRUSH                | -5 |
| 5 | <i>Scutellaria lateriflora</i>                        | MAD-DOG SKULLCAP       | -5 |
| 3 | <i>Solidago gigantea</i>                              | LATE GOLDENROD         | -3 |
| 6 | <i>Solidago patula</i>                                | SWAMP GOLDENROD        | -5 |
| 3 | <i>Solidago rugosa</i>                                | ROUGH-LEAVED GOLDENROD | 0  |
| 4 | <i>Sphenopholis intermedia</i>                        | SLENDER WEDGEGRASS     | 0  |
| 5 | <i>Stellaria longifolia</i>                           | LONG-LEAVED CHICKWEED  | -3 |
| 4 | <i>Symphotrichum firmum</i> ( <i>Aster puniceus</i> ) | SMOOTH SWAMP ASTER     | -3 |
| 2 | <i>Symphotrichum lateriflorum</i> ( <i>Aster l.</i> ) | CALICO ASTER           | 0  |
| 5 | <i>Symphotrichum puniceum</i> ( <i>Aster p.</i> )     | SWAMP ASTER            | -5 |
| 6 | <i>Symplocarpus foetidus</i>                          | SKUNK-CABBAGE          | -5 |
| 3 | <i>Thalictrum dasycarpum</i>                          | PURPLE MEADOW-RUE      | -3 |
| 5 | <i>Tilia americana</i>                                | BASSWOOD               | 3  |
| 2 | <i>Toxicodendron radicans</i>                         | POISON-IVY             | 0  |
| 6 | <i>Toxicodendron vernix</i>                           | POISON SUMAC           | -5 |
| 1 | <i>Typha latifolia</i>                                | BROAD-LEAVED CAT-TAIL  | -5 |
| 1 | <i>Ulmus americana</i>                                | AMERICAN ELM           | -3 |
| 6 | <i>Viburnum dentatum</i>                              | ARROW-WOOD             | 0  |
| 4 | <i>Viburnum lentago</i>                               | NANNYBERRY             | 0  |

Also: *Pilea*

# Matthaei Botanical Gardens

## Clements-Osgood Woods - Wet Meadow B

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Southern Wet Meadow

Shrubby wet meadow along trail just NW of floodplain forest, dominated by *Carex lacustris*

#### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 127   | Total Species        | 3.97 | NATIVE MEAN C |
| 109   | Total Native Species | 3.41 | W/Adventives  |
| 85.8  | % Native Species     | -1.9 | NATIVE MEAN W |
| 41.47 | NATIVE FQI           | -1.5 | W/Adventives  |
| 38.42 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                                  | COMMON NAME              | W  | LISTED |
|---|--|--------------------------|----|--------|
| 1 | <i>Acer rubrum</i>                               | RED MAPLE                | 0  |        |
| 2 | <i>Acer saccharinum</i>                          | SILVER MAPLE             | -3 |        |
| 4 | <i>Agrimonia parviflora</i>                      | SWAMP AGRIMONY           | 0  |        |
| 5 | <i>Agrimonia pubescens</i>                       | SOFT AGRIMONY            | 5  |        |
| 1 | <i>Alisma subcordatum</i> (A. plantago-aquatica) | SOUTHERN WATER-PLANTAIN  | -5 |        |
| * | ALLIARIA PETIOLATA                               | GARLIC MUSTARD           | 3  |        |
| 4 | <i>Allium canadense</i>                          | WILD GARLIC              | 3  |        |
| 5 | <i>Amphicarpaea bracteata</i>                    | HOG-PEANUT               | 0  |        |
| 4 | <i>Anemone canadensis</i>                        | CANADA ANEMONE           | -3 |        |
| 3 | <i>Apios americana</i>                           | GROUNDNUT                | -3 |        |
| 5 | <i>Arisaema triphyllum</i>                       | JACK-IN-THE-PULPIT       | 0  |        |
| * | BARBAREA VULGARIS                                | YELLOW ROCKET            | 0  |        |
| * | BERBERIS THUNBERGII                              | JAPANESE BARBERRY        | 3  |        |
| 1 | <i>Bidens frondosa</i>                           | COMMON BEGGAR-TICKS      | -3 |        |
| 6 | <i>Bromus latiglumis</i>                         | EAR-LEAVED BROME         | -3 |        |
| 6 | <i>Caltha palustris</i>                          | MARSH-MARIGOLD           | -5 |        |
| 4 | <i>Cardamine bulbosa</i>                         | SPRING CRESS             | -5 |        |
| 1 | <i>Carex blanda</i>                              | SEDGE                    | 0  |        |
| 6 | <i>Carex lacustris</i>                           | SEDGE                    | -5 |        |
| 6 | <i>Carpinus caroliniana</i>                      | BLUE-BEECH               | 0  |        |
| * | CELASTRUS ORBICULATUS                            | ORIENTAL BITTERSWEET     | 5  |        |
| * | CERASTIUM FONTANUM                               | MOUSE-EAR CHICKWEED      | 3  |        |
| 7 | <i>Chelone glabra</i>                            | TURTLEHEAD               | -5 |        |
| 4 | <i>Cicuta maculata</i>                           | WATER HEMLOCK            | -5 |        |
| * | CIRSIUM ARVENSE                                  | CANADA THISTLE           | 3  |        |
| * | CIRSIUM VULGARE                                  | BULL THISTLE             | 3  |        |
| 4 | <i>Clematis virginiana</i>                       | VIRGIN'S BOWER           | 0  |        |
| 5 | <i>Cornus alternifolia</i>                       | ALTERNATE-LEAVED DOGWOOD | 3  |        |
| 2 | <i>Cornus amomum</i>                             | SILKY DOGWOOD            | -3 |        |
| 1 | <i>Cornus foemina</i>                            | GRAY DOGWOOD             | 0  |        |
| 2 | <i>Cornus sericea</i> (C. stolonifera)           | RED-OSIER                | -3 |        |
| 5 | <i>Corylus americana</i>                         | HAZELNUT                 | 3  |        |
| 3 | <i>Cuscuta gronovii</i>                          | COMMON DODDER            | -3 |        |
| 5 | <i>Doellingeria umbellata</i> (Aster u.)         | FLAT-TOPPED WHITE ASTER  | -3 |        |
| 5 | <i>Dryopteris carthusiana</i>                    | SPINULOSE WOODFERN       | -3 |        |
| 4 | <i>Elymus virginicus</i>                         | VIRGINIA WILD-RYE        | -3 |        |
| 3 | <i>Epilobium coloratum</i>                       | CINNAMON WILLOW-HERB     | -5 |        |
| 0 | <i>Equisetum arvense</i>                         | COMMON HORSETAIL         | 0  |        |
| 7 | <i>Equisetum fluviatile</i>                      | WATER HORSETAIL          | -5 |        |
| 4 | <i>Eupatorium perfoliatum</i>                    | BONESET                  | -3 |        |
| 4 | <i>Eutrochium maculatum</i> (Eupatorium m.)      | JOE-PYE-WEED             | -5 |        |
| * | FRANGULA ALNUS (RHAMNUS FRANGULA)                | GLOSSY BUCKTHORN         | 0  |        |
| 5 | <i>Fraxinus americana</i>                        | WHITE ASH                | 3  |        |
| 6 | <i>Fraxinus nigra</i>                            | BLACK ASH                | -3 |        |



|   |   |                           |    |
|---|---|---------------------------|----|
| 2 | <i>Fraxinus pennsylvanica</i>               | RED ASH                   | -3 |
| 5 | <i>Galium asprellum</i>                     | ROUGH BEDSTRAW            | -5 |
| 8 | <i>Galium labradoricum</i>                  | BOG BEDSTRAW              | -5 |
| 4 | <i>Galium triflorum</i>                     | FRAGRANT BEDSTRAW         | 3  |
| 4 | <i>Geranium maculatum</i>                   | WILD GERANIUM             | 3  |
| 6 | <i>Glyceria grandis</i>                     | REED MANNA GRASS          | -5 |
| 1 | <i>Hackelia virginiana</i>                  | BEGGAR'S LICE             | 3  |
| 3 | <i>Heracleum maximum</i>                    | COW-PARSNIP               | -3 |
| * | HESPERIS MATRONALIS                         | DAME'S ROCKET             | 3  |
| 5 | <i>Hypericum prolificum</i>                 | SHRUBBY ST. JOHN'S-WORT   | 3  |
| 2 | <i>Impatiens capensis</i>                   | SPOTTED TOUCH-ME-NOT      | -3 |
| 5 | <i>Iris virginica</i>                       | SOUTHERN BLUE FLAG        | -5 |
| 5 | <i>Juglans nigra</i>                        | BLACK WALNUT              | 3  |
| 1 | <i>Juncus dudleyi</i>                       | DUDLEY'S RUSH             | -3 |
| 3 | <i>Juncus effusus</i>                       | SOFT-STEMMED RUSH         | -5 |
| 3 | <i>Juniperus virginiana</i>                 | RED-CEDAR                 | 3  |
| 2 | <i>Lactuca biennis</i>                      | TALL BLUE LETTUCE         | 0  |
| 4 | <i>Laportea canadensis</i>                  | WOOD NETTLE               | -3 |
| 3 | <i>Leersia oryzoides</i>                    | CUT GRASS                 | -5 |
| 5 | <i>Lemna minor</i>                          | COMMON DUCKWEED           | -5 |
| 5 | <i>Lemna turionifera</i> (L. minor)         | RED DUCKWEED              | -5 |
| * | LIGUSTRUM VULGARE                           | COMMON PRIVET             | 3  |
| 4 | <i>Lobelia siphilitica</i>                  | GREAT BLUE LOBELIA        | -3 |
| * | LONICERA MAACKII                            | AMUR HONEYSUCKLE          | 5  |
| 4 | <i>Lysimachia ciliata</i>                   | FRINGED LOOSESTRIFE       | -3 |
| 6 | <i>Lysimachia thysiflora</i>                | TUFTED LOOSESTRIFE        | -5 |
| * | LYTHRUM SALICARIA                           | PURPLE LOOSESTRIFE        | -5 |
| 5 | <i>Maianthemum racemosum</i> (Smilacina r.) | FALSE SPIKENARD           | 3  |
| 5 | <i>Maianthemum stellatum</i> (Smilacina s.) | STARRY FALSE SOLOMON-SEAL | 0  |
| 3 | <i>Mentha canadensis</i> (M. arvensis)      | WILD MINT                 | -3 |
| 5 | <i>Mimulus ringens</i>                      | MONKEY-FLOWER             | -5 |
| * | MYOSOTIS SCORPIOIDES                        | FORGET-ME-NOT             | -5 |
| 2 | <i>Onoclea sensibilis</i>                   | SENSITIVE FERN            | -3 |
| 4 | <i>Osmorhiza claytonii</i>                  | HAIRY SWEET-CICELY        | 3  |
| 6 | <i>Oxypolis rigidior</i>                    | COWBANE                   | -5 |
| 5 | <i>Packera aurea</i> (Senecio a.)           | GOLDEN RAGWORT            | -3 |
| 5 | <i>Parthenocissus quinquefolia</i>          | VIRGINIA CREEPER          | 3  |
| 3 | <i>Penthorum sedoides</i>                   | DITCH STONECROP           | -5 |
| 4 | <i>Persicaria virginiana</i> (Polygonum v.) | JUMPSEED                  | 0  |
| 4 | <i>Physocarpus opulifolius</i>              | NINEBARK                  | -3 |
| 5 | <i>Pilea fontana</i>                        | BOG CLEARWEED             | -3 |
| * | POA TRIVIALIS                               | BLUEGRASS                 | -3 |
| 1 | <i>Populus deltoides</i>                    | COTTONWOOD                | 0  |
| 1 | <i>Populus tremuloides</i>                  | QUAKING ASPEN             | 0  |
| 8 | <i>Quercus bicolor</i>                      | SWAMP WHITE OAK           | -3 |
| 5 | <i>Quercus macrocarpa</i>                   | BUR OAK                   | 3  |
| 5 | <i>Ranunculus hispidus</i>                  | SWAMP BUTTERCUP           | 0  |
| 1 | <i>Ranunculus sceleratus</i>                | CURSED CROWFOOT           | -5 |
| * | RHAMNUS CATHARTICA                          | COMMON BUCKTHORN          | 0  |
| 6 | <i>Ribes americanum</i>                     | WILD BLACK CURRANT        | -3 |
| * | ROSA MULTIFLORA                             | MULTIFLORA ROSE           | 3  |
| 5 | <i>Rosa palustris</i>                       | SWAMP ROSE                | -5 |
| 1 | <i>Rubus occidentalis</i>                   | BLACK RASPBERRY           | 5  |
| 4 | <i>Rubus pubescens</i>                      | DWARF RASPBERRY           | -3 |
| 6 | <i>Rudbeckia laciniata</i>                  | CUT-LEAF CONEFLOWER       | -3 |
| 9 | <i>Rumex orbiculatus</i>                    | GREAT WATER DOCK          | -5 |
| 1 | <i>Salix bebbiana</i>                       | BEBB'S WILLOW             | -3 |
| 1 | <i>Salix exigua</i>                         | SANDBAR WILLOW            | -3 |
| 3 | <i>Sambucus canadensis</i>                  | ELDERBERRY                | -3 |
| 5 | <i>Sanguinaria canadensis</i>               | BLOODROOT                 | 3  |

|   |  |                             |    |
|---|--|-----------------------------|----|
| 5 | <i>Schoenoplectus acutus</i> ( <i>Scirpus a.</i> )     | HARDSTEM BULRUSH            | -5 |
| 3 | <i>Scirpus pendulus</i>                                | BULRUSH                     | -5 |
| * | <i>SOLANUM DULCAMARA</i>                               | BITTERSWEET NIGHTSHADE      | 0  |
| 3 | <i>Solidago gigantea</i>                               | LATE GOLDENROD              | -3 |
| 6 | <i>Solidago patula</i>                                 | SWAMP GOLDENROD             | -5 |
| 3 | <i>Solidago rugosa</i>                                 | ROUGH-LEAVED GOLDENROD      | 0  |
| 9 | <i>Symphotrichum boreale</i> ( <i>Aster b.</i> )       | NORTHERN BOG ASTER          | -5 |
| 2 | <i>Symphotrichum lanceolatum</i> ( <i>Aster l.</i> )   | PANICLED ASTER              | -3 |
| 3 | <i>Symphotrichum novae-angliae</i> ( <i>Aster n.</i> ) | NEW ENGLAND ASTER           | -3 |
| 5 | <i>Symphotrichum puniceum</i> ( <i>Aster p.</i> )      | SWAMP ASTER                 | -5 |
| 6 | <i>Symplocarpus foetidus</i>                           | SKUNK-CABBAGE               | -5 |
| 3 | <i>Thalictrum dasycarpum</i>                           | PURPLE MEADOW-RUE           | -3 |
| 5 | <i>Tilia americana</i>                                 | BASSWOOD                    | 3  |
| 2 | <i>Toxicodendron radicans</i>                          | POISON-IVY                  | 0  |
| 1 | <i>Ulmus americana</i>                                 | AMERICAN ELM                | -3 |
| 4 | <i>Verbena hastata</i>                                 | BLUE VERVAIN                | -3 |
| 4 | <i>Verbena urticifolia</i>                             | WHITE VERVAIN               | 0  |
| 4 | <i>Viburnum lentago</i>                                | NANNYBERRY                  | 0  |
| * | <i>VIBURNUM OPULUS</i>                                 | EUROPEAN Highbush-Cranberry | -3 |
| 5 | <i>Viburnum trilobum</i> ( <i>V. opulus</i> )          | AMERICAN Highbush-Cranberry | -3 |
| 3 | <i>Vitis riparia</i>                                   | RIVER-BANK GRAPE            | 0  |
| 3 | <i>Zanthoxylum americanum</i>                          | PRICKLY-ASH                 | 3  |
| 6 | <i>Zizia aurea</i>                                     | GOLDEN ALEXANDERS           | 0  |

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Also: *Malus sp.*, *Sagittaria sp.*, *Viola sp.*

# Matthaei Botanical Gardens

## Cummings Fen

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Prairie Fen

High quality fen at N end of property with recent shrub clearing, plant diversity greatest on the eastern slope just W of tamaracks

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 109   | Total Species        | 4.55 | NATIVE MEAN C |
| 96    | Total Native Species | 4.01 | W/Adventives  |
| 88.1  | % Native Species     | -2.2 | NATIVE MEAN W |
| 44.60 | NATIVE FQI           | -1.8 | W/Adventives  |
| 41.86 | W/Adventives         |      |               |

| C  | SCIENTIFIC NAME  | COMMON NAME             | W  | LISTED |
|----|--|-------------------------|----|--------|
| 4  | <i>Ageratina altissima</i> ( <i>Eupatorium rugosum</i> ) | WHITE SNAKEROOT         | 3  |        |
| 5  | <i>Allium cernuum</i>                                    | NODDING WILD ONION      | 3  |        |
| 5  | <i>Andropogon gerardii</i>                               | BIG BLUESTEM            | 0  |        |
| 6  | <i>Asclepias incarnata</i>                               | SWAMP MILKWEED          | -5 |        |
| 1  | <i>Bidens frondosa</i>                                   | COMMON BEGGAR-TICKS     | -3 |        |
| 6  | <i>Bromus ciliatus</i>                                   | FRINGED BROME           | -3 |        |
| 6  | <i>Caltha palustris</i>                                  | MARSH-MARIGOLD          | -5 |        |
| 9  | <i>Carex conoidea</i>                                    | BEAUTY SEDGE            | -3 |        |
| 2  | <i>Carex granularis</i>                                  | SEDE                    | -3 |        |
| 2  | <i>Carex hystericina</i>                                 | SEDE                    | -5 |        |
| 5  | <i>Carex leptalea</i>                                    | SEDE                    | -5 |        |
| 10 | <i>Carex prairea</i>                                     | SEDE                    | -3 |        |
| 10 | <i>Carex sterilis</i>                                    | SEDE                    | -5 |        |
| 4  | <i>Carex stricta</i>                                     | SEDE                    | -5 |        |
| 9  | <i>Carex tetanica</i>                                    | SEDE                    | -3 |        |
| 2  | <i>Circaea canadensis</i> ( <i>C. lutetiana</i> )        | ENCHANTER'S-NIGHTSHADE  | 3  |        |
| *  | CIRSIUM ARVENSE  | CANADA THISTLE          | 3  |        |
| 6  | <i>Cirsium muticum</i>                                   | SWAMP THISTLE           | -5 |        |
| 4  | <i>Clematis virginiana</i>                               | VIRGIN'S BOWER          | 0  |        |
| 2  | <i>Cornus amomum</i>                                     | SILKY DOGWOOD           | -3 |        |
| 5  | <i>Corylus americana</i>                                 | HAZELNUT                | 3  |        |
| 3  | <i>Cuscuta gronovii</i>                                  | COMMON DODDER           | -3 |        |
| 8  | <i>Dasiphora fruticosa</i> ( <i>Potentilla</i> f.)       | SHRUBBY CINQUEFOIL      | -3 |        |
| *  | DAUCUS CAROTA  | QUEEN-ANNE'S-LACE       | 5  |        |
| 5  | <i>Doellingeria umbellata</i> ( <i>Aster</i> u.)         | FLAT-TOPPED WHITE ASTER | -3 |        |
| 10 | <i>Eleocharis rostellata</i>                             | SPIKE-RUSH              | -5 |        |
| 0  | <i>Equisetum arvense</i>                                 | COMMON HORSETAIL        | 0  |        |
| 7  | <i>Equisetum fluviatile</i>                              | WATER HORSETAIL         | -5 |        |
| 2  | <i>Erechtites hieraciifolius</i>                         | FIREWEED                | 3  |        |
| 4  | <i>Eupatorium perfoliatum</i>                            | BONESET                 | -3 |        |
| 3  | <i>Euthamia graminifolia</i>                             | GRASS-LEAVED GOLDENROD  | 0  |        |
| 4  | <i>Eutrochium maculatum</i> ( <i>Eupatorium</i> m.)      | JOE-PYE-WEED            | -5 |        |
| 2  | <i>Fallopia scandens</i> ( <i>Polygonum</i> s.)          | FALSE BUCKWHEAT         | 0  |        |
| *  | FRANGULA ALNUS ( <i>RHAMNUS FRANGULA</i> )               | GLOSSY BUCKTHORN        | 0  |        |
| 5  | <i>Fraxinus americana</i>                                | WHITE ASH               | 3  |        |
| 5  | <i>Galium asprellum</i>                                  | ROUGH BEDSTRAW          | -5 |        |
| 4  | <i>Galium triflorum</i>                                  | FRAGRANT BEDSTRAW       | 3  |        |
| 4  | <i>Glyceria striata</i>                                  | FOWL MANNA GRASS        | -5 |        |
| *  | HESPERIS MATRONALIS                                      | DAME'S ROCKET           | 3  |        |
| 9  | <i>Hierochloë hirta</i> ( <i>H. odorata</i> )            | SWEET GRASS             | -3 |        |
| 10 | <i>Hypoxis hirsuta</i>                                   | STAR-GRASS              | 0  |        |
| 2  | <i>Impatiens capensis</i>                                | SPOTTED TOUCH-ME-NOT    | -3 |        |
| 7  | <i>Juncus brachycephalus</i>                             | RUSH                    | -5 |        |
| 6  | <i>Juncus canadensis</i>                                 | CANADIAN RUSH           | -5 |        |

|    |  |                           |    |
|----|--|---------------------------|----|
| 1  | <i>Juncus dudleyi</i>  | DUDLEY'S RUSH             | -3 |
| 4  | <i>Juncus torreyi</i>  | TORREY'S RUSH             | -3 |
| 3  | <i>Juniperus virginiana</i>                                      | RED-CEDAR                 | 3  |
| 5  | <i>Larix laricina</i>  | TAMARACK                  | -3 |
| 10 | <i>Lobelia kalmii</i>  | BOG LOBELIA               | -5 |
| 4  | <i>Lobelia siphilitica</i>                                       | GREAT BLUE LOBELIA        | -3 |
| *  | LONICERA MAACKII   | AMUR HONEYSUCKLE          | 5  |
| *  | LOTUS CORNICULATUS   | BIRDFOOT TREFOIL          | 3  |
| 2  | <i>Lycopus americanus</i>  | COMMON WATER HOREHOUND    | -5 |
| 10 | <i>Lysimachia quadriflora</i>                                    | WHORLED LOOSESTRIFE       | -5 |
| *  | LYTHRUM SALICARIA  | PURPLE LOOSESTRIFE        | -5 |
| 5  | <i>Maianthemum stellatum</i> ( <i>Smilacina</i> s.)              | STARRY FALSE SOLOMON-SEAL | 0  |
| 3  | <i>Mentha canadensis</i> ( <i>M. arvensis</i> )                  | WILD MINT                 | -3 |
| 10 | <i>Muhlenbergia glomerata</i>                                    | MARSH WILD-TIMOTHY        | -5 |
| 0  | <i>Oxalis stricta</i> ( <i>O. fontana</i> )                      | YELLOW WOOD-SORREL        | 3  |
| 6  | <i>Oxypolis rigidior</i>   | COWBANE                   | -5 |
| 5  | <i>Packera aurea</i> ( <i>Senecio</i> a.)                        | GOLDEN RAGWORT            | -3 |
| 8  | <i>Parnassia glauca</i>  | GRASS-OF-PARNASSUS        | -5 |
| 5  | <i>Parthenocissus quinquefolia</i>                               | VIRGINIA CREEPER          | 3  |
| 5  | <i>Persicaria punctata</i> ( <i>Polygonum</i> p.)                | SMARTWEED                 | -5 |
| 0  | <i>Phalaris arundinacea</i>                                      | REED CANARY GRASS         | -3 |
| 5  | <i>Pilea fontana</i>   | BOG CLEARWEED             | -3 |
| *  | POA TRIVIALIS  | BLUEGRASS                 | -3 |
| 1  | <i>Populus deltoides</i>   | COTTONWOOD                | 0  |
| 5  | <i>Pycnanthemum virginianum</i>                                  | COMMON MOUNTAIN MINT      | -3 |
| 5  | <i>Quercus macrocarpa</i>  | BUR OAK                   | 3  |
| 8  | <i>Rhamnus alnifolia</i>   | ALDER-LEAVED BUCKTHORN    | -5 |
| *  | RHAMNUS CATHARTICA   | COMMON BUCKTHORN          | 0  |
| *  | ROSA MULTIFLORA  | MULTIFLORA ROSE           | 3  |
| 1  | <i>Rubus occidentalis</i>  | BLACK RASPBERRY           | 5  |
| 2  | <i>Rubus strigosus</i>   | WILD RED RASPBERRY        | 0  |
| 1  | <i>Rudbeckia hirta</i>   | BLACK-EYED SUSAN          | 3  |
| *  | SALIX ALBA   | WHITE WILLOW              | -3 |
| 3  | <i>Salix amygdaloides</i>  | PEACH-LEAVED WILLOW       | -3 |
| 9  | <i>Salix candida</i>   | HOARY WILLOW              | -5 |
| 1  | <i>Salix petiolaris</i>  | SLENDER WILLOW            | -3 |
| 5  | <i>Schoenoplectus acutus</i> ( <i>Scirpus</i> a.)                | HARDSTEM BULRUSH          | -5 |
| 4  | <i>Schoenoplectus tabernaemontani</i> ( <i>Scirpus validus</i> ) | SOFTSTEM BULRUSH          | -5 |
| 3  | <i>Scirpus atrovirens</i>  | BULRUSH                   | -5 |
| *  | SOLANUM DULCAMARA  | BITTERSWEET NIGHTSHADE    | 0  |
| 1  | <i>Solidago altissima</i>  | TALL GOLDENROD            | 3  |
| 3  | <i>Solidago gigantea</i>   | LATE GOLDENROD            | -3 |
| 8  | <i>Solidago ohioensis</i>  | OHIO GOLDENROD            | -5 |
| 6  | <i>Solidago patula</i>   | SWAMP GOLDENROD           | -5 |
| 6  | <i>Solidago riddellii</i>  | RIDDELL'S GOLDENROD       | -5 |
| 3  | <i>Solidago rugosa</i>   | ROUGH-LEAVED GOLDENROD    | 0  |
| 4  | <i>Solidago uliginosa</i>  | BOG GOLDENROD             | -5 |
| 4  | <i>Sphenopholis intermedia</i>                                   | SLENDER WEDGEGRASS        | 0  |
| 5  | <i>Symphyotrichum laeve</i> ( <i>Aster</i> l.)                   | SMOOTH ASTER              | 3  |
| 2  | <i>Symphyotrichum lateriflorum</i> ( <i>Aster</i> l.)            | CALICO ASTER              | 0  |
| 3  | <i>Symphyotrichum novae-angliae</i> ( <i>Aster</i> n.)           | NEW ENGLAND ASTER         | -3 |
| 1  | <i>Symphyotrichum pilosum</i> ( <i>Aster</i> p.)                 | HAIRY ASTER               | 3  |
| 5  | <i>Symphyotrichum puniceum</i> ( <i>Aster</i> p.)                | SWAMP ASTER               | -5 |
| 6  | <i>Symplocarpus foetidus</i>                                     | SKUNK-CABBAGE             | -5 |
| 3  | <i>Thalictrum dasycarpum</i>                                     | PURPLE MEADOW-RUE         | -3 |
| 2  | <i>Thelypteris palustris</i>                                     | MARSH FERN                | -3 |
| 5  | <i>Tilia americana</i>   | BASSWOOD                  | 3  |
| 2  | <i>Toxicodendron radicans</i>                                    | POISON-IVY                | 0  |
| 1  | <i>Typha latifolia</i>   | BROAD-LEAVED CAT-TAIL     | -5 |
| 1  | <i>Ulmus americana</i>   | AMERICAN ELM              | -3 |

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|    |                     |                             |    |
|----|---------------------|-----------------------------|----|
| 10 | Valeriana uliginosa | SWAMP VALERIAN              | -5 |
| *  | VIBURNUM OPULUS     | EUROPEAN Highbush-CRANBERRY | -3 |
| 5  | Viola cucullata     | MARSH VIOLET                | -5 |
| 3  | Vitis riparia       | RIVER-BANK GRAPE            | 0  |
| 6  | Zizia aurea         | GOLDEN ALEXANDERS           | 0  |

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Also: *Picea pungens*



# Matthaei Botanical Gardens

## Kirk Woods

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Southern Forest

Open oak woods NE of N barn with *Quercus alba* dominant and a good diversity of woodland wildflowers

#### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 145   | Total Species        | 3.62 | NATIVE MEAN C |
| 121   | Total Native Species | 3.02 | W/Adventives  |
| 83.4  | % Native Species     | 0.8  | NATIVE MEAN W |
| 39.82 | NATIVE FQI           | 1.2  | W/Adventives  |
| 36.37 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME  | COMMON NAME              | W  | LISTED |
|---|--|--------------------------|----|--------|
| 0 | <i>Acer negundo</i>                                      | BOX-ELDER                | 0  |        |
| 4 | <i>Acer nigrum</i> ( <i>A. saccharum</i> )               | BLACK MAPLE              | 3  |        |
| 5 | <i>Acer saccharum</i>                                    | SUGAR MAPLE              | 3  |        |
| 1 | <i>Achillea millefolium</i>                              | YARROW                   | 3  |        |
| 7 | <i>Actaea pachypoda</i>                                  | DOLL'S-EYES              | 5  |        |
| 4 | <i>Ageratina altissima</i> ( <i>Eupatorium rugosum</i> ) | WHITE SNAKEROOT          | 3  |        |
| 2 | <i>Agrimonia gryposepala</i>                             | TALL AGRIMONY            | 3  |        |
| 5 | <i>Agrimonia pubescens</i>                               | SOFT AGRIMONY            | 5  |        |
| * | ALLIARIA PETIOLATA                                       | GARLIC MUSTARD           | 3  |        |
| 4 | <i>Allium canadense</i>                                  | WILD GARLIC              | 3  |        |
| 5 | <i>Amphicarpaea bracteata</i>                            | HOG-PEANUT               | 0  |        |
| 5 | <i>Anemone quinquefolia</i>                              | WOOD ANEMONE             | 3  |        |
| 3 | <i>Anemone virginiana</i>                                | THIMBLEWEED              | 3  |        |
| * | ARCTIUM MINUS  | COMMON BURDOCK           | 3  |        |
| 5 | <i>Arisaema triphyllum</i>                               | JACK-IN-THE-PULPIT       | 0  |        |
| 1 | <i>Asclepias syriaca</i>                                 | COMMON MILKWEED          | 5  |        |
| 4 | <i>Athyrium filix-femina</i>                             | LADY FERN                | 0  |        |
| * | BERBERIS THUNBERGII                                      | JAPANESE BARBERRY        | 3  |        |
| 5 | <i>Boehmeria cylindrica</i>                              | FALSE NETTLE             | -5 |        |
| * | BROMUS INERMIS   | SMOOTH BROME             | 5  |        |
| 3 | <i>Calamagrostis canadensis</i>                          | BLUE-JOINT               | -5 |        |
| * | CARDUUS ACANTHOIDES                                      | PLUMELESS THISTLE        | 5  |        |
| 4 | <i>Carex bebbii</i>                                      | SEDGE                    | -5 |        |
| 1 | <i>Carex blanda</i>                                      | SEDGE                    | 0  |        |
| 3 | <i>Carex cephalophora</i>                                | SEDGE                    | 3  |        |
| 7 | <i>Carex muehlenbergii</i>                               | SEDGE                    | 5  |        |
| 5 | <i>Carex normalis</i>                                    | SEDGE                    | -3 |        |
| 4 | <i>Carex pensylvanica</i>                                | SEDGE                    | 5  |        |
| 2 | <i>Carex rosea</i> ( <i>C. convoluta</i> )               | CURLY-STYLED WOOD SEDGE  | 5  |        |
| 1 | <i>Carex stipata</i>                                     | SEDGE                    | -5 |        |
| 3 | <i>Carex tribuloides</i>                                 | SEDGE                    | -3 |        |
| 1 | <i>Carex vulpinoidea</i>                                 | SEDGE                    | -5 |        |
| 6 | <i>Carpinus caroliniana</i>                              | BLUE-BEECH               | 0  |        |
| 5 | <i>Carya ovata</i>                                       | SHAGBARK HICKORY         | 3  |        |
| * | CELASTRUS ORBICULATUS                                    | ORIENTAL BITTERSWEET     | 5  |        |
| * | CERASTIUM FONTANUM                                       | MOUSE-EAR CHICKWEED      | 3  |        |
| 7 | <i>Cinna arundinacea</i>                                 | WOOD REEDGRASS           | -3 |        |
| 2 | <i>Circaea canadensis</i> ( <i>C. lutetiana</i> )        | ENCHANTER'S-NIGHTSHADE   | 3  |        |
| * | CIRSIUM ARVENSE  | CANADA THISTLE           | 3  |        |
| * | CONVOLVULUS ARVENSIS                                     | FIELD BINDWEED           | 5  |        |
| 5 | <i>Cornus alternifolia</i>                               | ALTERNATE-LEAVED DOGWOOD | 3  |        |
| * | DACTYLIS GLOMERATA                                       | ORCHARD GRASS            | 3  |        |
| 5 | <i>Desmodium glabellum</i> ( <i>D. paniculatum</i> )     | TICK-TREFOIL             | 5  |        |
| 4 | <i>Dioscorea villosa</i> ( <i>Dioscorea villosa</i> )    | WILD YAM                 | 0  |        |

|   |   |                          |    |
|---|---|--------------------------|----|
| 2 | <i>Echinocystis lobata</i>                          | WILD-CUCUMBER            | -3 |
| 5 | <i>Elymus villosus</i>                              | SILKY WILD-RYE           | 3  |
| 4 | <i>Elymus virginicus</i>                            | VIRGINIA WILD-RYE        | -3 |
| 2 | <i>Erechtites hieraciifolius</i>                    | FIREWEED                 | 3  |
| 0 | <i>Erigeron annuus</i>                              | DAISY FLEABANE           | 3  |
| 2 | <i>Erigeron philadelphicus</i>                      | PHILADELPHIA FLEABANE    | 0  |
| 5 | <i>Erigeron pulchellus</i>                          | ROBIN'S-PLANTAIN         | 3  |
| 5 | <i>Erythronium americanum</i>                       | YELLOW TROUT LILY        | 5  |
| 4 | <i>Eupatorium perfoliatum</i>                       | BONESET                  | -3 |
| 3 | <i>Euthamia graminifolia</i>                        | GRASS-LEAVED GOLDENROD   | 0  |
| 4 | <i>Eutrochium maculatum</i> ( <i>Eupatorium</i> m.) | JOE-PYE-WEED             | -5 |
| 2 | <i>Fallopia scandens</i> ( <i>Polygonum</i> s.)     | FALSE BUCKWHEAT          | 0  |
| 5 | <i>Festuca subverticillata</i> ( <i>F. obtusa</i> ) | NODDING FESCUE           | 3  |
| * | FRANGULA ALNUS (RHAMNUS FRANGULA)                   | GLOSSY BUCKTHORN         | 0  |
| 2 | <i>Fraxinus pennsylvanica</i>                       | RED ASH                  | -3 |
| 0 | <i>Galium aparine</i>                               | ANNUAL BEDSTRAW          | 3  |
| 4 | <i>Galium circaezans</i>                            | WHITE WILD LICORICE      | 3  |
| 5 | <i>Galium concinnum</i>                             | SHINING BEDSTRAW         | 3  |
| 4 | <i>Galium triflorum</i>                             | FRAGRANT BEDSTRAW        | 3  |
| 4 | <i>Geranium maculatum</i>                           | WILD GERANIUM            | 3  |
| 1 | <i>Geum canadense</i>                               | WHITE AVENS              | 0  |
| 4 | <i>Glyceria striata</i>                             | FOWL MANNA GRASS         | -5 |
| 1 | <i>Hackelia virginiana</i>                          | BEGGAR'S LICE            | 3  |
| 3 | <i>Heracleum maximum</i>                            | COW-PARSNIP              | -3 |
| * | HESPERIS MATRONALIS                                 | DAME'S ROCKET            | 3  |
| 8 | <i>Heuchera americana</i>                           | ALUM ROOT                | 3  |
| * | HYPERICUM PERFORATUM                                | COMMON ST. JOHN'S-WORT   | 5  |
| 1 | <i>Juncus tenuis</i>                                | PATH RUSH                | 0  |
| 3 | <i>Leersia oryzoides</i>                            | CUT GRASS                | -5 |
| * | LEONURUS CARDIACA                                   | MOTHERWORT               | 5  |
| * | LIGUSTRUM VULGARE                                   | COMMON PRIVET            | 3  |
| * | LINARIA VULGARIS                                    | BUTTER-AND-EGGS          | 5  |
| 4 | <i>Lobelia siphilitica</i>                          | GREAT BLUE LOBELIA       | -3 |
| 5 | <i>Luzula multiflora</i>                            | COMMON WOOD RUSH         | 3  |
| 5 | <i>Maianthemum racemosum</i> ( <i>Smilacina</i> r.) | FALSE SPIKENARD          | 3  |
| 2 | <i>Oenothera biennis</i>                            | COMMON EVENING-PRIMROSE  | 3  |
| 2 | <i>Onoclea sensibilis</i>                           | SENSITIVE FERN           | -3 |
| 5 | <i>Osmunda regalis</i>                              | ROYAL FERN               | -5 |
| 0 | <i>Oxalis stricta</i> ( <i>O. fontana</i> )         | YELLOW WOOD-SORREL       | 3  |
| 5 | <i>Parthenocissus quinquefolia</i>                  | VIRGINIA CREEPER         | 3  |
| 5 | <i>Persicaria punctata</i> ( <i>Polygonum</i> p.)   | SMARTWEED                | -5 |
| 4 | <i>Persicaria virginiana</i> ( <i>Polygonum</i> v.) | JUMPSEED                 | 0  |
| * | PHLEUM PRATENSE                                     | TIMOTHY                  | 3  |
| 2 | <i>Phytolacca americana</i>                         | POKEWEED                 | 3  |
| 5 | <i>Pilea fontana</i>                                | BOG CLEARWEED            | -3 |
| 5 | <i>Pilea pumila</i>                                 | CLEARWEED                | -3 |
| * | POA COMPRESSA                                       | CANADA BLUEGRASS         | 3  |
| * | POA PRATENSIS                                       | KENTUCKY BLUEGRASS       | 3  |
| * | POA TRIVIALIS                                       | BLUEGRASS                | -3 |
| 3 | <i>Podophyllum peltatum</i>                         | MAY-APPLE                | 3  |
| 1 | <i>Populus deltoides</i>                            | COTTONWOOD               | 0  |
| 2 | <i>Potentilla simplex</i>                           | OLD-FIELD CINQUEFOIL     | 3  |
| 2 | <i>Prunus serotina</i>                              | WILD BLACK CHERRY        | 3  |
| 5 | <i>Quercus alba</i>                                 | WHITE OAK                | 3  |
| 5 | <i>Quercus macrocarpa</i>                           | BUR OAK                  | 3  |
| 6 | <i>Quercus velutina</i>                             | BLACK OAK                | 5  |
| 0 | <i>Ranunculus abortivus</i>                         | SMALL-FLOWERED BUTTERCUP | 0  |
| 5 | <i>Ranunculus recurvatus</i>                        | HOKED CROWFOOT           | -3 |
| 4 | <i>Ratibida pinnata</i>                             | YELLOW CONEFLOWER        | 5  |
| 6 | <i>Ribes americanum</i>                             | WILD BLACK CURRANT       | -3 |

|   |  |                        |    |
|---|--|------------------------|----|
| * | ROSA MULTIFLORA                                | MULTIFLORA ROSE        | 3  |
| 1 | Rubus allegheniensis                           | COMMON BLACKBERRY      | 3  |
| 1 | Rubus occidentalis                             | BLACK RASPBERRY        | 5  |
| 6 | Rudbeckia laciniata                            | CUT-LEAF CONEFLOWER    | -3 |
| * | RUMEX CRISPUS                                  | CURLY DOCK             | 0  |
| 5 | Sanguinaria canadensis                         | BLOODROOT              | 3  |
| 5 | Sassafras albidum                              | SASSAFRAS              | 3  |
| 5 | Scrophularia marilandica                       | LATE FIGWORT           | 3  |
| 5 | Scutellaria lateriflora                        | MAD-DOG SKULLCAP       | -5 |
| 1 | Solidago altissima                             | TALL GOLDENROD         | 3  |
| 1 | Solidago canadensis                            | CANADA GOLDENROD       | 3  |
| 3 | Solidago rugosa                                | ROUGH-LEAVED GOLDENROD | 0  |
| 5 | Solidago speciosa                              | SHOWY GOLDENROD        | 5  |
| 4 | Sphenopholis intermedia                        | SLENDER WEDGEGRASS     | 0  |
| 3 | Symphotrichum ericoides (Aster e.)             | HEATH ASTER            | 3  |
| 2 | Symphotrichum lanceolatum (Aster l.)           | PANICLED ASTER         | -3 |
| 2 | Symphotrichum lateriflorum (Aster l.)          | CALICO ASTER           | 0  |
| 6 | Symphotrichum ontarionis (Aster o.)            | LAKE ONTARIO ASTER     | 0  |
| 5 | Symphotrichum puniceum (Aster p.)              | SWAMP ASTER            | -5 |
| 2 | Symphotrichum urophyllum (Aster sagittifolius) | ARROW-LEAVED ASTER     | 5  |
| 6 | Symplocarpus foetidus                          | SKUNK-CABBAGE          | -5 |
| 8 | Taenidia integerrima                           | YELLOW-PIMPERNEL       | 5  |
| * | TARAXACUM OFFICINALE                           | COMMON DANDELION       | 3  |
| 6 | Thalictrum dioicum                             | EARLY MEADOW-RUE       | 3  |
| 2 | Thelypteris palustris                          | MARSH FERN             | -3 |
| 5 | Tilia americana                                | BASSWOOD               | 3  |
| * | TORILIS JAPONICA                               | HEDGE-PARSLEY          | 3  |
| 2 | Toxicodendron radicans                         | POISON-IVY             | 0  |
| 5 | Trillium grandiflorum                          | COMMON TRILLIUM        | 3  |
| 1 | Ulmus americana                                | AMERICAN ELM           | -3 |
| 1 | Urtica dioica                                  | STINGING NETTLE        | 0  |
| 5 | Uvularia sessilifolia                          | MERRYBELLS             | 3  |
| 4 | Verbena urticifolia                            | WHITE VERVAIN          | 0  |
| 8 | Veronicastrum virginicum                       | CULVER'S-ROOT          | 0  |
| 4 | Viburnum lentago                               | NANNYBERRY             | 0  |
| 5 | Viburnum rafinesquianum                        | DOWNY ARROW-WOOD       | 5  |
| 2 | Viola affinis                                  | LE CONTE'S VIOLET      | -3 |
| 1 | Viola sororia                                  | COMMON BLUE VIOLET     | 0  |
| 3 | Vitis riparia                                  | RIVER-BANK GRAPE       | 0  |
| 3 | Zanthoxylum americanum                         | PRICKLY-ASH            | 3  |
| 6 | Zizia aurea                                    | GOLDEN ALEXANDERS      | 0  |

Also: Lonicera sp., Smilax sp., Digitalis



# Matthaei Botanical Gardens

## Kirk-Cummings-Sinclair Complex

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Southern Shrub-carr

Shrub thickets at the N end of the property along and to the N of Fleming Creek, with occasional trees and a few wet meadow openings and seeps

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 100   | Total Species        | 3.68 | NATIVE MEAN C |
| 80    | Total Native Species | 2.94 | W/Adventives  |
| 80.0  | % Native Species     | -1.3 | NATIVE MEAN W |
| 32.87 | NATIVE FQI           | -0.7 | W/Adventives  |
| 29.40 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                                  | COMMON NAME              | W  | LISTED |
|---|--|--------------------------|----|--------|
| 0 | <i>Acer negundo</i>                              | BOX-ELDER                | 0  |        |
| 5 | <i>Acer saccharum</i>                            | SUGAR MAPLE              | 3  |        |
| * | <i>ALLIARIA PETIOLATA</i>                        | GARLIC MUSTARD           | 3  |        |
| 5 | <i>Amphicarpaea bracteata</i>                    | HOG-PEANUT               | 0  |        |
| 3 | <i>Apios americana</i>                           | GROUNDNUT                | -3 |        |
| * | <i>ARCTIUM MINUS</i>                             | COMMON BURDOCK           | 3  |        |
| 5 | <i>Arisaema triphyllum</i>                       | JACK-IN-THE-PULPIT       | 0  |        |
| 6 | <i>Asclepias incarnata</i>                       | SWAMP MILKWEED           | -5 |        |
| * | <i>BARBAREA VULGARIS</i>                         | YELLOW ROCKET            | 0  |        |
| 1 | <i>Bidens frondosa</i>                           | COMMON BEGGAR-TICKS      | -3 |        |
| 6 | <i>Caltha palustris</i>                          | MARSH-MARIGOLD           | -5 |        |
| 2 | <i>Calystegia sepium</i>                         | HEDGE BINDWEED           | 0  |        |
| 4 | <i>Cardamine bulbosa</i>                         | SPRING CRESS             | -5 |        |
| 1 | <i>Carex blanda</i>                              | SEDGE                    | 0  |        |
| 3 | <i>Carex grisea</i> (C. <i>amphibola</i> )       | SEDGE                    | 0  |        |
| 6 | <i>Carex lacustris</i>                           | SEDGE                    | -5 |        |
| 8 | <i>Carex lasiocarpa</i>                          | SEDGE                    | -5 |        |
| 4 | <i>Carex stricta</i>                             | SEDGE                    | -5 |        |
| 6 | <i>Carpinus caroliniana</i>                      | BLUE-BEECH               | 0  |        |
| * | <i>CELASTRUS ORBICULATUS</i>                     | ORIENTAL BITTERSWEET     | 5  |        |
| 2 | <i>Circaea canadensis</i> (C. <i>lutetiana</i> ) | ENCHANTER'S-NIGHTSHADE   | 3  |        |
| * | <i>CIRSIUM ARVENSE</i>                           | CANADA THISTLE           | 3  |        |
| 6 | <i>Cirsium muticum</i>                           | SWAMP THISTLE            | -5 |        |
| 4 | <i>Clematis virginiana</i>                       | VIRGIN'S BOWER           | 0  |        |
| * | <i>CONVALLARIA MAJALIS</i>                       | LILY-OF-THE-VALLEY       | 5  |        |
| 5 | <i>Cornus alternifolia</i>                       | ALTERNATE-LEAVED DOGWOOD | 3  |        |
| 1 | <i>Cornus foemina</i>                            | GRAY DOGWOOD             | 0  |        |
| 5 | <i>Corylus americana</i>                         | HAZELNUT                 | 3  |        |
| 3 | <i>Cuscuta gronovii</i>                          | COMMON DODDER            | -3 |        |
| 2 | <i>Echinocystis lobata</i>                       | WILD-CUCUMBER            | -3 |        |
| 4 | <i>Elymus virginicus</i>                         | VIRGINIA WILD-RYE        | -3 |        |
| 3 | <i>Epilobium coloratum</i>                       | CINNAMON WILLOW-HERB     | -5 |        |
| 0 | <i>Equisetum arvense</i>                         | COMMON HORSETAIL         | 0  |        |
| 2 | <i>Erigeron philadelphicus</i>                   | PHILADELPHIA FLEABANE    | 0  |        |
| 4 | <i>Eupatorium perfoliatum</i>                    | BONESET                  | -3 |        |
| 4 | <i>Eutrochium maculatum</i> (Eupatorium m.)      | JOE-PYE-WEED             | -5 |        |
| * | <i>FRANGULA ALNUS</i> (RHAMNUS <i>FRANGULA</i> ) | GLOSSY BUCKTHORN         | 0  |        |
| 5 | <i>Fraxinus americana</i>                        | WHITE ASH                | 3  |        |
| 0 | <i>Galium aparine</i>                            | ANNUAL BEDSTRAW          | 3  |        |
| 5 | <i>Galium asprellum</i>                          | ROUGH BEDSTRAW           | -5 |        |
| 4 | <i>Galium triflorum</i>                          | FRAGRANT BEDSTRAW        | 3  |        |
| 1 | <i>Geum canadense</i>                            | WHITE AVENS              | 0  |        |
| 4 | <i>Geum vernum</i>                               | SPRING AVENS             | 3  |        |

|   |  |                             |    |
|---|--|-----------------------------|----|
| 4 | <i>Glyceria striata</i>                              | FOWL MANNA GRASS            | -5 |
| 1 | <i>Hackelia virginiana</i>                           | BEGGAR'S LICE               | 3  |
| * | HESPERIS MATRONALIS                                  | DAME'S ROCKET               | 3  |
| 2 | <i>Impatiens capensis</i>                            | SPOTTED TOUCH-ME-NOT        | -3 |
| 5 | <i>Iris virginica</i>                                | SOUTHERN BLUE FLAG          | -5 |
| 5 | <i>Juglans nigra</i>                                 | BLACK WALNUT                | 3  |
| 4 | <i>Laportea canadensis</i>                           | WOOD NETTLE                 | -3 |
| 5 | <i>Larix laricina</i>                                | TAMARACK                    | -3 |
| 5 | <i>Leersia virginica</i>                             | WHITE GRASS                 | -3 |
| * | LEONURUS CARDIACA                                    | MOTHERWORT                  | 5  |
| * | LIGUSTRUM OBTUSIFOLIUM                               | BORDER PRIVET               | 3  |
| * | LIGUSTRUM VULGARE                                    | COMMON PRIVET               | 3  |
| 4 | <i>Lobelia siphilitica</i>                           | GREAT BLUE LOBELIA          | -3 |
| * | LONICERA MAACKII                                     | AMUR HONEYSUCKLE            | 5  |
| * | LYTHRUM SALICARIA                                    | PURPLE LOOSESTRIFE          | -5 |
| 5 | <i>Maianthemum racemosum</i> ( <i>Smilacina</i> r.)  | FALSE SPIKENARD             | 3  |
| 3 | <i>Mentha canadensis</i> ( <i>M. arvensis</i> )      | WILD MINT                   | -3 |
| * | MYOSOTIS SCORPIOIDES                                 | FORGET-ME-NOT               | -5 |
| 4 | <i>Nasturtium officinale</i>                         | WATERCRESS                  | -5 |
| 2 | <i>Onoclea sensibilis</i>                            | SENSITIVE FERN              | -3 |
| 5 | <i>Packera aurea</i> ( <i>Senecio</i> a.)            | GOLDEN RAGWORT              | -3 |
| 5 | <i>Parthenocissus quinquefolia</i>                   | VIRGINIA CREEPER            | 3  |
| 4 | <i>Persicaria virginiana</i> ( <i>Polygonum</i> v.)  | JUMPSEED                    | 0  |
| 0 | <i>Phalaris arundinacea</i>                          | REED CANARY GRASS           | -3 |
| 4 | <i>Phryma leptostachya</i>                           | LOPSEED                     | 3  |
| 5 | <i>Pilea fontana</i>                                 | BOG CLEARWEED               | -3 |
| 1 | <i>Populus deltoides</i>                             | COTTONWOOD                  | 0  |
| * | POTENTILLA INDICA ( <i>DUCHESNEA</i> l.)             | INDIAN-STRAWBERRY           | 3  |
| 5 | <i>Pycnanthemum virginianum</i>                      | COMMON MOUNTAIN MINT        | -3 |
| 5 | <i>Quercus macrocarpa</i>                            | BUR OAK                     | 3  |
| 5 | <i>Ranunculus hispidus</i>                           | SWAMP BUTTERCUP             | 0  |
| 5 | <i>Ranunculus recurvatus</i>                         | HOOKED CROWFOOT             | -3 |
| * | RHAMNUS CATHARTICA                                   | COMMON BUCKTHORN            | 0  |
| * | ROSA MULTIFLORA                                      | MULTIFLORA ROSE             | 3  |
| 9 | <i>Rumex orbiculatus</i>                             | GREAT WATER DOCK            | -5 |
| 3 | <i>Sambucus canadensis</i>                           | ELDERBERRY                  | -3 |
| 3 | <i>Scirpus atrovirens</i>                            | BULRUSH                     | -5 |
| * | SOLANUM DULCAMARA                                    | BITTERSWEET NIGHTSHADE      | 0  |
| 1 | <i>Solidago altissima</i>                            | TALL GOLDENROD              | 3  |
| 6 | <i>Solidago patula</i>                               | SWAMP GOLDENROD             | -5 |
| 3 | <i>Solidago rugosa</i>                               | ROUGH-LEAVED GOLDENROD      | 0  |
| 5 | <i>Symphotrichum laeve</i> ( <i>Aster</i> l.)        | SMOOTH ASTER                | 3  |
| 2 | <i>Symphotrichum lanceolatum</i> ( <i>Aster</i> l.)  | PANICLED ASTER              | -3 |
| 2 | <i>Symphotrichum lateriflorum</i> ( <i>Aster</i> l.) | CALICO ASTER                | 0  |
| 5 | <i>Symphotrichum puniceum</i> ( <i>Aster</i> p.)     | SWAMP ASTER                 | -5 |
| 6 | <i>Symplocarpus foetidus</i>                         | SKUNK-CABBAGE               | -5 |
| * | TARAXACUM OFFICINALE                                 | COMMON DANDELION            | 3  |
| 3 | <i>Thalictrum dasycarpum</i>                         | PURPLE MEADOW-RUE           | -3 |
| 2 | <i>Thelypteris palustris</i>                         | MARSH FERN                  | -3 |
| 5 | <i>Tilia americana</i>                               | BASSWOOD                    | 3  |
| 2 | <i>Toxicodendron radicans</i>                        | POISON-IVY                  | 0  |
| 1 | <i>Ulmus americana</i>                               | AMERICAN ELM                | -3 |
| 4 | <i>Verbena urticifolia</i>                           | WHITE VERVAIN               | 0  |
| 4 | <i>Viburnum lentago</i>                              | NANNYBERRY                  | 0  |
| * | VIBURNUM OPULUS                                      | EUROPEAN Highbush-Cranberry | -3 |
| 3 | <i>Vitis riparia</i>                                 | RIVER-BANK GRAPE            | 0  |
| 3 | <i>Zanthoxylum americanum</i>                        | PRICKLY-ASH                 | 3  |

Also: *Allium* sp.

# Matthaei Botanical Gardens

## Parker Brook Floodplain

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Floodplain Forest

Disturbed shrubby forest along Parker Brook and to the S, with fairly open canopy dominated by *Populus deltoides* and *Acer negundo*; occasional wet meadow openings

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 129   | Total Species        | 3.78 | NATIVE MEAN C |
| 103   | Total Native Species | 3.02 | W/Adventives  |
| 79.8  | % Native Species     | -2.0 | NATIVE MEAN W |
| 38.33 | NATIVE FQI           | -1.4 | W/Adventives  |
| 34.25 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME  | COMMON NAME             | W  | LISTED |
|---|--|-------------------------|----|--------|
| 0 | <i>Acer negundo</i>                                    | BOX-ELDER               | 0  |        |
| 2 | <i>Agrimonia gryposepala</i>                           | TALL AGRIMONY           | 3  |        |
| 4 | <i>Agrimonia parviflora</i>                            | SWAMP AGRIMONY          | 0  |        |
| 1 | <i>Alisma triviale</i> ( <i>A. plantago-aquatica</i> ) | NORTHERN WATER-PLANTAIN | -5 |        |
| * | ALLIARIA PETIOLATA                                     | GARLIC MUSTARD          | 3  |        |
| 5 | <i>Amphicarpaea bracteata</i>                          | HOG-PEANUT              | 0  |        |
| 3 | <i>Apios americana</i>                                 | GROUNDNUT               | -3 |        |
| 3 | <i>Apocynum androsaemifolium</i>                       | SPREADING DOGBANE       | 5  |        |
| 3 | <i>Apocynum cannabinum</i> ( <i>A. sibiricum</i> )     | INDIAN-HEMP             | 0  |        |
| * | ASPARAGUS OFFICINALIS                                  | GARDEN ASPARAGUS        | 3  |        |
| * | BARBAREA VULGARIS                                      | YELLOW ROCKET           | 0  |        |
| 5 | <i>Boehmeria cylindrica</i>                            | FALSE NETTLE            | -5 |        |
| 6 | <i>Bromus ciliatus</i>                                 | FRINGED BROME           | -3 |        |
| 6 | <i>Bromus latiglumis</i>                               | EAR-LEAVED BROME        | -3 |        |
| 3 | <i>Calamagrostis canadensis</i>                        | BLUE-JOINT              | -5 |        |
| 6 | <i>Caltha palustris</i>                                | MARSH-MARIGOLD          | -5 |        |
| 4 | <i>Cardamine bulbosa</i>                               | SPRING CRESS            | -5 |        |
| 1 | <i>Carex blanda</i>                                    | SEDGE                   | 0  |        |
| 4 | <i>Carex stricta</i>                                   | SEDGE                   | -5 |        |
| 1 | <i>Carex vulpinoidea</i>                               | SEDGE                   | -5 |        |
| 7 | <i>Chelone glabra</i>                                  | TURTLEHEAD              | -5 |        |
| 4 | <i>Cicuta maculata</i>                                 | WATER HEMLOCK           | -5 |        |
| 7 | <i>Cinna arundinacea</i>                               | WOOD REEDGRASS          | -3 |        |
| 2 | <i>Circaea canadensis</i> ( <i>C. lutetiana</i> )      | ENCHANTER'S-NIGHTSHADE  | 3  |        |
| * | CIRSIUM ARVENSE  | CANADA THISTLE          | 3  |        |
| 4 | <i>Clematis virginiana</i>                             | VIRGIN'S BOWER          | 0  |        |
| 2 | <i>Cornus amomum</i>                                   | SILKY DOGWOOD           | -3 |        |
| 1 | <i>Cornus foemina</i>                                  | GRAY DOGWOOD            | 0  |        |
| 2 | <i>Cornus sericea</i> ( <i>C. stolonifera</i> )        | RED-OSIER               | -3 |        |
| 2 | <i>Cryptotaenia canadensis</i>                         | HONEWORT                | 0  |        |
| 3 | <i>Cuscuta gronovii</i>                                | COMMON DODDER           | -3 |        |
| 3 | <i>Cyperus odoratus</i>                                | UMBRELLA SEDGE          | -5 |        |
| * | DACTYLIS GLOMERATA                                     | ORCHARD GRASS           | 3  |        |
| * | DAUCUS CAROTA  | QUEEN-ANNE'S-LACE       | 5  |        |
| * | ECHINOCHLOA CRUSGALLI                                  | BARNYARD GRASS          | 0  |        |
| 2 | <i>Echinocystis lobata</i>                             | WILD-CUCUMBER           | -3 |        |
| * | ELAEAGNUS UMBELLATA                                    | AUTUMN-OLIVE            | 3  |        |
| 4 | <i>Eleocharis erythropoda</i>                          | SPIKE-RUSH              | -5 |        |
| 4 | <i>Elymus virginicus</i>                               | VIRGINIA WILD-RYE       | -3 |        |
| 3 | <i>Epilobium coloratum</i>                             | CINNAMON WILLOW-HERB    | -5 |        |
| 0 | <i>Equisetum arvense</i>                               | COMMON HORSETAIL        | 0  |        |
| 2 | <i>Erechtites hieraciifolius</i>                       | FIREWEED                | 3  |        |
| 4 | <i>Eupatorium perfoliatum</i>                          | BONESET                 | -3 |        |

|    |   |                           |    |
|----|---|---------------------------|----|
| 4  | <i>Eutrochium maculatum</i> (Eupatorium m.)             | JOE-PYE-WEED              | -5 |
| *  | FRANGULA ALNUS (RHAMNUS FRANGULA)                       | GLOSSY BUCKTHORN          | 0  |
| 6  | <i>Fraxinus nigra</i>                                   | BLACK ASH                 | -3 |
| 5  | <i>Galium asprellum</i>                                 | ROUGH BEDSTRAW            | -5 |
| 4  | <i>Galium triflorum</i>                                 | FRAGRANT BEDSTRAW         | 3  |
| 3  | <i>Geum aleppicum</i>                                   | YELLOW AVENS              | 0  |
| 1  | <i>Geum canadense</i>                                   | WHITE AVENS               | 0  |
| 5  | <i>Helianthus giganteus</i>                             | TALL SUNFLOWER            | -3 |
| 5  | <i>Heliopsis helianthoides</i>                          | FALSE SUNFLOWER           | 3  |
| *  | HESPERIS MATRONALIS                                     | DAME'S ROCKET             | 3  |
| 9  | <i>Hierochloë hirta</i> (H. odorata)                    | SWEET GRASS               | -3 |
| *  | HYPERICUM PERFORATUM                                    | COMMON ST. JOHN'S-WORT    | 5  |
| 2  | <i>Impatiens capensis</i>                               | SPOTTED TOUCH-ME-NOT      | -3 |
| 5  | <i>Iris virginica</i>                                   | SOUTHERN BLUE FLAG        | -5 |
| 5  | <i>Juglans nigra</i>                                    | BLACK WALNUT              | 3  |
| 4  | <i>Laportea canadensis</i>                              | WOOD NETTLE               | -3 |
| 3  | <i>Leersia oryzoides</i>                                | CUT GRASS                 | -5 |
| 5  | <i>Leersia virginica</i>                                | WHITE GRASS               | -3 |
| 5  | <i>Lemna minor</i>                                      | COMMON DUCKWEED           | -5 |
| 5  | <i>Lemna turionifera</i> (L. minor)                     | RED DUCKWEED              | -5 |
| *  | LIGUSTRUM OBTUSIFOLIUM                                  | BORDER PRIVET             | 3  |
| 9  | <i>Liriodendron tulipifera</i>                          | TULIP TREE                | 3  |
| 4  | <i>Lobelia siphilitica</i>                              | GREAT BLUE LOBELIA        | -3 |
| *  | LONICERA xBELLA   | HYBRID HONEYSUCKLE        | 3  |
| *  | LONICERA MORROWII                                       | MORROW HONEYSUCKLE        | 3  |
| 2  | <i>Lycopus americanus</i>                               | COMMON WATER HOREHOUND    | -5 |
| 4  | <i>Lysimachia ciliata</i>                               | FRINGED LOOSESTRIFE       | -3 |
| *  | LYSIMACHIA NUMMULARIA                                   | MONEYWORT                 | -3 |
| *  | LYTHRUM SALICARIA                                       | PURPLE LOOSESTRIFE        | -5 |
| 5  | <i>Maianthemum stellatum</i> (Smilacina s.)             | STARRY FALSE SOLOMON-SEAL | 0  |
| 10 | <i>Micranthes pensylvanica</i> (Saxifraga p.)           | SWAMP SAXIFRAGE           | -5 |
| 2  | <i>Onoclea sensibilis</i>                               | SENSITIVE FERN            | -3 |
| 5  | <i>Packera aurea</i> (Senecio a.)                       | GOLDEN RAGWORT            | -3 |
| 5  | <i>Parthenocissus quinquefolia</i>                      | VIRGINIA CREEPER          | 3  |
| *  | PERSICARIA MACULOSA (POLYGONUM PERSICARIA)              | LADY'S-THUMB              | 0  |
| 5  | <i>Persicaria punctata</i> (Polygonum p.)               | SMARTWEED                 | -5 |
| 4  | <i>Persicaria virginiana</i> (Polygonum v.)             | JUMPSEED                  | 0  |
| 0  | <i>Phalaris arundinacea</i>                             | REED CANARY GRASS         | -3 |
| 8  | <i>Physostegia virginiana</i>                           | FALSE DRAGONHEAD          | -3 |
| 5  | <i>Pilea pumila</i>                                     | CLEARWEED                 | -3 |
| *  | POA PRATENSIS   | KENTUCKY BLUEGRASS        | 3  |
| 1  | <i>Populus deltoides</i>                                | COTTONWOOD                | 0  |
| 0  | <i>Prunella vulgaris</i>                                | SELF-HEAL                 | 0  |
| 2  | <i>Prunus serotina</i>                                  | WILD BLACK CHERRY         | 3  |
| 5  | <i>Quercus alba</i>                                     | WHITE OAK                 | 3  |
| 5  | <i>Ranunculus hispidus</i>                              | SWAMP BUTTERCUP           | 0  |
| *  | RHAMNUS CATHARTICA                                      | COMMON BUCKTHORN          | 0  |
| 6  | <i>Ribes americanum</i>                                 | WILD BLACK CURRANT        | -3 |
| *  | ROSA MULTIFLORA   | MULTIFLORA ROSE           | 3  |
| 1  | <i>Rubus occidentalis</i>                               | BLACK RASPBERRY           | 5  |
| 6  | <i>Rudbeckia laciniata</i>                              | CUT-LEAF CONEFLOWER       | -3 |
| *  | RUMEX CRISPUS   | CURLY DOCK                | 0  |
| *  | RUMEX OBTUSIFOLIUS                                      | BITTER DOCK               | 0  |
| 1  | <i>Salix exigua</i>                                     | SANDBAR WILLOW            | -3 |
| 6  | <i>Salix sericea</i>                                    | SILKY WILLOW              | -5 |
| 4  | <i>Schoenoplectus tabernaemontani</i> (Scirpus validus) | SOFTSTEM BULRUSH          | -5 |
| 3  | <i>Scirpus atrovirens</i>                               | BULRUSH                   | -5 |
| 5  | <i>Scutellaria lateriflora</i>                          | MAD-DOG SKULLCAP          | -5 |
| 1  | <i>Solidago altissima</i>                               | TALL GOLDENROD            | 3  |

|   |  |                             |    |
|---|--|-----------------------------|----|
| 3 | <i>Solidago gigantea</i>                               | LATE GOLDENROD              | -3 |
| 6 | <i>Solidago patula</i>                                 | SWAMP GOLDENROD             | -5 |
| 9 | <i>Staphylea trifolia</i>                              | BLADDERNUT                  | 0  |
| 4 | <i>Symphotrichum firmum</i> ( <i>Aster puniceus</i> )  | SMOOTH SWAMP ASTER          | -3 |
| 2 | <i>Symphotrichum lanceolatum</i> ( <i>Aster l.</i> )   | PANICLED ASTER              | -3 |
| 2 | <i>Symphotrichum lateriflorum</i> ( <i>Aster l.</i> )  | CALICO ASTER                | 0  |
| 3 | <i>Symphotrichum novae-angliae</i> ( <i>Aster n.</i> ) | NEW ENGLAND ASTER           | -3 |
| 5 | <i>Symphotrichum puniceum</i> ( <i>Aster p.</i> )      | SWAMP ASTER                 | -5 |
| 6 | <i>Symplocarpus foetidus</i>                           | SKUNK-CABBAGE               | -5 |
| * | TARAXACUM OFFICINALE                                   | COMMON DANDELION            | 3  |
| 4 | <i>Teucrium canadense</i>                              | WOOD-SAGE                   | -3 |
| 3 | <i>Thalictrum dasycarpum</i>                           | PURPLE MEADOW-RUE           | -3 |
| 2 | <i>Thelypteris palustris</i>                           | MARSH FERN                  | -3 |
| 2 | <i>Toxicodendron radicans</i>                          | POISON-IVY                  | 0  |
| * | TYPHA ANGUSTIFOLIA                                     | NARROW-LEAVED CAT-TAIL      | -5 |
| 1 | <i>Ulmus americana</i>                                 | AMERICAN ELM                | -3 |
| 1 | <i>Urtica dioica</i>                                   | STINGING NETTLE             | 0  |
| 4 | <i>Verbena hastata</i>                                 | BLUE VERVAIN                | -3 |
| 4 | <i>Verbena urticifolia</i>                             | WHITE VERVAIN               | 0  |
| * | VERONICA SERPYLLIFOLIA                                 | THYME-LEAVED SPEEDWELL      | 0  |
| 6 | <i>Viburnum dentatum</i>                               | ARROW-WOOD                  | 0  |
| 4 | <i>Viburnum lentago</i>                                | NANNYBERRY                  | 0  |
| * | VIBURNUM OPULUS  | EUROPEAN Highbush-Cranberry | -3 |
| 5 | <i>Viburnum trilobum</i> ( <i>V. opulus</i> )          | AMERICAN Highbush-Cranberry | -3 |
| 2 | <i>Viola affinis</i>                                   | LE CONTE'S VIOLET           | -3 |
| 5 | <i>Viola striata</i>                                   | CREAM VIOLET                | -3 |
| 3 | <i>Vitis riparia</i>                                   | RIVER-BANK GRAPE            | 0  |

Also: *Prenanthes* sp., *Bidens* sp., *Malus* sp.

# Matthaei Botanical Gardens

## Parker Brook Wet Meadow

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Southern Wet Meadow

Open wet meadow areas W of Willow Pond, W areas ecologically degraded but E portion adjacent to pond with higher quality vegetation

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 62    | Total Species        | 4.00 | NATIVE MEAN C |
| 50    | Total Native Species | 3.23 | W/Adventives  |
| 80.6  | % Native Species     | -2.1 | NATIVE MEAN W |
| 28.28 | NATIVE FQI           | -1.2 | W/Adventives  |
| 25.40 | W/Adventives         |      |               |

| C  | SCIENTIFIC NAME  | COMMON NAME             | W  | LISTED |
|----|--|-------------------------|----|--------|
| 6  | <i>Asclepias incarnata</i>                               | SWAMP MILKWEED          | -5 |        |
| *  | <i>BARBAREA VULGARIS</i>                                 | YELLOW ROCKET           | 0  |        |
| *  | <i>BROMUS INERMIS</i>                                    | SMOOTH BROME            | 5  |        |
| 2  | <i>Carex granularis</i>                                  | SEDGE                   | -3 |        |
| 6  | <i>Carex lacustris</i>                                   | SEDGE                   | -5 |        |
| 5  | <i>Carex leptalea</i>                                    | SEDGE                   | -5 |        |
| 2  | <i>Carex pellita</i> (C. lanuginosa)                     | SEDGE                   | -5 |        |
| 10 | <i>Carex prairea</i>                                     | SEDGE                   | -3 |        |
| 10 | <i>Carex sterilis</i>                                    | SEDGE                   | -5 |        |
| 1  | <i>Carex vulpinoidea</i>                                 | SEDGE                   | -5 |        |
| 4  | <i>Cicuta maculata</i>                                   | WATER HEMLOCK           | -5 |        |
| 2  | <i>Cornus sericea</i> (C. stolonifera)                   | RED-OSIER               | -3 |        |
| 5  | <i>Crataegus crus-galli</i> (C. fontanesiana)            | COCKSPUR THORN          | 0  |        |
| 4  | <i>Danthonia spicata</i>                                 | POVERTY GRASS; OATGRASS | 5  |        |
| 8  | <i>Dasiphora fruticosa</i> (Potentilla f.)               | SHRUBBY CINQUEFOIL      | -3 |        |
| *  | <i>DAUCUS CAROTA</i>                                     | QUEEN-ANNE'S-LACE       | 5  |        |
| 5  | <i>Doellingeria umbellata</i> (Aster u.)                 | FLAT-TOPPED WHITE ASTER | -3 |        |
| *  | <i>ELAEAGNUS UMBELLATA</i>                               | AUTUMN-OLIVE            | 3  |        |
| 4  | <i>Eleocharis erythropoda</i>                            | SPIKE-RUSH              | -5 |        |
| 4  | <i>Elymus virginicus</i>                                 | VIRGINIA WILD-RYE       | -3 |        |
| 3  | <i>Euthamia graminifolia</i>                             | GRASS-LEAVED GOLDENROD  | 0  |        |
| 4  | <i>Eutrochium maculatum</i> (Eupatorium m.)              | JOE-PYE-WEED            | -5 |        |
| *  | <i>FRANGULA ALNUS</i> (RHAMNUS FRANGULA)                 | GLOSSY BUCKTHORN        | 0  |        |
| 2  | <i>Fraxinus pennsylvanica</i>                            | RED ASH                 | -3 |        |
| 8  | <i>Gentianopsis virgata</i> (G. procera)                 | SMALL FRINGED GENTIAN   | -5 |        |
| 4  | <i>Glyceria striata</i>                                  | FOWL MANNA GRASS        | -5 |        |
| 5  | <i>Helianthus giganteus</i>                              | TALL SUNFLOWER          | -3 |        |
| 5  | <i>Heliopsis helianthoides</i>                           | FALSE SUNFLOWER         | 3  |        |
| 4  | <i>Hypericum punctatum</i>                               | SPOTTED ST. JOHN'S-WORT | 0  |        |
| 5  | <i>Iris virginica</i>                                    | SOUTHERN BLUE FLAG      | -5 |        |
| 1  | <i>Juncus dudleyi</i>                                    | DUDLEY'S RUSH           | -3 |        |
| 5  | <i>Larix laricina</i>                                    | TAMARACK                | -3 |        |
| *  | <i>LEUCANTHEMUM VULGARE</i> (CHRYSANTHEMUM LEUCANTHEMUM) | OX-EYE DAISY            | 5  |        |
| *  | <i>LINARIA VULGARIS</i>                                  | BUTTER-AND-EGGS         | 5  |        |
| 4  | <i>Lysimachia ciliata</i>                                | FRINGED LOOSESTRIFE     | -3 |        |
| 10 | <i>Lysimachia quadriflora</i>                            | WHORLED LOOSESTRIFE     | -5 |        |
| *  | <i>LYTHRUM SALICARIA</i>                                 | PURPLE LOOSESTRIFE      | -5 |        |
| *  | <i>MELILOTUS OFFICINALIS</i>                             | YELLOW SWEET-CLOVER     | 3  |        |
| 2  | <i>Monarda fistulosa</i>                                 | WILD-BERGAMOT           | 3  |        |
| 2  | <i>Onoclea sensibilis</i>                                | SENSITIVE FERN          | -3 |        |
| 8  | <i>Parnassia glauca</i>                                  | GRASS-OF-PARNASSUS      | -5 |        |
| 8  | <i>Pedicularis lanceolata</i>                            | SWAMP-BETONY            | -3 |        |

|   |  |                      |    |
|---|--|----------------------|----|
| * | POA PRATENSIS                                  | KENTUCKY BLUEGRASS   | 3  |
| 1 | Populus deltoides                              | COTTONWOOD           | 0  |
| 0 | Prunella vulgaris                              | SELF-HEAL            | 0  |
| 5 | Pycnanthemum virginianum                       | COMMON MOUNTAIN MINT | -3 |
| * | RHAMNUS CATHARTICA                             | COMMON BUCKTHORN     | 0  |
| 1 | Rudbeckia hirta                                | BLACK-EYED SUSAN     | 3  |
| 1 | Salix petiolaris                               | SLENDER WILLOW       | -3 |
| 3 | Scirpus atrovirens                             | BULRUSH              | -5 |
| 3 | Scirpus pendulus                               | BULRUSH              | -5 |
| 1 | Solidago altissima                             | TALL GOLDENROD       | 3  |
| 6 | Solidago riddellii                             | RIDDELL'S GOLDENROD  | -5 |
| 3 | Symphotrichum ericoides (Aster e.)             | HEATH ASTER          | 3  |
| 4 | Symphotrichum firmum (Aster puniceus)          | SMOOTH SWAMP ASTER   | -3 |
| 2 | Symphotrichum lateriflorum (Aster l.)          | CALICO ASTER         | 0  |
| 2 | Symphotrichum urophyllum (Aster sagittifolius) | ARROW-LEAVED ASTER   | 5  |
| 2 | Toxicodendron radicans                         | POISON-IVY           | 0  |
| 2 | Ulmus rubra                                    | SLIPPERY ELM         | 0  |
| * | VERBASCUM THAPSUS                              | COMMON MULLEIN       | 5  |
| 3 | Vitis riparia                                  | RIVER-BANK GRAPE     | 0  |
| 3 | Zanthoxylum americanum                         | PRICKLY-ASH          | 3  |

Also: Lonicera spp.

# Matthaei Botanical Gardens

## Radrack Fen

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Prairie Fen

High quality open fen at S end of property, dominated by sedges, with some mossy hummocks in the S and E; large open marly area at the N end

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 125   | Total Species        | 5.39 | NATIVE MEAN C |
| 122   | Total Native Species | 5.26 | W/Adventives  |
| 97.6  | % Native Species     | -3.0 | NATIVE MEAN W |
| 59.48 | NATIVE FQI           | -2.9 | W/Adventives  |
| 58.76 | W/Adventives         |      |               |

| C  | SCIENTIFIC NAME                               | COMMON NAME                   | W  | LISTED |
|----|---|-------------------------------|----|--------|
| 1  | <i>Acer rubrum</i>                            | RED MAPLE                     | 0  |        |
| 5  | <i>Acer saccharum</i>                         | SUGAR MAPLE                   | 3  |        |
| 5  | <i>Alnus incana</i> (A. rugosa)               | SPECKLED ALDER                | -3 |        |
| 5  | <i>Amphicarpaea bracteata</i>                 | HOG-PEANUT                    | 0  |        |
| 5  | <i>Andropogon gerardii</i>                    | BIG BLUESTEM                  | 0  |        |
| 3  | <i>Apios americana</i>                        | GROUNDNUT                     | -3 |        |
| 3  | <i>Apocynum cannabinum</i> (A. sibiricum)     | INDIAN-HEMP                   | 0  |        |
| 6  | <i>Asclepias incarnata</i>                    | SWAMP MILKWEED                | -5 |        |
| 8  | <i>Betula pumila</i>                          | BOG BIRCH                     | -5 |        |
| 6  | <i>Bromus ciliatus</i>                        | FRINGED BROME                 | -3 |        |
| 3  | <i>Calamagrostis canadensis</i>               | BLUE-JOINT                    | -5 |        |
| 9  | <i>Calopogon tuberosus</i>                    | GRASS-PINK                    | -5 |        |
| 6  | <i>Caltha palustris</i>                       | MARSH-MARIGOLD                | -5 |        |
| 2  | <i>Carex hystericina</i>                      | SEDGE                         | -5 |        |
| 3  | <i>Carex interior</i>                         | SEDGE                         | -5 |        |
| 6  | <i>Carex lacustris</i>                        | SEDGE                         | -5 |        |
| 5  | <i>Carex leptalea</i>                         | SEDGE                         | -5 |        |
| 2  | <i>Carex pellita</i> (C. lanuginosa)          | SEDGE                         | -5 |        |
| 10 | <i>Carex prairea</i>                          | SEDGE                         | -3 |        |
| 5  | <i>Carex sartwellii</i>                       | SEDGE                         | -5 |        |
| 10 | <i>Carex sterilis</i>                         | SEDGE                         | -5 |        |
| 4  | <i>Carex stricta</i>                          | SEDGE                         | -5 |        |
| 9  | <i>Carex tetanica</i>                         | SEDGE                         | -3 |        |
| 6  | <i>Carpinus caroliniana</i>                   | BLUE-BEECH                    | 0  |        |
| 7  | <i>Chelone glabra</i>                         | TURTLEHEAD                    | -5 |        |
| 6  | <i>Cirsium muticum</i>                        | SWAMP THISTLE                 | -5 |        |
| 7  | <i>Comarum palustre</i> (Potentilla p.)       | MARSH CINQUEFOIL              | -5 |        |
| 2  | <i>Cornus amomum</i>                          | SILKY DOGWOOD                 | -3 |        |
| 1  | <i>Cornus foemina</i>                         | GRAY DOGWOOD                  | 0  |        |
| 2  | <i>Cornus sericea</i> (C. stolonifera)        | RED-OSIER                     | -3 |        |
| 5  | <i>Cypripedium parviflorum</i> (C. calceolus) | YELLOW LADY-SLIPPER           | 0  |        |
| 9  | <i>Cypripedium reginae</i>                    | SHOWY or QUEEN'S LADY-SLIPPER | -3 |        |
| 8  | <i>Dasiphora fruticosa</i> (Potentilla f.)    | SHRUBBY CINQUEFOIL            | -3 |        |
| 5  | <i>Doellingeria umbellata</i> (Aster u.)      | FLAT-TOPPED WHITE ASTER       | -3 |        |
| 6  | <i>Drosera rotundifolia</i>                   | ROUND-LEAVED SUNDEW           | -5 |        |
| 6  | <i>Dryopteris cristata</i>                    | CRESTED SHIELD FERN           | -5 |        |
| 6  | <i>Eleocharis elliptica</i>                   | GOLDEN-SEEDED SPIKE RUSH      | -5 |        |
| 8  | <i>Elymus trachycaulus</i> (Agropyron t.)     | SLENDER WHEATGRASS            | 3  |        |
| 4  | <i>Elymus virginicus</i>                      | VIRGINIA WILD-RYE             | -3 |        |
| 6  | <i>Epilobium leptophyllum</i>                 | FEN WILLOW-HERB               | -5 |        |
| 0  | <i>Equisetum arvense</i>                      | COMMON HORSETAIL              | 0  |        |
| 8  | <i>Eriophorum viridi-carinatum</i>            | GREEN-KEELED COTTON-GRASS     | -5 |        |
| 4  | <i>Eupatorium perfoliatum</i>                 | BONESET                       | -3 |        |



|    |   |                           |    |   |
|----|---|---------------------------|----|---|
| 4  | <i>Eutrochium maculatum</i> (Eupatorium m.)             | JOE-PYE-WEED              | -5 |   |
| *  | FRANGULA ALNUS (RHAMNUS FRANGULA)                       | GLOSSY BUCKTHORN          | 0  |   |
| 5  | <i>Galium asprellum</i>                                 | ROUGH BEDSTRAW            | -5 |   |
| 3  | <i>Galium boreale</i>                                   | NORTHERN BEDSTRAW         | 0  |   |
| 8  | <i>Gentianopsis virgata</i> (G. procera)                | SMALL FRINGED GENTIAN     | -5 |   |
| 4  | <i>Geranium maculatum</i>                               | WILD GERANIUM             | 3  |   |
| 7  | <i>Geum rivale</i>                                      | PURPLE AVENS              | -5 |   |
| 4  | <i>Glyceria striata</i>                                 | FOWL MANNA GRASS          | -5 |   |
| 5  | <i>Helianthus giganteus</i>                             | TALL SUNFLOWER            | -3 |   |
| 6  | <i>Hydrocotyle americana</i>                            | WATER-PENNYWORT           | -5 |   |
| 10 | <i>Hypoxis hirsuta</i>                                  | STAR-GRASS                | 0  |   |
| 5  | <i>Iris virginica</i>                                   | SOUTHERN BLUE FLAG        | -5 |   |
| 7  | <i>Juncus brachycephalus</i>                            | RUSH                      | -5 |   |
| 3  | <i>Juniperus virginiana</i>                             | RED-CEDAR                 | 3  |   |
| 7  | <i>Lathyrus palustris</i>                               | MARSH PEA                 | -3 |   |
| 5  | <i>Lemna minor</i>                                      | COMMON DUCKWEED           | -5 |   |
| 8  | <i>Liatris spicata</i>                                  | MARSH BLAZING-STAR        | 0  |   |
| 7  | <i>Lilium philadelphicum</i>                            | WOOD LILY                 | 0  |   |
| 5  | <i>Liparis loeselii</i>                                 | LOESEL'S TWAYBLADE        | -3 |   |
| 10 | <i>Lobelia kalmii</i>                                   | BOG LOBELIA               | -5 |   |
| 10 | <i>Lysimachia quadriflora</i>                           | WHORLED LOOSESTRIFE       | -5 |   |
| *  | LYTHRUM SALICARIA                                       | PURPLE LOOSESTRIFE        | -5 |   |
| 5  | <i>Maianthemum stellatum</i> (Smilacina s.)             | STARRY FALSE SOLOMON-SEAL | 0  |   |
| 10 | <i>Micranthes pensylvanica</i> (Saxifraga p.)           | SWAMP SAXIFRAGE           | -5 |   |
| 10 | <i>Muhlenbergia glomerata</i>                           | MARSH WILD-TIMOTHY        | -5 |   |
| 3  | <i>Muhlenbergia mexicana</i>                            | LEAFY SATIN GRASS         | -3 |   |
| 2  | <i>Onoclea sensibilis</i>                               | SENSITIVE FERN            | -3 |   |
| 6  | <i>Oxypolis rigidior</i>                                | COWBANE                   | -5 |   |
| 8  | <i>Parnassia glauca</i>                                 | GRASS-OF-PARNASSUS        | -5 |   |
| 8  | <i>Pedicularis lanceolata</i>                           | SWAMP-BETONY              | -3 |   |
| 5  | <i>Phragmites australis</i> var. <i>americanus</i>      | REED                      | -3 |   |
| 4  | <i>Physocarpus opulifolius</i>                          | NINEBARK                  | -3 |   |
| 3  | <i>Picea glauca</i>                                     | WHITE SPRUCE              | 3  |   |
| 3  | <i>Pinus strobus</i>                                    | WHITE PINE                | 3  |   |
| *  | PINUS SYLVESTRIS  | SCOTCH PINE               | 3  |   |
| 1  | <i>Populus deltoides</i>                                | COTTONWOOD                | 0  |   |
| 1  | <i>Populus tremuloides</i>                              | QUAKING ASPEN             | 0  |   |
| 5  | <i>Pycnanthemum virginianum</i>                         | COMMON MOUNTAIN MINT      | -3 |   |
| 5  | <i>Quercus macrocarpa</i>                               | BUR OAK                   | 3  |   |
| 8  | <i>Rhamnus alnifolia</i>                                | ALDER-LEAVED BUCKTHORN    | -5 |   |
| 6  | <i>Rhynchospora alba</i>                                | BEAK-RUSH                 | -5 |   |
| 10 | <i>Rhynchospora capillacea</i>                          | BEAK-RUSH                 | -5 |   |
| 6  | <i>Ribes hirtellum</i>                                  | SWAMP GOOSEBERRY          | -3 |   |
| 4  | <i>Rubus pubescens</i>                                  | DWARF RASPBERRY           | -3 |   |
| 1  | <i>Rudbeckia hirta</i>                                  | BLACK-EYED SUSAN          | 3  |   |
| 3  | <i>Salix amygdaloides</i>                               | PEACH-LEAVED WILLOW       | -3 |   |
| 1  | <i>Salix bebbiana</i>                                   | BEBB'S WILLOW             | -3 |   |
| 9  | <i>Salix candida</i>                                    | HOARY WILLOW              | -5 |   |
| 1  | <i>Salix discolor</i>                                   | PUSSY WILLOW              | -3 |   |
| 1  | <i>Salix petiolaris</i>                                 | SLENDER WILLOW            | -3 |   |
| 8  | <i>Salix serissima</i>                                  | AUTUMN WILLOW             | -5 |   |
| 10 | <i>Sanguisorba canadensis</i>                           | AMERICAN BURNET           | -3 | E |
| 5  | <i>Schoenoplectus acutus</i> (Scirpus a.)               | HARDSTEM BULRUSH          | -5 |   |
| 4  | <i>Schoenoplectus tabernaemontani</i> (Scirpus validus) | SOFTSTEM BULRUSH          | -5 |   |
| 1  | <i>Solidago altissima</i>                               | TALL GOLDENROD            | 3  |   |
| 3  | <i>Solidago gigantea</i>                                | LATE GOLDENROD            | -3 |   |
| 8  | <i>Solidago ohioensis</i>                               | OHIO GOLDENROD            | -5 |   |
| 6  | <i>Solidago patula</i>                                  | SWAMP GOLDENROD           | -5 |   |
| 6  | <i>Solidago riddellii</i>                               | RIDDELL'S GOLDENROD       | -5 |   |
| 4  | <i>Solidago uliginosa</i>                               | BOG GOLDENROD             | -5 |   |

|    |  |                         |    |   |
|----|--|-------------------------|----|---|
| 4  | <i>Spiraea alba</i>                            | MEADOWSWEET             | -3 |   |
| 4  | <i>Spiranthes cernua</i>                       | NODDING LADIES'-TRESSES | -3 |   |
| 5  | <i>Symphyotrichum laeve</i> (Aster l.)         | SMOOTH ASTER            | 3  |   |
| 2  | <i>Symphyotrichum lateriflorum</i> (Aster l.)  | CALICO ASTER            | 0  |   |
| 3  | <i>Symphyotrichum novae-angliae</i> (Aster n.) | NEW ENGLAND ASTER       | -3 |   |
| 5  | <i>Symphyotrichum puniceum</i> (Aster p.)      | SWAMP ASTER             | -5 |   |
| 6  | <i>Symplocarpus foetidus</i>                   | SKUNK-CABBAGE           | -5 |   |
| 2  | <i>Thelypteris palustris</i>                   | MARSH FERN              | -3 |   |
| 5  | <i>Tilia americana</i>                         | BASSWOOD                | 3  |   |
| 6  | <i>Toxicodendron vernix</i>                    | POISON SUMAC            | -5 |   |
| 10 | <i>Triantha glutinosa</i> (Tofieldia g.)       | FALSE ASPHODEL          | -5 |   |
| 8  | <i>Triglochin maritima</i>                     | COMMON BOG ARROW-GRASS  | -5 |   |
| 8  | <i>Triglochin palustris</i>                    | SLENDER BOG ARROW-GRASS | -5 |   |
| 1  | <i>Typha latifolia</i>                         | BROAD-LEAVED CAT-TAIL   | -5 |   |
| 1  | <i>Ulmus americana</i>                         | AMERICAN ELM            | -3 |   |
| 10 | <i>Utricularia intermedia</i>                  | FLAT-LEAVED BLADDERWORT | -5 |   |
| 10 | <i>Valeriana edulis</i> (V. ciliata)           | COMMON VALERIAN         | -5 | T |
| 10 | <i>Valeriana uliginosa</i>                     | SWAMP VALERIAN          | -5 |   |
| 4  | <i>Viburnum lentago</i>                        | NANNYBERRY              | 0  |   |
| 5  | <i>Viola cucullata</i>                         | MARSH VIOLET            | -5 |   |
| 8  | <i>Viola nephrophylla</i>                      | NORTHERN BOG VIOLET     | -3 |   |
| 6  | <i>Zizia aurea</i>                             | GOLDEN ALEXANDERS       | 0  |   |



# Matthaei Botanical Gardens

## Radrick Floodplain Forest

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Floodplain Forest

Closed canopy floodplain forest between Fleming Creek and Radrick Fen, dominated by *Acer nigrum* and *Quercus macrocarpa* and interlaced with seepage channels from Radrick Fen

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 173   | Total Species        | 4.16 | NATIVE MEAN C |
| 152   | Total Native Species | 3.65 | W/Adventives  |
| 87.9  | % Native Species     | -0.7 | NATIVE MEAN W |
| 51.26 | NATIVE FQI           | -0.4 | W/Adventives  |
| 48.05 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                                   | COMMON NAME               | W  | LISTED |
|---|---|---------------------------|----|--------|
| 4 | <i>Acer nigrum</i> (A. saccharum)                 | BLACK MAPLE               | 3  |        |
| 5 | <i>Acer saccharum</i>                             | SUGAR MAPLE               | 3  |        |
| * | AESCULUS HIPPOCASTANUM                            | HORSE-CHESTNUT            | 5  |        |
| 4 | <i>Ageratina altissima</i> (Eupatorium rugosum)   | WHITE SNAKEROOT           | 3  |        |
| 5 | <i>Agrimonia pubescens</i>                        | SOFT AGRIMONY             | 5  |        |
| * | AGROSTIS STOLONIFERA                              | CREEPING BENT             | -3 |        |
| * | ALLIARIA PETIOLATA                                | GARLIC MUSTARD            | 3  |        |
| 4 | <i>Allium canadense</i>                           | WILD GARLIC               | 3  |        |
| 5 | <i>Allium tricoccum</i>                           | WILD LEEK                 | 3  |        |
| 5 | <i>Amphicarpaea bracteata</i>                     | HOG-PEANUT                | 0  |        |
| 5 | <i>Anemone quinquefolia</i>                       | WOOD ANEMONE              | 3  |        |
| 3 | <i>Anemone virginiana</i>                         | THIMBLEWEED               | 3  |        |
| 3 | <i>Apios americana</i>                            | GROUNDNUT                 | -3 |        |
| * | ARCTIUM MINUS                                     | COMMON BURDOCK            | 3  |        |
| 5 | <i>Arisaema triphyllum</i>                        | JACK-IN-THE-PULPIT        | 0  |        |
| 5 | <i>Asarum canadense</i>                           | WILD-GINGER               | 5  |        |
| * | BERBERIS THUNBERGII                               | JAPANESE BARBERRY         | 3  |        |
| 1 | <i>Bidens frondosa</i>                            | COMMON BEGGAR-TICKS       | -3 |        |
| 5 | <i>Boehmeria cylindrica</i>                       | FALSE NETTLE              | -5 |        |
| 6 | <i>Bromus latiglumis</i>                          | EAR-LEAVED BROME          | -3 |        |
| 6 | <i>Caltha palustris</i>                           | MARSH-MARIGOLD            | -5 |        |
| 2 | <i>Calystegia sepium</i>                          | HEDGE BINDWEED            | 0  |        |
| 5 | <i>Cardamine concatenata</i> (Dentaria laciniata) | CUT-LEAVED TOOTHWORT      | 3  |        |
| * | CARDAMINE IMPATIENS                               | BITTER CRESS              | 3  |        |
| 1 | <i>Cardamine pensylvanica</i>                     | PENNSYLVANIA BITTER CRESS | -3 |        |
| 6 | <i>Carex lacustris</i>                            | SEDGE                     | -5 |        |
| 2 | <i>Carex rosea</i> (C. convoluta)                 | CURLY-STYLED WOOD SEDGE   | 5  |        |
| 4 | <i>Carex stricta</i>                              | SEDGE                     | -5 |        |
| 6 | <i>Carpinus caroliniana</i>                       | BLUE-BEECH                | 0  |        |
| 5 | <i>Caulophyllum thalictroides</i>                 | BLUE COHOSH               | 5  |        |
| * | CELASTRUS ORBICULATUS                             | ORIENTAL BITTERSWEET      | 5  |        |
| 5 | <i>Celtis occidentalis</i>                        | HACKBERRY                 | 0  |        |
| 7 | <i>Chelone glabra</i>                             | TURTLEHEAD                | -5 |        |
| 4 | <i>Cicuta maculata</i>                            | WATER HEMLOCK             | -5 |        |
| 7 | <i>Cinna arundinacea</i>                          | WOOD REEDGRASS            | -3 |        |
| 2 | <i>Circaea canadensis</i> (C. lutetiana)          | ENCHANTER'S-NIGHTSHADE    | 3  |        |
| 6 | <i>Cirsium muticum</i>                            | SWAMP THISTLE             | -5 |        |
| * | CIRSIUM VULGARE                                   | BULL THISTLE              | 3  |        |
| 4 | <i>Claytonia virginica</i>                        | SPRING-BEAUTY             | 3  |        |
| 4 | <i>Clematis virginiana</i>                        | VIRGIN'S BOWER            | 0  |        |
| 5 | <i>Cornus alternifolia</i>                        | ALTERNATE-LEAVED DOGWOOD  | 3  |        |
| 2 | <i>Cornus sericea</i> (C. stolonifera)            | RED-OSIER                 | -3 |        |
| 5 | <i>Corylus americana</i>                          | HAZELNUT                  | 3  |        |

|    |   |                               |    |
|----|---|-------------------------------|----|
| 2  | <i>Cryptotaenia canadensis</i>                        | HONEWORT                      | 0  |
| 3  | <i>Cuscuta gronovii</i>                               | COMMON DODDER                 | -3 |
| 4  | <i>Dioscorea villosa</i> ( <i>Dioscorea villosa</i> ) | WILD YAM                      | 0  |
| 5  | <i>Doellingeria umbellata</i> ( <i>Aster</i> u.)      | FLAT-TOPPED WHITE ASTER       | -3 |
| 5  | <i>Dryopteris carthusiana</i>                         | SPINULOSE WOODFERN            | -3 |
| 6  | <i>Dryopteris cristata</i>                            | CRESTED SHIELD FERN           | -5 |
| 5  | <i>Dryopteris intermedia</i>                          | EVERGREEN WOODFERN            | 0  |
| 2  | <i>Echinocystis lobata</i>                            | WILD-CUCUMBER                 | -3 |
| 5  | <i>Elymus hystrix</i> ( <i>Hystrix patula</i> )       | BOTTLEBRUSH GRASS             | 3  |
| 8  | <i>Elymus riparius</i>                                | RIVERBANK WILD-RYE            | -3 |
| 5  | <i>Elymus villosus</i>                                | SILKY WILD-RYE                | 3  |
| 4  | <i>Elymus virginicus</i>                              | VIRGINIA WILD-RYE             | -3 |
| 3  | <i>Epilobium coloratum</i>                            | CINNAMON WILLOW-HERB          | -5 |
| 0  | <i>Equisetum arvense</i>                              | COMMON HORSETAIL              | 0  |
| 2  | <i>Equisetum hyemale</i>                              | SCOURING RUSH                 | 0  |
| 8  | <i>Eragrostis hypnoides</i>                           | CREEPING LOVE GRASS           | -5 |
| 0  | <i>Erigeron annuus</i>                                | DAISY FLEABANE                | 3  |
| 5  | <i>Erythronium americanum</i>                         | YELLOW TROUT LILY             | 5  |
| 5  | <i>Euonymus obovata</i>                               | RUNNING STRAWBERRY-BUSH       | 3  |
| 4  | <i>Eupatorium perfoliatum</i>                         | BONESET                       | -3 |
| 2  | <i>Fallopia scandens</i> ( <i>Polygonum</i> s.)       | FALSE BUCKWHEAT               | 0  |
| 5  | <i>Festuca subverticillata</i> ( <i>F. obtusa</i> )   | NODDING FESCUE                | 3  |
| 5  | <i>Fraxinus americana</i>                             | WHITE ASH                     | 3  |
| 6  | <i>Fraxinus nigra</i>                                 | BLACK ASH                     | -3 |
| 5  | <i>Galium asprellum</i>                               | ROUGH BEDSTRAW                | -5 |
| 5  | <i>Galium concinnum</i>                               | SHINING BEDSTRAW              | 3  |
| 4  | <i>Galium triflorum</i>                               | FRAGRANT BEDSTRAW             | 3  |
| 1  | <i>Geum canadense</i>                                 | WHITE AVENS                   | 0  |
| 4  | <i>Glyceria striata</i>                               | FOWL MANNA GRASS              | -5 |
| 1  | <i>Hackelia virginiana</i>                            | BEGGAR'S LICE                 | 3  |
| 5  | <i>Heliopsis helianthoides</i>                        | FALSE SUNFLOWER               | 3  |
| 3  | <i>Heracleum maximum</i>                              | COW-PARSNIP                   | -3 |
| *  | HESPERIS MATRONALIS                                   | DAME'S ROCKET                 | 3  |
| 3  | <i>Humulus lupulus</i>                                | COMMON HOPS                   | 3  |
| 5  | <i>Hylodesmum glutinosum</i> ( <i>Desmodium</i> g.)   | CLUSTERED-LEAVED TICK-TREFOIL | 5  |
| 2  | <i>Impatiens capensis</i>                             | SPOTTED TOUCH-ME-NOT          | -3 |
| 5  | <i>Iris virginica</i>                                 | SOUTHERN BLUE FLAG            | -5 |
| 5  | <i>Juglans nigra</i>                                  | BLACK WALNUT                  | 3  |
| 3  | <i>Juniperus virginiana</i>                           | RED-CEDAR                     | 3  |
| 4  | <i>Laportea canadensis</i>                            | WOOD NETTLE                   | -3 |
| 3  | <i>Leersia oryzoides</i>                              | CUT GRASS                     | -5 |
| 5  | <i>Leersia virginica</i>                              | WHITE GRASS                   | -3 |
| *  | LIGUSTRUM OBTUSIFOLIUM                                | BORDER PRIVET                 | 3  |
| *  | LIGUSTRUM VULGARE                                     | COMMON PRIVET                 | 3  |
| 5  | <i>Lilium michiganense</i>                            | MICHIGAN LILY                 | -3 |
| 4  | <i>Lobelia siphilitica</i>                            | GREAT BLUE LOBELIA            | -3 |
| 5  | <i>Lonicera dioica</i>                                | RED HONEYSUCKLE               | 3  |
| *  | LONICERA MAACKII                                      | AMUR HONEYSUCKLE              | 5  |
| 4  | <i>Ludwigia palustris</i>                             | WATER-PURSLANE                | -5 |
| 2  | <i>Lycopus americanus</i>                             | COMMON WATER HOREHOUND        | -5 |
| 2  | <i>Lycopus uniflorus</i>                              | NORTHERN BUGLE WEED           | -5 |
| 4  | <i>Lysimachia ciliata</i>                             | FRINGED LOOSESTRIFE           | -3 |
| *  | LYTHRUM SALICARIA                                     | PURPLE LOOSESTRIFE            | -5 |
| 5  | <i>Maianthemum racemosum</i> ( <i>Smilacina</i> r.)   | FALSE SPIKENARD               | 3  |
| 5  | <i>Maianthemum stellatum</i> ( <i>Smilacina</i> s.)   | STARRY FALSE SOLOMON-SEAL     | 0  |
| 3  | <i>Matteuccia struthiopteris</i>                      | OSTRICH FERN                  | 0  |
| 3  | <i>Mentha canadensis</i> ( <i>M. arvensis</i> )       | WILD MINT                     | -3 |
| 10 | <i>Micranthes pensylvanica</i> ( <i>Saxifraga</i> p.) | SWAMP SAXIFRAGE               | -5 |
| 5  | <i>Mimulus ringens</i>                                | MONKEY-FLOWER                 | -5 |
| 2  | <i>Onoclea sensibilis</i>                             | SENSITIVE FERN                | -3 |

|    |   |                          |    |   |
|----|---|--------------------------|----|---|
| 5  | <i>Osmunda cinnamomea</i>                         | CINNAMON FERN            | -3 |   |
| 6  | <i>Oxypolis rigidior</i>                          | COWBANE                  | -5 |   |
| 5  | <i>Packera aurea</i> (Senecio a.)                 | GOLDEN RAGWORT           | -3 |   |
| 5  | <i>Parthenocissus quinquefolia</i>                | VIRGINIA CREEPER         | 3  |   |
| *  | <i>PERSICARIA MACULOSA</i> (POLYGONUM PERSICARIA) | LADY'S-THUMB             | 0  |   |
| 5  | <i>Persicaria punctata</i> (Polygonum p.)         | SMARTWEED                | -5 |   |
| 4  | <i>Persicaria virginiana</i> (Polygonum v.)       | JUMPSEED                 | 0  |   |
| 0  | <i>Phalaris arundinacea</i>                       | REED CANARY GRASS        | -3 |   |
| 5  | <i>Phlox divaricata</i>                           | WILD BLUE PHLOX          | 3  |   |
| 4  | <i>Physocarpus opulifolius</i>                    | NINEBARK                 | -3 |   |
| 5  | <i>Pilea fontana</i>                              | BOG CLEARWEED            | -3 |   |
| 5  | <i>Pilea pumila</i>                               | CLEARWEED                | -3 |   |
| 0  | <i>Plantago rugelii</i>                           | RED-STALKED PLANTAIN     | 0  |   |
| 7  | <i>Platanus occidentalis</i>                      | SYCAMORE                 | -3 |   |
| 3  | <i>Podophyllum peltatum</i>                       | MAY-APPLE                | 3  |   |
| 1  | <i>Populus deltoides</i>                          | COTTONWOOD               | 0  |   |
| 0  | <i>Prunella vulgaris</i>                          | SELF-HEAL                | 0  |   |
| 2  | <i>Prunus serotina</i>                            | WILD BLACK CHERRY        | 3  |   |
| 5  | <i>Pycnanthemum virginianum</i>                   | COMMON MOUNTAIN MINT     | -3 |   |
| 5  | <i>Quercus macrocarpa</i>                         | BUR OAK                  | 3  |   |
| 5  | <i>Quercus muehlenbergii</i>                      | CHINQUAPIN OAK           | 3  |   |
| 0  | <i>Ranunculus abortivus</i>                       | SMALL-FLOWERED BUTTERCUP | 0  |   |
| 5  | <i>Ranunculus hispidus</i>                        | SWAMP BUTTERCUP          | 0  |   |
| *  | <i>RHAMNUS CATHARTICA</i>                         | COMMON BUCKTHORN         | 0  |   |
| *  | <i>ROBINIA PSEUDOACACIA</i>                       | BLACK LOCUST             | 3  |   |
| *  | <i>ROSA MULTIFLORA</i>                            | MULTIFLORA ROSE          | 3  |   |
| 4  | <i>Rubus pubescens</i>                            | DWARF RASPBERRY          | -3 |   |
| 6  | <i>Rudbeckia laciniata</i>                        | CUT-LEAF CONEFLOWER      | -3 |   |
| *  | <i>RUMEX OBTUSIFOLIUS</i>                         | BITTER DOCK              | 0  |   |
| 4  | <i>Sagittaria latifolia</i>                       | COMMON ARROWHEAD         | -5 |   |
| 3  | <i>Salix amygdaloides</i>                         | PEACH-LEAVED WILLOW      | -3 |   |
| 3  | <i>Sambucus canadensis</i>                        | ELDERBERRY               | -3 |   |
| 10 | <i>Sanguisorba canadensis</i>                     | AMERICAN BURNET          | -3 | E |
| 2  | <i>Sanicula odorata</i> (S. gregaria)             | BLACK SNAKEROOT          | 0  |   |
| 5  | <i>Scirpus cyperinus</i>                          | WOOL-GRASS               | -5 |   |
| 5  | <i>Scrophularia marilandica</i>                   | LATE FIGWORT             | 3  |   |
| 5  | <i>Scutellaria lateriflora</i>                    | MAD-DOG SKULLCAP         | -5 |   |
| 5  | <i>Smilax hispida</i> (S. tamnoides)              | BRISTLY GREENBRIER       | 0  |   |
| *  | <i>SOLANUM DULCAMARA</i>                          | BITTERSWEET NIGHTSHADE   | 0  |   |
| 6  | <i>Solidago caesia</i>                            | BLUESTEM GOLDENROD       | 3  |   |
| 6  | <i>Solidago flexicaulis</i>                       | ZIGZAG GOLDENROD         | 3  |   |
| 3  | <i>Solidago gigantea</i>                          | LATE GOLDENROD           | -3 |   |
| 6  | <i>Solidago patula</i>                            | SWAMP GOLDENROD          | -5 |   |
| 4  | <i>Sphenopholis intermedia</i>                    | SLENDER WEDGEGRASS       | 0  |   |
| 9  | <i>Staphylea trifolia</i>                         | BLADDERNUT               | 0  |   |
| 4  | <i>Symphyotrichum cordifolium</i> (Aster c.)      | HEART-LEAVED ASTER       | 5  |   |
| 2  | <i>Symphyotrichum lateriflorum</i> (Aster l.)     | CALICO ASTER             | 0  |   |
| 6  | <i>Symplocarpus foetidus</i>                      | SKUNK-CABBAGE            | -5 |   |
| *  | <i>TARAXACUM OFFICINALE</i>                       | COMMON DANDELION         | 3  |   |
| 4  | <i>Teucrium canadense</i>                         | WOOD-SAGE                | -3 |   |
| 3  | <i>Thalictrum dasycarpum</i>                      | PURPLE MEADOW-RUE        | -3 |   |
| 6  | <i>Thalictrum dioicum</i>                         | EARLY MEADOW-RUE         | 3  |   |
| 2  | <i>Thelypteris palustris</i>                      | MARSH FERN               | -3 |   |
| 5  | <i>Tilia americana</i>                            | BASSWOOD                 | 3  |   |
| 2  | <i>Toxicodendron radicans</i>                     | POISON-IVY               | 0  |   |
| 6  | <i>Toxicodendron vernix</i>                       | POISON SUMAC             | -5 |   |
| 7  | <i>Trillium flexipes</i>                          | DROOPING TRILLIUM        | 0  |   |
| 5  | <i>Trillium grandiflorum</i>                      | COMMON TRILLIUM          | 3  |   |
| 1  | <i>Ulmus americana</i>                            | AMERICAN ELM             | -3 |   |

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|   |                               |                             |    |
|---|-------------------------------|-----------------------------|----|
| 1 | <i>Urtica dioica</i>          | STINGING NETTLE             | 0  |
| 4 | <i>Verbena urticifolia</i>    | WHITE VERVAIN               | 0  |
| 4 | <i>Viburnum lentago</i>       | NANNYBERRY                  | 0  |
| * | VIBURNUM OPULUS               | EUROPEAN Highbush-CRANBERRY | -3 |
| 2 | <i>Viola affinis</i>          | LE CONTE'S VIOLET           | -3 |
| 5 | <i>Viola cucullata</i>        | MARSH VIOLET                | -5 |
| 4 | <i>Viola pubescens</i>        | YELLOW VIOLET               | 3  |
| 5 | <i>Viola striata</i>          | CREAM VIOLET                | -3 |
| 3 | <i>Vitis riparia</i>          | RIVER-BANK GRAPE            | 0  |
| 3 | <i>Zanthoxylum americanum</i> | PRICKLY-ASH                 | 3  |
| 6 | <i>Zizia aurea</i>            | GOLDEN ALEXANDERS           | 0  |

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Also: *Actaea* sp.



# Matthaei Botanical Gardens

## Radrack Forest

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Southern Forest

Closed canopy forest at SE corner of property, dominated by *Quercus* spp. in overstory and *Acer* spp. in understory, few shrubs, groundcover sparse

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 98    | Total Species        | 4.51 | NATIVE MEAN C |
| 86    | Total Native Species | 3.96 | W/Adventives  |
| 87.8  | % Native Species     | 2.8  | NATIVE MEAN W |
| 41.84 | NATIVE FQI           | 2.8  | W/Adventives  |
| 39.19 | W/Adventives         |      |               |

| C  | SCIENTIFIC NAME                                   | COMMON NAME             | W  | LISTED |
|----|---|-------------------------|----|--------|
| 4  | <i>Acer nigrum</i> (A. saccharum)                 | BLACK MAPLE             | 3  |        |
| *  | ACER PLATANOIDES                                  | NORWAY MAPLE            | 5  |        |
| 1  | <i>Acer rubrum</i>                                | RED MAPLE               | 0  |        |
| 5  | <i>Acer saccharum</i>                             | SUGAR MAPLE             | 3  |        |
| 7  | <i>Actaea pachypoda</i>                           | DOLL'S-EYES             | 5  |        |
| 6  | <i>Adiantum pedatum</i>                           | MAIDENHAIR FERN         | 3  |        |
| *  | AESCULUS HIPPOCASTANUM                            | HORSE-CHESTNUT          | 5  |        |
| 5  | <i>Agrimonia pubescens</i>                        | SOFT AGRIMONY           | 5  |        |
| *  | ALLIARIA PETIOLATA                                | GARLIC MUSTARD          | 3  |        |
| 7  | <i>Allium burdickii</i> (A. tricoccum)            | WILD LEEK               | 3  |        |
| 5  | <i>Allium tricoccum</i>                           | WILD LEEK               | 3  |        |
| 4  | <i>Amelanchier laevis</i>                         | SMOOTH SHADBUSH         | 5  |        |
| 5  | <i>Amphicarpaea bracteata</i>                     | HOG-PEANUT              | 0  |        |
| 5  | <i>Anemone quinquefolia</i>                       | WOOD ANEMONE            | 3  |        |
| *  | ARCTIUM MINUS                                     | COMMON BURDOCK          | 3  |        |
| 5  | <i>Arisaema triphyllum</i>                        | JACK-IN-THE-PULPIT      | 0  |        |
| 6  | <i>Asclepias exaltata</i>                         | POKE MILKWEED           | 5  |        |
| *  | BERBERIS THUNBERGII                               | JAPANESE BARBERRY       | 3  |        |
| 5  | <i>Boechera laevigata</i> (Arabis l.)             | SMOOTH BANK CRESS       | 5  |        |
| 7  | <i>Brachyelytrum erectum</i>                      | LONG-AWNED WOOD GRASS   | 5  |        |
| 5  | <i>Cardamine concatenata</i> (Dentaria laciniata) | CUT-LEAVED TOOTHWORT    | 3  |        |
| *  | CARDAMINE IMPATIENS                               | BITTER CRESS            | 3  |        |
| 3  | <i>Carex cephalophora</i>                         | SEDGE                   | 3  |        |
| 5  | <i>Carex hirtifolia</i>                           | SEDGE                   | 3  |        |
| 4  | <i>Carex pensylvanica</i>                         | SEDGE                   | 5  |        |
| 2  | <i>Carex rosea</i> (C. convoluta)                 | CURLY-STYLED WOOD SEDGE | 5  |        |
| 5  | <i>Carya glabra</i>                               | PIGNET HICKORY          | 3  |        |
| 5  | <i>Carya ovata</i>                                | SHAGBARK HICKORY        | 3  |        |
| *  | CELASTRUS ORBICULATUS                             | ORIENTAL BITTERSWEET    | 5  |        |
| 2  | <i>Circaea canadensis</i> (C. lutetiana)          | ENCHANTER'S-NIGHTSHADE  | 3  |        |
| 4  | <i>Claytonia virginica</i>                        | SPRING-BEAUTY           | 3  |        |
| 10 | <i>Conopholis americana</i>                       | SQUAW-ROOT              | 5  |        |
| 8  | <i>Cornus florida</i>                             | FLOWERING DOGWOOD       | 3  |        |
| 4  | <i>Cystopteris fragilis</i>                       | FRAGILE FERN            | 3  |        |
| 4  | <i>Dioscorea villosa</i> (Dioscorea villosa)      | WILD YAM                | 0  |        |
| 5  | <i>Elymus hystrix</i> (Hystrix patula)            | BOTTLEBRUSH GRASS       | 3  |        |
| 5  | <i>Euonymus obovata</i>                           | RUNNING STRAWBERRY-BUSH | 3  |        |
| 6  | <i>Fagus grandifolia</i>                          | AMERICAN BEECH          | 3  |        |
| 5  | <i>Festuca subverticillata</i> (F. obtusa)        | NODDING FESCUE          | 3  |        |
| 5  | <i>Fraxinus americana</i>                         | WHITE ASH               | 3  |        |
| 2  | <i>Fraxinus pennsylvanica</i>                     | RED ASH                 | -3 |        |
| 0  | <i>Galium aparine</i>                             | ANNUAL BEDSTRAW         | 3  |        |
| 4  | <i>Galium circaezans</i>                          | WHITE WILD LICORICE     | 3  |        |

|   |  |                               |    |
|---|--|-------------------------------|----|
| 5 | <i>Galium concinnum</i>                              | SHINING BEDSTRAW              | 3  |
| 4 | <i>Galium triflorum</i>                              | FRAGRANT BEDSTRAW             | 3  |
| 4 | <i>Geranium maculatum</i>                            | WILD GERANIUM                 | 3  |
| 1 | <i>Geum canadense</i>                                | WHITE AVENS                   | 0  |
| 1 | <i>Hackelia virginiana</i>                           | BEGGAR'S LICE                 | 3  |
| 5 | <i>Hamamelis virginiana</i>                          | WITCH-HAZEL                   | 3  |
| 6 | <i>Hepatica americana</i>                            | ROUND-LOBED HEPATICA          | 5  |
| 5 | <i>Hylodesmum glutinosum</i> ( <i>Desmodium g.</i> ) | CLUSTERED-LEAVED TICK-TREFOIL | 5  |
| 5 | <i>Juglans nigra</i>                                 | BLACK WALNUT                  | 3  |
| 5 | <i>Leersia virginica</i>                             | WHITE GRASS                   | -3 |
| * | LEONURUS CARDIACA                                    | MOTHERWORT                    | 5  |
| * | LIGUSTRUM VULGARE                                    | COMMON PRIVET                 | 3  |
| 5 | <i>Lonicera dioica</i>                               | RED HONEYSUCKLE               | 3  |
| 5 | <i>Maianthemum racemosum</i> ( <i>Smilacina r.</i> ) | FALSE SPIKENARD               | 3  |
| 5 | <i>Menispermum canadense</i>                         | MOONSEED                      | 0  |
| 3 | <i>Mentha canadensis</i> ( <i>M. arvensis</i> )      | WILD MINT                     | -3 |
| 5 | <i>Monotropa uniflora</i>                            | INDIAN-PIPE                   | 3  |
| 5 | <i>Ostrya virginiana</i>                             | IRONWOOD; HOP-HORNBEAM        | 3  |
| 0 | <i>Oxalis stricta</i> ( <i>O. fontana</i> )          | YELLOW WOOD-SORREL            | 3  |
| 5 | <i>Parthenocissus quinquefolia</i>                   | VIRGINIA CREEPER              | 3  |
| 4 | <i>Persicaria virginiana</i> ( <i>Polygonum v.</i> ) | JUMPSEED                      | 0  |
| 8 | <i>Piptatherum racemosum</i> ( <i>Oryzopsis r.</i> ) | RICE-GRASS                    | 5  |
| 8 | <i>Poa sylvestris</i>                                | WOODLAND BLUEGRASS            | 0  |
| 3 | <i>Podophyllum peltatum</i>                          | MAY-APPLE                     | 3  |
| 5 | <i>Polygonatum pubescens</i>                         | DOWNY SOLOMON SEAL            | 5  |
| 2 | <i>Prunus serotina</i>                               | WILD BLACK CHERRY             | 3  |
| 2 | <i>Prunus virginiana</i>                             | CHOKE CHERRY                  | 3  |
| 5 | <i>Quercus alba</i>                                  | WHITE OAK                     | 3  |
| 4 | <i>Quercus ellipsoidalis</i> ( <i>Q. coccinea</i> )  | HILL'S OAK                    | 5  |
| 5 | <i>Quercus rubra</i>                                 | RED OAK                       | 3  |
| 6 | <i>Quercus velutina</i>                              | BLACK OAK                     | 5  |
| * | RHAMNUS CATHARTICA                                   | COMMON BUCKTHORN              | 0  |
| 4 | <i>Ribes cynosbati</i>                               | PRICKLY or WILD GOOSEBERRY    | 3  |
| 4 | <i>Rosa carolina</i>                                 | PASTURE ROSE                  | 3  |
| * | ROSA MULTIFLORA                                      | MULTIFLORA ROSE               | 3  |
| 1 | <i>Rubus allegheniensis</i>                          | COMMON BLACKBERRY             | 3  |
| 1 | <i>Rubus occidentalis</i>                            | BLACK RASPBERRY               | 5  |
| 5 | <i>Sanguinaria canadensis</i>                        | BLOODROOT                     | 3  |
| 2 | <i>Sanicula odorata</i> ( <i>S. gregaria</i> )       | BLACK SNAKEROOT               | 0  |
| 5 | <i>Sassafras albidum</i>                             | SASSAFRAS                     | 3  |
| 6 | <i>Smilax ecirrata</i>                               | UPRIGHT CARRION-FLOWER        | 5  |
| 5 | <i>Smilax hispida</i> ( <i>S. tamnoides</i> )        | BRISTLY GREENBRIER            | 0  |
| 6 | <i>Solidago caesia</i>                               | BLUESTEM GOLDENROD            | 3  |
| 6 | <i>Thalictrum dioicum</i>                            | EARLY MEADOW-RUE              | 3  |
| 5 | <i>Tilia americana</i>                               | BASSWOOD                      | 3  |
| * | TORILIS JAPONICA                                     | HEDGE-PARSLEY                 | 3  |
| 2 | <i>Toxicodendron radicans</i>                        | POISON-IVY                    | 0  |
| 5 | <i>Trillium grandiflorum</i>                         | COMMON TRILLIUM               | 3  |
| 1 | <i>Ulmus americana</i>                               | AMERICAN ELM                  | -3 |
| 6 | <i>Viburnum acerifolium</i>                          | MAPLE-LEAVED VIBURNUM         | 5  |
| 5 | <i>Viburnum rafinesquianum</i>                       | DOWNY ARROW-WOOD              | 5  |
| 4 | <i>Viola pubescens</i>                               | YELLOW VIOLET                 | 3  |
| 6 | <i>Vitis aestivalis</i>                              | SUMMER GRAPE                  | 3  |
| 3 | <i>Vitis riparia</i>                                 | RIVER-BANK GRAPE              | 0  |

Also: *Lonicera* spp., *Prenanthes* sp.



# Matthaei Botanical Gardens

## Radrick Forest West

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Southern Forest

Oak forest between Radrick Forest and Radrick Fen more open than adjacent forest, with good diversity of savanna indicator species present; past disturbance from gravel mining evident in areas

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 134   | Total Species        | 4.32 | NATIVE MEAN C |
| 116   | Total Native Species | 3.74 | W/Adventives  |
| 86.6  | % Native Species     | 2.6  | NATIVE MEAN W |
| 46.52 | NATIVE FQI           | 2.7  | W/Adventives  |
| 43.28 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME  | COMMON NAME              | W | LISTED |
|---|--|--------------------------|---|--------|
| 0 | <i>Acer negundo</i>                                      | BOX-ELDER                | 0 |        |
| 4 | <i>Acer nigrum</i> (A. <i>saccharum</i> )                | BLACK MAPLE              | 3 |        |
| 1 | <i>Achillea millefolium</i>                              | YARROW                   | 3 |        |
| 7 | <i>Actaea pachypoda</i>                                  | DOLL'S-EYES              | 5 |        |
| 7 | <i>Actaea rubra</i>                                      | RED BANE BERRY           | 3 |        |
| * | <i>AESCULUS HIPPOCASTANUM</i>                            | HORSE-CHESTNUT           | 5 |        |
| 4 | <i>Ageratina altissima</i> ( <i>Eupatorium rugosum</i> ) | WHITE SNAKE ROOT         | 3 |        |
| * | <i>ALLIARIA PETIOLATA</i>                                | GARLIC MUSTARD           | 3 |        |
| 5 | <i>Allium cernuum</i>                                    | NODDING WILD ONION       | 3 |        |
| 5 | <i>Allium tricoccum</i>                                  | WILD LEEK                | 3 |        |
| 5 | <i>Amphicarpaea bracteata</i>                            | HOG-PEANUT               | 0 |        |
| 5 | <i>Anemone quinquefolia</i>                              | WOOD ANEMONE             | 3 |        |
| 3 | <i>Anemone virginiana</i>                                | THIMBLEWEED              | 3 |        |
| 2 | <i>Antennaria parlinii</i>                               | SMOOTH PUSSYTOES         | 5 |        |
| 3 | <i>Apocynum androsaemifolium</i>                         | SPREADING DOGBANE        | 5 |        |
| * | <i>ASPARAGUS OFFICINALIS</i>                             | GARDEN ASPARAGUS         | 3 |        |
| * | <i>BERBERIS THUNBERGII</i>                               | JAPANESE BARBERRY        | 3 |        |
| 7 | <i>Boechera canadensis</i> ( <i>Arabis c.</i> )          | SICKLE-POD               | 5 |        |
| 5 | <i>Boechera laevigata</i> ( <i>Arabis l.</i> )           | SMOOTH BANK CRESS        | 5 |        |
| 7 | <i>Brachyelytrum erectum</i>                             | LONG-AWNED WOOD GRASS    | 5 |        |
| * | <i>BROMUS ERECTUS</i>                                    | ERECT BROME              | 5 |        |
| 5 | <i>Bromus pubescens</i>                                  | CANADA BROME             | 3 |        |
| 6 | <i>Campanula rotundifolia</i>                            | HAREBELL                 | 3 |        |
| * | <i>CARDAMINE IMPATIENS</i>                               | BITTER CRESS             | 3 |        |
| 1 | <i>Carex blanda</i>                                      | SEDGE                    | 0 |        |
| 3 | <i>Carex cephalophora</i>                                | SEDGE                    | 3 |        |
| 7 | <i>Carex eburnea</i>                                     | SEDGE                    | 3 |        |
| 5 | <i>Carex hirtifolia</i>                                  | SEDGE                    | 3 |        |
| 4 | <i>Carex pensylvanica</i>                                | SEDGE                    | 5 |        |
| 1 | <i>Carex retroflexa</i>                                  | SEDGE                    | 5 |        |
| 2 | <i>Carex rosea</i> ( <i>C. convoluta</i> )               | CURLY-STYLED WOOD SEDGE  | 5 |        |
| 6 | <i>Carpinus caroliniana</i>                              | BLUE-BEECH               | 0 |        |
| 5 | <i>Carya glabra</i>                                      | PIG NUT HICKORY          | 3 |        |
| 5 | <i>Carya ovata</i>                                       | SHAG BARK HICKORY        | 3 |        |
| * | <i>CENTAUREA STOEBE</i> ( <i>C. MACULOSA</i> )           | SPOTTED KNAPWEED         | 5 |        |
| 4 | <i>Claytonia virginica</i>                               | SPRING-BEAUTY            | 3 |        |
| 4 | <i>Clematis virginiana</i>                               | VIRGIN'S BOWER           | 0 |        |
| 5 | <i>Comandra umbellata</i>                                | BASTARD-TOADFLAX         | 3 |        |
| 5 | <i>Cornus alternifolia</i>                               | ALTERNATE-LEAVED DOGWOOD | 3 |        |
| 1 | <i>Cornus foemina</i>                                    | GRAY DOGWOOD             | 0 |        |
| * | <i>DACTYLIS GLOMERATA</i>                                | ORCHARD GRASS            | 3 |        |
| 4 | <i>Danthonia spicata</i>                                 | POVERTY GRASS; OATGRASS  | 5 |        |
| 5 | <i>Desmodium canescens</i>                               | HOARY TICK-TREFOIL       | 5 |        |

|    |  |                               |    |   |
|----|--|-------------------------------|----|---|
| *  | DIANTHUS ARMERIA                         | DEPTFORD PINK                 | 5  |   |
| 3  | Dichanthelium implicatum (Panicum i.)    | PANIC GRASS                   | 0  |   |
| 5  | Dichanthelium latifolium (Panicum l.)    | BROAD-LEAVED PANIC GRASS      | 3  |   |
| 4  | Dichanthelium linearifolium (Panicum l.) | SLENDER-LEAVED PANIC GRASS    | 5  |   |
| 4  | Dioscorea villosa (Dioscorea villosa)    | WILD YAM                      | 0  |   |
| *  | ELAEAGNUS UMBELLATA                      | AUTUMN-OLIVE                  | 3  |   |
| 5  | Elymus hystrix (Hystrix patula)          | BOTTLEBRUSH GRASS             | 3  |   |
| 0  | Erigeron annuus                          | DAISY FLEABANE                | 3  |   |
| *  | EUONYMUS ALATA                           | WINGED EUONYMUS               | 5  |   |
| 5  | Euonymus obovata                         | RUNNING STRAWBERRY-BUSH       | 3  |   |
| 5  | Festuca subverticillata (F. obtusa)      | NODDING FESCUE                | 3  |   |
| 5  | Fraxinus americana                       | WHITE ASH                     | 3  |   |
| 2  | Fraxinus pennsylvanica                   | RED ASH                       | -3 |   |
| 0  | Galium aparine                           | ANNUAL BEDSTRAW               | 3  |   |
| 3  | Galium boreale                           | NORTHERN BEDSTRAW             | 0  |   |
| 4  | Galium circaezans                        | WHITE WILD LICORICE           | 3  |   |
| 5  | Galium concinnum                         | SHINING BEDSTRAW              | 3  |   |
| 9  | Gentianella quinquefolia                 | STIFF GENTIAN                 | 0  | T |
| 4  | Geranium maculatum                       | WILD GERANIUM                 | 3  |   |
| 1  | Geum canadense                           | WHITE AVENS                   | 0  |   |
| 5  | Hamamelis virginiana                     | WITCH-HAZEL                   | 3  |   |
| 5  | Helianthus divaricatus                   | WOODLAND SUNFLOWER            | 5  |   |
| 8  | Hepatica acutiloba                       | SHARP-LOBED HEPATICA          | 5  |   |
| 6  | Hepatica americana                       | ROUND-LOBED HEPATICA          | 5  |   |
| *  | HESPERIS MATRONALIS                      | DAME'S ROCKET                 | 3  |   |
| 8  | Heuchera americana                       | ALUM ROOT                     | 3  |   |
| *  | HIERACIUM PILOSELLOIDES                  | KING DEVIL                    | 5  |   |
| 5  | Hylodesmum glutinosum (Desmodium g.)     | CLUSTERED-LEAVED TICK-TREFOIL | 5  |   |
| 5  | Juglans nigra                            | BLACK WALNUT                  | 3  |   |
| 1  | Juncus tenuis                            | PATH RUSH                     | 0  |   |
| 4  | Juniperus communis                       | COMMON or GROUND JUNIPER      | 3  |   |
| 3  | Juniperus virginiana                     | RED-CEDAR                     | 3  |   |
| *  | LIGUSTRUM VULGARE                        | COMMON PRIVET                 | 3  |   |
| 5  | Lonicera dioica                          | RED HONEYSUCKLE               | 3  |   |
| 5  | Luzula multiflora                        | COMMON WOOD RUSH              | 3  |   |
| 5  | Maianthemum racemosum (Smilacina r.)     | FALSE SPIKENARD               | 3  |   |
| 5  | Maianthemum stellatum (Smilacina s.)     | STARRY FALSE SOLOMON-SEAL     | 0  |   |
| 4  | Osmorhiza claytonii                      | HAIRY SWEET-CICELY            | 3  |   |
| 5  | Ostrya virginiana                        | IRONWOOD; HOP-HORNBEAM        | 3  |   |
| 5  | Parthenocissus quinquefolia              | VIRGINIA CREEPER              | 3  |   |
| 10 | Pedicularis canadensis                   | WOOD-BETONY                   | 3  |   |
| 5  | Penstemon hirsutus                       | HAIRY BEARD-TONGUE            | 5  |   |
| 4  | Persicaria virginiana (Polygonum v.)     | JUMPSEED                      | 0  |   |
| 4  | Physocarpus opulifolius                  | NINEBARK                      | -3 |   |
| *  | POA COMPRESSA                            | CANADA BLUEGRASS              | 3  |   |
| *  | POA PRATENSIS                            | KENTUCKY BLUEGRASS            | 3  |   |
| 8  | Poa sylvestris                           | WOODLAND BLUEGRASS            | 0  |   |
| 3  | Podophyllum peltatum                     | MAY-APPLE                     | 3  |   |
| 1  | Populus deltoides                        | COTTONWOOD                    | 0  |   |
| 4  | Populus grandidentata                    | BIG-TOOTH ASPEN               | 3  |   |
| 2  | Potentilla simplex                       | OLD-FIELD CINQUEFOIL          | 3  |   |
| 2  | Prunus serotina                          | WILD BLACK CHERRY             | 3  |   |
| 2  | Prunus virginiana                        | CHOKE CHERRY                  | 3  |   |
| 5  | Quercus alba                             | WHITE OAK                     | 3  |   |
| 8  | Quercus bicolor                          | SWAMP WHITE OAK               | -3 |   |
| 5  | Quercus rubra                            | RED OAK                       | 3  |   |
| 6  | Quercus velutina                         | BLACK OAK                     | 5  |   |
| 0  | Ranunculus abortivus                     | SMALL-FLOWERED BUTTERCUP      | 0  |   |
| 10 | Ranunculus fascicularis                  | EARLY BUTTERCUP               | 3  |   |
| *  | RHAMNUS CATHARTICA                       | COMMON BUCKTHORN              | 0  |   |

|   |   |                            |    |
|---|---|----------------------------|----|
| 7 | <i>Rhus aromatica</i>                                 | FRAGRANT SUMAC             | 5  |
| 4 | <i>Ribes cynosbati</i>                                | PRICKLY or WILD GOOSEBERRY | 3  |
| 4 | <i>Rosa carolina</i>                                  | PASTURE ROSE               | 3  |
| 1 | <i>Rubus occidentalis</i>                             | BLACK RASPBERRY            | 5  |
| 5 | <i>Sanguinaria canadensis</i>                         | BLOODROOT                  | 3  |
| 4 | <i>Sanicula marilandica</i>                           | BLACK SNAKEROOT            | 3  |
| 2 | <i>Sanicula odorata</i> (S. gregaria)                 | BLACK SNAKEROOT            | 0  |
| 6 | <i>Smilax ecirrata</i>                                | UPRIGHT CARRION-FLOWER     | 5  |
| 5 | <i>Smilax hispida</i> (S. tamnoides)                  | BRISTLY GREENBRIER         | 0  |
| 6 | <i>Solidago caesia</i>                                | BLUESTEM GOLDENROD         | 3  |
| 5 | <i>Solidago speciosa</i>                              | SHOWY GOLDENROD            | 5  |
| 4 | <i>Sphenopholis intermedia</i>                        | SLENDER WEDGEGRASS         | 0  |
| 4 | <i>Symphotrichum cordifolium</i> (Aster c.)           | HEART-LEAVED ASTER         | 5  |
| 4 | <i>Symphotrichum oolentangiense</i> (Aster o.)        | PRAIRIE HEART-LEAVED ASTER | 5  |
| 2 | <i>Symphotrichum urophyllum</i> (Aster sagittifolius) | ARROW-LEAVED ASTER         | 5  |
| 6 | <i>Symplocarpus foetidus</i>                          | SKUNK-CABBAGE              | -5 |
| 8 | <i>Taenidia integerrima</i>                           | YELLOW-PIMPERNEL           | 5  |
| * | TARAXACUM OFFICINALE                                  | COMMON DANDELION           | 3  |
| 6 | <i>Thalictrum dioicum</i>                             | EARLY MEADOW-RUE           | 3  |
| 5 | <i>Tilia americana</i>                                | BASSWOOD                   | 3  |
| 2 | <i>Toxicodendron radicans</i>                         | POISON-IVY                 | 0  |
| 5 | <i>Trillium grandiflorum</i>                          | COMMON TRILLIUM            | 3  |
| 5 | <i>Triosteum aurantiacum</i>                          | HORSE-GENTIAN              | 5  |
| 3 | <i>Turritis glabra</i> (Arabis g.)                    | TOWER MUSTARD              | 5  |
| 1 | <i>Ulmus americana</i>                                | AMERICAN ELM               | -3 |
| 5 | <i>Viburnum rafinesquianum</i>                        | DOWNY ARROW-WOOD           | 5  |
| 8 | <i>Vicia caroliniana</i>                              | PALE or WOOD VETCH         | 5  |
| 2 | <i>Viola affinis</i>                                  | LE CONTE'S VIOLET          | -3 |
| 1 | <i>Viola sororia</i>                                  | COMMON BLUE VIOLET         | 0  |
| 3 | <i>Vitis riparia</i>                                  | RIVER-BANK GRAPE           | 0  |
| 3 | <i>Zanthoxylum americanum</i>                         | PRICKLY-ASH                | 3  |

Also: *Lonicera* spp., *Prenanthes* sp.

# Matthaei Botanical Gardens

## Radrack North Wetland

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Prairie Fen

Very degraded and ditched fen W of Fleming Creek, S of the buildings; dominated by *Typha* spp. and *Lythrum salicaria* but with significant pockets of native fen species; one small open marly area toward S end

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 146   | Total Species        | 4.42 | NATIVE MEAN C |
| 130   | Total Native Species | 3.93 | W/Adventives  |
| 89.0  | % Native Species     | -2.6 | NATIVE MEAN W |
| 50.34 | NATIVE FQI           | -2.3 | W/Adventives  |
| 47.50 | W/Adventives         |      |               |

| C  | SCIENTIFIC NAME                                | COMMON NAME             | W  | LISTED |
|----|--|-------------------------|----|--------|
| 7  | <i>Actaea rubra</i>                            | RED BANE BERRY          | 3  |        |
| 4  | <i>Allium canadense</i>                        | WILD GARLIC             | 3  |        |
| 5  | <i>Amphicarpaea bracteata</i>                  | HOG-PEANUT              | 0  |        |
| 3  | <i>Anemone virginiana</i>                      | THIMBLEWEED             | 3  |        |
| 3  | <i>Apios americana</i>                         | GROUNDNUT               | -3 |        |
| 3  | <i>Apocynum cannabinum</i> (A. sibiricum)      | INDIAN-HEMP             | 0  |        |
| 5  | <i>Arisaema triphyllum</i>                     | JACK-IN-THE-PULPIT      | 0  |        |
| 6  | <i>Asclepias incarnata</i>                     | SWAMP MILKWEED          | -5 |        |
| 1  | <i>Asclepias syriaca</i>                       | COMMON MILKWEED         | 5  |        |
| *  | BARBAREA VULGARIS                              | YELLOW ROCKET           | 0  |        |
| 8  | <i>Betula pumila</i>                           | BOG BIRCH               | -5 |        |
| 1  | <i>Bidens frondosa</i>                         | COMMON BEGGAR-TICKS     | -3 |        |
| 6  | <i>Bromus ciliatus</i>                         | FRINGED BROME           | -3 |        |
| 6  | <i>Bromus latiglumis</i>                       | EAR-LEAVED BROME        | -3 |        |
| 3  | <i>Calamagrostis canadensis</i>                | BLUE-JOINT              | -5 |        |
| 6  | <i>Caltha palustris</i>                        | MARSH-MARIGOLD          | -5 |        |
| 2  | <i>Calystegia sepium</i>                       | HEDGE BINDWEED          | 0  |        |
| 7  | <i>Campanula aparinoides</i>                   | MARSH BELLFLOWER        | -5 |        |
| *  | CARDAMINE IMPATIENS                            | BITTER CRESS            | 3  |        |
| 2  | <i>Carex hystericina</i>                       | SEDGE                   | -5 |        |
| 5  | <i>Carex leptalea</i>                          | SEDGE                   | -5 |        |
| 4  | <i>Carex lupulina</i>                          | SEDGE                   | -5 |        |
| 2  | <i>Carex pellita</i> (C. lanuginosa)           | SEDGE                   | -5 |        |
| 10 | <i>Carex prairea</i>                           | SEDGE                   | -3 |        |
| 10 | <i>Carex sterilis</i>                          | SEDGE                   | -5 |        |
| 4  | <i>Carex stricta</i>                           | SEDGE                   | -5 |        |
| *  | CELASTRUS ORBICULATUS                          | ORIENTAL BITTERSWEET    | 5  |        |
| 7  | <i>Chelone glabra</i>                          | TURTLEHEAD              | -5 |        |
| 4  | <i>Cicuta maculata</i>                         | WATER HEMLOCK           | -5 |        |
| 6  | <i>Cirsium muticum</i>                         | SWAMP THISTLE           | -5 |        |
| 4  | <i>Clematis virginiana</i>                     | VIRGIN'S BOWER          | 0  |        |
| 2  | <i>Cornus amomum</i>                           | SILKY DOGWOOD           | -3 |        |
| 2  | <i>Cornus sericea</i> (C. stolonifera)         | RED-OSIER               | -3 |        |
| 5  | <i>Corylus americana</i>                       | HAZELNUT                | 3  |        |
| 3  | <i>Cuscuta gronovii</i>                        | COMMON DODDER           | -3 |        |
| 8  | <i>Dasiphora fruticosa</i> (Potentilla f.)     | SHRUBBY CINQUEFOIL      | -3 |        |
| 5  | <i>Doellingeria umbellata</i> (Aster u.)       | FLAT-TOPPED WHITE ASTER | -3 |        |
| 6  | <i>Drosera rotundifolia</i>                    | ROUND-LEAVED SUNDEW     | -5 |        |
| 2  | <i>Echinocystis lobata</i>                     | WILD-CUCUMBER           | -3 |        |
| *  | ELAEAGNUS UMBELLATA                            | AUTUMN-OLIVE            | 3  |        |
| 4  | <i>Eleocharis erythropoda</i>                  | SPIKE-RUSH              | -5 |        |
| 10 | <i>Eleocharis quinqueflora</i> (E. pauciflora) | SPIKE-RUSH              | -5 |        |
| 10 | <i>Eleocharis rostellata</i>                   | SPIKE-RUSH              | -5 |        |

|   |   |                           |    |
|---|---|---------------------------|----|
| 4 | <i>Elymus virginicus</i>                            | VIRGINIA WILD-RYE         | -3 |
| 3 | <i>Epilobium coloratum</i>                          | CINNAMON WILLOW-HERB      | -5 |
| * | EPILOBIUM PARVIFLORUM                               | WILLOW-HERB               | -5 |
| 0 | <i>Equisetum arvense</i>                            | COMMON HORSETAIL          | 0  |
| 2 | <i>Erigeron philadelphicus</i>                      | PHILADELPHIA FLEABANE     | 0  |
| 4 | <i>Eupatorium perfoliatum</i>                       | BONESET                   | -3 |
| 4 | <i>Eutrochium maculatum</i> ( <i>Eupatorium</i> m.) | JOE-PYE-WEED              | -5 |
| * | FRANGULA ALNUS ( <i>RHAMNUS</i> FRANGULA)           | GLOSSY BUCKTHORN          | 0  |
| 2 | <i>Fraxinus pennsylvanica</i>                       | RED ASH                   | -3 |
| 5 | <i>Galium asprellum</i>                             | ROUGH BEDSTRAW            | -5 |
| 3 | <i>Galium boreale</i>                               | NORTHERN BEDSTRAW         | 0  |
| 4 | <i>Galium triflorum</i>                             | FRAGRANT BEDSTRAW         | 3  |
| 1 | <i>Geum canadense</i>                               | WHITE AVENS               | 0  |
| 4 | <i>Glyceria striata</i>                             | FOWL MANNA GRASS          | -5 |
| 5 | <i>Helianthus giganteus</i>                         | TALL SUNFLOWER            | -3 |
| * | HESPERIS MATRONALIS                                 | DAME'S ROCKET             | 3  |
| 9 | <i>Hierochloë hirta</i> ( <i>H. odorata</i> )       | SWEET GRASS               | -3 |
| 6 | <i>Hydrocotyle americana</i>                        | WATER-PENNYWORT           | -5 |
| 8 | <i>Hypericum ascyron</i>                            | GIANT ST. JOHN'S-WORT     | 0  |
| 2 | <i>Impatiens capensis</i>                           | SPOTTED TOUCH-ME-NOT      | -3 |
| 5 | <i>Iris virginica</i>                               | SOUTHERN BLUE FLAG        | -5 |
| 5 | <i>Juglans nigra</i>                                | BLACK WALNUT              | 3  |
| 7 | <i>Juncus brachycephalus</i>                        | RUSH                      | -5 |
| 4 | <i>Laportea canadensis</i>                          | WOOD NETTLE               | -3 |
| 7 | <i>Lathyrus palustris</i>                           | MARSH PEA                 | -3 |
| 3 | <i>Leersia oryzoides</i>                            | CUT GRASS                 | -5 |
| 5 | <i>Lemna minor</i>                                  | COMMON DUCKWEED           | -5 |
| 4 | <i>Lobelia siphilitica</i>                          | GREAT BLUE LOBELIA        | -3 |
| * | LONICERA xBELLA                                     | HYBRID HONEYSUCKLE        | 3  |
| 2 | <i>Lycopus americanus</i>                           | COMMON WATER HOREHOUND    | -5 |
| 4 | <i>Lysimachia ciliata</i>                           | FRINGED LOOSESTRIFE       | -3 |
| * | LYTHRUM SALICARIA                                   | PURPLE LOOSESTRIFE        | -5 |
| 5 | <i>Maianthemum stellatum</i> ( <i>Smilacina</i> s.) | STARRY FALSE SOLOMON-SEAL | 0  |
| 3 | <i>Mentha canadensis</i> ( <i>M. arvensis</i> )     | WILD MINT                 | -3 |
| 2 | <i>Monarda fistulosa</i>                            | WILD-BERGAMOT             | 3  |
| 3 | <i>Muhlenbergia mexicana</i>                        | LEAFY SATIN GRASS         | -3 |
| * | MYOSOTIS SCORPIOIDES                                | FORGET-ME-NOT             | -5 |
| 2 | <i>Onoclea sensibilis</i>                           | SENSITIVE FERN            | -3 |
| 6 | <i>Oxypolis rigidior</i>                            | COWBANE                   | -5 |
| 8 | <i>Parnassia glauca</i>                             | GRASS-OF-PARNASSUS        | -5 |
| 5 | <i>Parthenocissus quinquefolia</i>                  | VIRGINIA CREEPER          | 3  |
| 8 | <i>Pedicularis lanceolata</i>                       | SWAMP-BETONY              | -3 |
| 0 | <i>Phalaris arundinacea</i>                         | REED CANARY GRASS         | -3 |
| 5 | <i>Phragmites australis</i> var. <i>americanus</i>  | REED                      | -3 |
| 4 | <i>Physocarpus opulifolius</i>                      | NINEBARK                  | -3 |
| 5 | <i>Pilea fontana</i>                                | BOG CLEARWEED             | -3 |
| * | POA TRIVIALIS                                       | BLUEGRASS                 | -3 |
| 1 | <i>Populus deltoides</i>                            | COTTONWOOD                | 0  |
| 1 | <i>Populus tremuloides</i>                          | QUAKING ASPEN             | 0  |
| 0 | <i>Prunella vulgaris</i>                            | SELF-HEAL                 | 0  |
| 5 | <i>Pycnanthemum virginianum</i>                     | COMMON MOUNTAIN MINT      | -3 |
| 5 | <i>Quercus macrocarpa</i>                           | BUR OAK                   | 3  |
| 5 | <i>Ranunculus hispidus</i>                          | SWAMP BUTTERCUP           | 0  |
| * | RHAMNUS CATHARTICA                                  | COMMON BUCKTHORN          | 0  |
| 6 | <i>Ribes americanum</i>                             | WILD BLACK CURRANT        | -3 |
| 6 | <i>Ribes hirtellum</i>                              | SWAMP GOOSEBERRY          | -3 |
| * | ROSA MULTIFLORA                                     | MULTIFLORA ROSE           | 3  |
| 5 | <i>Rosa palustris</i>                               | SWAMP ROSE                | -5 |
| 4 | <i>Rubus pubescens</i>                              | DWARF RASPBERRY           | -3 |
| 1 | <i>Rudbeckia hirta</i>                              | BLACK-EYED SUSAN          | 3  |

|    |  |                             |    |   |
|----|--|-----------------------------|----|---|
| 6  | Rudbeckia laciniata                              | CUT-LEAF CONEFLOWER         | -3 |   |
| 9  | Rumex orbiculatus                                | GREAT WATER DOCK            | -5 |   |
| 3  | Salix amygdaloides                               | PEACH-LEAVED WILLOW         | -3 |   |
| 1  | Salix bebbiana                                   | BEBB'S WILLOW               | -3 |   |
| 1  | Salix discolor                                   | PUSSY WILLOW                | -3 |   |
| 2  | Salix eriocephala                                | WILLOW                      | -3 |   |
| 8  | Salix serissima                                  | AUTUMN WILLOW               | -5 |   |
| 3  | Sambucus canadensis                              | ELDERBERRY                  | -3 |   |
| 5  | Schoenoplectus acutus (Scirpus a.)               | HARDSTEM BULRUSH            | -5 |   |
| 4  | Schoenoplectus tabernaemontani (Scirpus validus) | SOFTSTEM BULRUSH            | -5 |   |
| 3  | Scirpus atrovirens                               | BULRUSH                     | -5 |   |
| 5  | Scutellaria galericulata                         | MARSH SKULLCAP              | -5 |   |
| *  | SOLANUM DULCAMARA                                | BITTERSWEET NIGHTSHADE      | 0  |   |
| 1  | Solidago altissima                               | TALL GOLDENROD              | 3  |   |
| 8  | Solidago ohioensis                               | OHIO GOLDENROD              | -5 |   |
| 6  | Solidago patula                                  | SWAMP GOLDENROD             | -5 |   |
| 6  | Solidago riddellii                               | RIDDELL'S GOLDENROD         | -5 |   |
| 4  | Sphenopholis intermedia                          | SLENDER WEDGEGRASS          | 0  |   |
| 4  | Spiraea alba                                     | MEADOWSWEET                 | -3 |   |
| 5  | Stellaria longifolia                             | LONG-LEAVED CHICKWEED       | -3 |   |
| 4  | Symphotrichum firmum (Aster puniceus)            | SMOOTH SWAMP ASTER          | -3 |   |
| 5  | Symphotrichum laeve (Aster l.)                   | SMOOTH ASTER                | 3  |   |
| 2  | Symphotrichum lateriflorum (Aster l.)            | CALICO ASTER                | 0  |   |
| 3  | Symphotrichum novae-angliae (Aster n.)           | NEW ENGLAND ASTER           | -3 |   |
| 5  | Symphotrichum puniceum (Aster p.)                | SWAMP ASTER                 | -5 |   |
| 6  | Symplocarpus foetidus                            | SKUNK-CABBAGE               | -5 |   |
| 4  | Teucrium canadense                               | WOOD-SAGE                   | -3 |   |
| 3  | Thalictrum dasycarpum                            | PURPLE MEADOW-RUE           | -3 |   |
| 2  | Thelypteris palustris                            | MARSH FERN                  | -3 |   |
| 5  | Tilia americana                                  | BASSWOOD                    | 3  |   |
| 2  | Toxicodendron radicans                           | POISON-IVY                  | 0  |   |
| 6  | Toxicodendron vernix                             | POISON SUMAC                | -5 |   |
| 8  | Triglochin palustris                             | SLENDER BOG ARROW-GRASS     | -5 |   |
| *  | TYPHA xGLAUCA                                    | HYBRID CAT-TAIL             | -5 |   |
| *  | TYPHA ANGUSTIFOLIA                               | NARROW-LEAVED CAT-TAIL      | -5 |   |
| 1  | Typha latifolia                                  | BROAD-LEAVED CAT-TAIL       | -5 |   |
| 1  | Ulmus americana                                  | AMERICAN ELM                | -3 |   |
| 10 | Valeriana edulis (V. ciliata)                    | COMMON VALERIAN             | -5 | T |
| 10 | Valeriana uliginosa                              | SWAMP VALERIAN              | -5 |   |
| 4  | Viburnum lentago                                 | NANNYBERRY                  | 0  |   |
| 5  | Viburnum trilobum (V. opulus)                    | AMERICAN Highbush-CRANBERRY | -3 |   |
| 3  | Vitis riparia                                    | RIVER-BANK GRAPE            | 0  |   |
| 3  | Zanthoxylum americanum                           | PRICKLY-ASH                 | 3  |   |

Also: Symphotrichum boreale x S. lanceolatum



# Matthaei Botanical Gardens

## Radrick Wet Meadow

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Southern Wet Meadow

Shrubby wet meadow dominated by *Carex lacustris* and coarser wetland forbs, N of Radrick fen and otherwise bordered by floodplain forest

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 90    | Total Species        | 4.33 | NATIVE MEAN C |
| 80    | Total Native Species | 3.84 | W/Adventives  |
| 88.9  | % Native Species     | -2.2 | NATIVE MEAN W |
| 38.68 | NATIVE FQI           | -1.7 | W/Adventives  |
| 36.47 | W/Adventives         |      |               |

| C  | SCIENTIFIC NAME  | COMMON NAME             | W  | LISTED |
|----|--|-------------------------|----|--------|
| 5  | <i>Acer saccharum</i>                                    | SUGAR MAPLE             | 3  |        |
| 4  | <i>Ageratina altissima</i> ( <i>Eupatorium rugosum</i> ) | WHITE SNAKEROOT         | 3  |        |
| 3  | <i>Apios americana</i>                                   | GROUNDNUT               | -3 |        |
| 5  | <i>Arisaema triphyllum</i>                               | JACK-IN-THE-PULPIT      | 0  |        |
| *  | <i>BERBERIS THUNBERGII</i>                               | JAPANESE BARBERRY       | 3  |        |
| 6  | <i>Bromus ciliatus</i>                                   | FRINGED BROME           | -3 |        |
| 6  | <i>Caltha palustris</i>                                  | MARSH-MARIGOLD          | -5 |        |
| 2  | <i>Carex hystericina</i>                                 | SEDGE                   | -5 |        |
| 6  | <i>Carex lacustris</i>                                   | SEDGE                   | -5 |        |
| 4  | <i>Carex stricta</i>                                     | SEDGE                   | -5 |        |
| 6  | <i>Carpinus caroliniana</i>                              | BLUE-BEECH              | 0  |        |
| *  | <i>CELASTRUS ORBICULATUS</i>                             | ORIENTAL BITTERSWEET    | 5  |        |
| 7  | <i>Chelone glabra</i>                                    | TURTLEHEAD              | -5 |        |
| 4  | <i>Cicuta maculata</i>                                   | WATER HEMLOCK           | -5 |        |
| 6  | <i>Cirsium muticum</i>                                   | SWAMP THISTLE           | -5 |        |
| 4  | <i>Clematis virginiana</i>                               | VIRGIN'S BOWER          | 0  |        |
| 10 | <i>Conioselinum chinense</i>                             | HEMLOCK-PARSLEY         | -5 |        |
| 2  | <i>Cornus amomum</i>                                     | SILKY DOGWOOD           | -3 |        |
| 1  | <i>Cornus foemina</i>                                    | GRAY DOGWOOD            | 0  |        |
| 2  | <i>Cornus sericea</i> ( <i>C. stolonifera</i> )          | RED-OSIER               | -3 |        |
| 5  | <i>Corylus americana</i>                                 | HAZELNUT                | 3  |        |
| 3  | <i>Cuscuta gronovii</i>                                  | COMMON DODDER           | -3 |        |
| 5  | <i>Doellingeria umbellata</i> ( <i>Aster</i> u.)         | FLAT-TOPPED WHITE ASTER | -3 |        |
| 6  | <i>Dryopteris cristata</i>                               | CRESTED SHIELD FERN     | -5 |        |
| 3  | <i>Epilobium coloratum</i>                               | CINNAMON WILLOW-HERB    | -5 |        |
| 0  | <i>Equisetum arvense</i>                                 | COMMON HORSETAIL        | 0  |        |
| 4  | <i>Eupatorium perfoliatum</i>                            | BONESET                 | -3 |        |
| 3  | <i>Euthamia graminifolia</i>                             | GRASS-LEAVED GOLDENROD  | 0  |        |
| 4  | <i>Eutrochium maculatum</i> ( <i>Eupatorium</i> m.)      | JOE-PYE-WEED            | -5 |        |
| *  | <i>FRANGULA ALNUS</i> ( <i>RHAMNUS FRANGULA</i> )        | GLOSSY BUCKTHORN        | 0  |        |
| 6  | <i>Fraxinus nigra</i>                                    | BLACK ASH               | -3 |        |
| 2  | <i>Fraxinus pennsylvanica</i>                            | RED ASH                 | -3 |        |
| 5  | <i>Galium asprellum</i>                                  | ROUGH BEDSTRAW          | -5 |        |
| 4  | <i>Galium triflorum</i>                                  | FRAGRANT BEDSTRAW       | 3  |        |
| 1  | <i>Geum canadense</i>                                    | WHITE AVENS             | 0  |        |
| 5  | <i>Helianthus giganteus</i>                              | TALL SUNFLOWER          | -3 |        |
| 3  | <i>Heracleum maximum</i>                                 | COW-PARSNIP             | -3 |        |
| 2  | <i>Impatiens capensis</i>                                | SPOTTED TOUCH-ME-NOT    | -3 |        |
| 5  | <i>Iris virginica</i>                                    | SOUTHERN BLUE FLAG      | -5 |        |
| 4  | <i>Laportea canadensis</i>                               | WOOD NETTLE             | -3 |        |
| 5  | <i>Lemna minor</i>                                       | COMMON DUCKWEED         | -5 |        |
| 5  | <i>Lemna turionifera</i> ( <i>L. minor</i> )             | RED DUCKWEED            | -5 |        |
| *  | <i>LIGUSTRUM OBTUSIFOLIUM</i>                            | BORDER PRIVET           | 3  |        |

|    |  |                             |    |
|----|--|-----------------------------|----|
| *  | LIGUSTRUM VULGARE                      | COMMON PRIVET               | 3  |
| 5  | Lilium michiganense                    | MICHIGAN LILY               | -3 |
| 4  | Lobelia siphilitica                    | GREAT BLUE LOBELIA          | -3 |
| 4  | Lysimachia ciliata                     | FRINGED LOOSESTRIFE         | -3 |
| 5  | Maianthemum racemosum (Smilacina r.)   | FALSE SPIKENARD             | 3  |
| 10 | Micranthes pensylvanica (Saxifraga p.) | SWAMP SAXIFRAGE             | -5 |
| 2  | Onoclea sensibilis                     | SENSITIVE FERN              | -3 |
| 6  | Oxypolis rigidior                      | COWBANE                     | -5 |
| 5  | Packera aurea (Senecio a.)             | GOLDEN RAGWORT              | -3 |
| 4  | Parthenocissus inserta                 | THICKET CREEPER             | 3  |
| 5  | Parthenocissus quinquefolia            | VIRGINIA CREEPER            | 3  |
| 8  | Pedicularis lanceolata                 | SWAMP-BETONY                | -3 |
| 4  | Persicaria virginiana (Polygonum v.)   | JUMPSEED                    | 0  |
| 4  | Physocarpus opulifolius                | NINEBARK                    | -3 |
| 5  | Pilea fontana                          | BOG CLEARWEED               | -3 |
| *  | POA PRATENSIS                          | KENTUCKY BLUEGRASS          | 3  |
| 5  | Prenanthes alba                        | WHITE LETTUCE               | 3  |
| 0  | Prunella vulgaris                      | SELF-HEAL                   | 0  |
| 5  | Quercus macrocarpa                     | BUR OAK                     | 3  |
| 5  | Quercus rubra                          | RED OAK                     | 3  |
| 5  | Ranunculus hispidus                    | SWAMP BUTTERCUP             | 0  |
| *  | RHAMNUS CATHARTICA                     | COMMON BUCKTHORN            | 0  |
| *  | ROSA MULTIFLORA                        | MULTIFLORA ROSE             | 3  |
| 5  | Rosa palustris                         | SWAMP ROSE                  | -5 |
| 1  | Rubus allegheniensis                   | COMMON BLACKBERRY           | 3  |
| 4  | Rubus pubescens                        | DWARF RASPBERRY             | -3 |
| 3  | Rubus setosus                          | BRISTLY BLACKBERRY          | -3 |
| 6  | Rudbeckia laciniata                    | CUT-LEAF CONEFLOWER         | -3 |
| *  | RUMEX OBTUSIFOLIUS                     | BITTER DOCK                 | 0  |
| 9  | Rumex orbiculatus                      | GREAT WATER DOCK            | -5 |
| 4  | Sagittaria latifolia                   | COMMON ARROWHEAD            | -5 |
| 10 | Sanguisorba canadensis                 | AMERICAN BURNET             | -3 |
| *  | SOLANUM DULCAMARA                      | BITTERSWEET NIGHTSHADE      | 0  |
| 6  | Solidago patula                        | SWAMP GOLDENROD             | -5 |
| 5  | Sparganium eurycarpum                  | COMMON BUR-REED             | -5 |
| 2  | Symphotrichum lateriflorum (Aster l.)  | CALICO ASTER                | 0  |
| 5  | Symphotrichum puniceum (Aster p.)      | SWAMP ASTER                 | -5 |
| 6  | Symplocarpus foetidus                  | SKUNK-CABBAGE               | -5 |
| 3  | Thalictrum dasycarpum                  | PURPLE MEADOW-RUE           | -3 |
| 2  | Thelypteris palustris                  | MARSH FERN                  | -3 |
| 5  | Tilia americana                        | BASSWOOD                    | 3  |
| 2  | Toxicodendron radicans                 | POISON-IVY                  | 0  |
| 1  | Typha latifolia                        | BROAD-LEAVED CAT-TAIL       | -5 |
| 1  | Ulmus americana                        | AMERICAN ELM                | -3 |
| 4  | Viburnum lentago                       | NANNYBERRY                  | 0  |
| 5  | Viburnum trilobum (V. opulus)          | AMERICAN Highbush-CRANBERRY | -3 |
| 3  | Zanthoxylum americanum                 | PRICKLY-ASH                 | 3  |

Also: Actaea sp., Trillium sp., Ribes sp.





# Matthaei Botanical Gardens

## Sanford Woods

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Southern Forest

Small open oak forest SW of Dix Pond, with some larger trees and spring wildflowers but infested with *Aesculus hippocastanum*

#### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 38    | Total Species        | 3.48 | NATIVE MEAN C |
| 29    | Total Native Species | 2.66 | W/Adventives  |
| 76.3  | % Native Species     | 2.1  | NATIVE MEAN W |
| 18.76 | NATIVE FQI           | 2.2  | W/Adventives  |
| 16.38 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                                       | COMMON NAME              | W  | LISTED |
|---|---|--------------------------|----|--------|
| 0 | <i>Acer negundo</i>                                   | BOX-ELDER                | 0  |        |
| * | <i>AESCULUS HIPPOCASTANUM</i>                         | HORSE-CHESTNUT           | 5  |        |
| * | <i>ALLIARIA PETIOLATA</i>                             | GARLIC MUSTARD           | 3  |        |
| 5 | <i>Arisaema triphyllum</i>                            | JACK-IN-THE-PULPIT       | 0  |        |
| 2 | <i>Asplenium platyneuron</i>                          | EBONY SPLEENWORT         | 3  |        |
| 3 | <i>Carex cristatella</i>                              | SEDGE                    | -3 |        |
| 4 | <i>Carex pensylvanica</i>                             | SEDGE                    | 5  |        |
| 2 | <i>Carex rosea</i> (C. convoluta)                     | CURLY-STYLED WOOD SEDGE  | 5  |        |
| 5 | <i>Carya glabra</i>                                   | PIGNET HICKORY           | 3  |        |
| 4 | <i>Claytonia virginica</i>                            | SPRING-BEAUTY            | 3  |        |
| 5 | <i>Cornus alternifolia</i>                            | ALTERNATE-LEAVED DOGWOOD | 3  |        |
| * | <i>DACTYLIS GLOMERATA</i>                             | ORCHARD GRASS            | 3  |        |
| 5 | <i>Elymus villosus</i>                                | SILKY WILD-RYE           | 3  |        |
| * | <i>FRANGULA ALNUS</i> (RHAMNUS FRANGULA)              | GLOSSY BUCKTHORN         | 0  |        |
| 5 | <i>Fraxinus americana</i>                             | WHITE ASH                | 3  |        |
| 5 | <i>Galium concinnum</i>                               | SHINING BEDSTRAW         | 3  |        |
| 4 | <i>Galium triflorum</i>                               | FRAGRANT BEDSTRAW        | 3  |        |
| 4 | <i>Geranium maculatum</i>                             | WILD GERANIUM            | 3  |        |
| 1 | <i>Hackelia virginiana</i>                            | BEGGAR'S LICE            | 3  |        |
| * | <i>HESPERIS MATRONALIS</i>                            | DAME'S ROCKET            | 3  |        |
| * | <i>LIGUSTRUM VULGARE</i>                              | COMMON PRIVET            | 3  |        |
| 5 | <i>Ostrya virginiana</i>                              | IRONWOOD; HOP-HORNBEAM   | 3  |        |
| 5 | <i>Parthenocissus quinquefolia</i>                    | VIRGINIA CREEPER         | 3  |        |
| 4 | <i>Persicaria virginiana</i> ( <i>Polygonum</i> v.)   | JUMPSEED                 | 0  |        |
| * | <i>POA PRATENSIS</i>                                  | KENTUCKY BLUEGRASS       | 3  |        |
| 2 | <i>Prunus serotina</i>                                | WILD BLACK CHERRY        | 3  |        |
| 2 | <i>Prunus virginiana</i>                              | CHOKE CHERRY             | 3  |        |
| 5 | <i>Quercus alba</i>                                   | WHITE OAK                | 3  |        |
| 6 | <i>Quercus velutina</i>                               | BLACK OAK                | 5  |        |
| * | <i>RHAMNUS CATHARTICA</i>                             | COMMON BUCKTHORN         | 0  |        |
| 5 | <i>Smilax hispida</i> (S. tamnoides)                  | BRISTLY GREENBRIER       | 0  |        |
| 2 | <i>Symphotrichum lateriflorum</i> (Aster l.)          | CALICO ASTER             | 0  |        |
| 2 | <i>Symphotrichum urophyllum</i> (Aster sagittifolius) | ARROW-LEAVED ASTER       | 5  |        |
| * | <i>TORILIS JAPONICA</i>                               | HEDGE-PARSLEY            | 3  |        |
| 2 | <i>Toxicodendron radicans</i>                         | POISON-IVY               | 0  |        |
| 1 | <i>Ulmus americana</i>                                | AMERICAN ELM             | -3 |        |
| 3 | <i>Vitis riparia</i>                                  | RIVER-BANK GRAPE         | 0  |        |
| 3 | <i>Zanthoxylum americanum</i>                         | PRICKLY-ASH              | 3  |        |

# Matthaei Botanical Gardens

## Sinclair Meadow North

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Southern Wet Meadow

Open moist meadow by Fleming Creek at N end of property, dominated by native *Solidago* spp. but with a variety of invasive species present

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 73    | Total Species        | 3.11 | NATIVE MEAN C |
| 53    | Total Native Species | 2.26 | W/Adventives  |
| 72.6  | % Native Species     | -0.5 | NATIVE MEAN W |
| 22.66 | NATIVE FQI           | 0.6  | W/Adventives  |
| 19.31 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                                   | COMMON NAME                | W  | LISTED |
|---|---|----------------------------|----|--------|
| 0 | <i>Acer negundo</i>                               | BOX-ELDER                  | 0  |        |
| 1 | <i>Achillea millefolium</i>                       | YARROW                     | 3  |        |
| 2 | <i>Agrimonia gryposepala</i>                      | TALL AGRIMONY              | 3  |        |
| 4 | <i>Agrimonia parviflora</i>                       | SWAMP AGRIMONY             | 0  |        |
| 5 | <i>Amphicarpaea bracteata</i>                     | HOG-PEANUT                 | 0  |        |
| 5 | <i>Andropogon gerardii</i>                        | BIG BLUESTEM               | 0  |        |
| 4 | <i>Anemone canadensis</i>                         | CANADA ANEMONE             | -3 |        |
| 3 | <i>Anemone virginiana</i>                         | THIMBLEWEED                | 3  |        |
| 3 | <i>Apocynum cannabinum</i> (A. sibiricum)         | INDIAN-HEMP                | 0  |        |
| 2 | <i>Carex granularis</i>                           | SEDGE                      | -3 |        |
| 3 | <i>Carex lurida</i>                               | SEDGE                      | -5 |        |
| 4 | <i>Carex stricta</i>                              | SEDGE                      | -5 |        |
| 1 | <i>Carex vulpinoidea</i>                          | SEDGE                      | -5 |        |
| * | CENTAUREA STOEBE (C. MACULOSA)                    | SPOTTED KNAPWEED           | 5  |        |
| 4 | <i>Cirsium discolor</i>                           | PASTURE THISTLE            | 5  |        |
| 4 | <i>Clematis virginiana</i>                        | VIRGIN'S BOWER             | 0  |        |
| 3 | <i>Clinopodium vulgare</i>                        | WILD-BASIL                 | 5  |        |
| * | DACTYLIS GLOMERATA                                | ORCHARD GRASS              | 3  |        |
| 8 | <i>Dasiphora fruticosa</i> (Potentilla f.)        | SHRUBBY CINQUEFOIL         | -3 |        |
| * | DAUCUS CAROTA                                     | QUEEN-ANNE'S-LACE          | 5  |        |
| 3 | <i>Desmodium canadense</i>                        | SHOWY TICK-TREFOIL         | 0  |        |
| 0 | <i>Equisetum arvense</i>                          | COMMON HORSETAIL           | 0  |        |
| 0 | <i>Erigeron annuus</i>                            | DAISY FLEABANE             | 3  |        |
| 4 | <i>Eupatorium perfoliatum</i>                     | BONESET                    | -3 |        |
| * | EUPHORBIA VIRGATA (E. ESULA)                      | LEAFY SPURGE               | 5  |        |
| 3 | <i>Euthamia graminifolia</i>                      | GRASS-LEAVED GOLDENROD     | 0  |        |
| 4 | <i>Eutrochium maculatum</i> (Eupatorium m.)       | JOE-PYE-WEED               | -5 |        |
| 5 | <i>Eutrochium purpureum</i> (Eupatorium p.)       | GREEN-STEMMED JOE-PYE-WEED | 0  |        |
| * | FRANGULA ALNUS (RHAMNUS FRANGULA)                 | GLOSSY BUCKTHORN           | 0  |        |
| 5 | <i>Heliopsis helianthoides</i>                    | FALSE SUNFLOWER            | 3  |        |
| * | HYPERICUM PERFORATUM                              | COMMON ST. JOHN'S-WORT     | 5  |        |
| 5 | <i>Hypericum prolificum</i>                       | SHRUBBY ST. JOHN'S-WORT    | 3  |        |
| 1 | <i>Juncus dudleyi</i>                             | DUDLEY'S RUSH              | -3 |        |
| 1 | <i>Juncus tenuis</i>                              | PATH RUSH                  | 0  |        |
| * | LEUCANTHEMUM VULGARE (CHRYSANTHEMUM LEUCANTHEMUM) | OX-EYE DAISY               | 5  |        |
| 4 | <i>Lysimachia ciliata</i>                         | FRINGED LOOSESTRIFE        | -3 |        |
| * | MEDICAGO LUPULINA                                 | BLACK MEDICK               | 3  |        |
| * | MELILOTUS ALBUS                                   | WHITE SWEET-CLOVER         | 3  |        |
| * | MELILOTUS OFFICINALIS                             | YELLOW SWEET-CLOVER        | 3  |        |
| 0 | <i>Oxalis dillenii</i> (O. stricta)               | COMMON YELLOW WOOD-SORREL  | 3  |        |
| * | PASTINACA SATIVA                                  | WILD PARSNIP               | 5  |        |
| 0 | <i>Phalaris arundinacea</i>                       | REED CANARY GRASS          | -3 |        |

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|   |   |                          |    |
|---|---|--------------------------|----|
| * | PINUS SYLVESTRIS                        | SCOTCH PINE              | 3  |
| * | PLANTAGO LANCEOLATA                     | ENGLISH PLANTAIN         | 3  |
| * | POA PRATENSIS                           | KENTUCKY BLUEGRASS       | 3  |
| 5 | Potentilla anserina                     | SILVERWEED               | -3 |
| * | POTENTILLA INCLINATA                    | ASHY CINQUEFOIL          | 5  |
| * | POTENTILLA RECTA                        | ROUGH-FRUITED CINQUEFOIL | 5  |
| 0 | Prunella vulgaris                       | SELF-HEAL                | 0  |
| 5 | Pycnanthemum virginianum                | COMMON MOUNTAIN MINT     | -3 |
| * | RHAMNUS CATHARTICA                      | COMMON BUCKTHORN         | 0  |
| 1 | Salix exigua                            | SANDBAR WILLOW           | -3 |
| * | SCHEDONORUS ARUNDINACEUS (FESTUCA A.)   | TALL FESCUE              | 3  |
| 5 | Schizachyrium scoparium (Andropogon s.) | LITTLE BLUESTEM          | 3  |
| 3 | Scirpus atrovirens                      | BULRUSH                  | -5 |
| 3 | Scirpus pendulus                        | BULRUSH                  | -5 |
| 5 | Scrophularia marilandica                | LATE FIGWORT             | 3  |
| * | SECURIGERA VARIA (CORONILLA V.)         | CROWN-VETCH              | 5  |
| 1 | Solidago altissima                      | TALL GOLDENROD           | 3  |
| 1 | Solidago canadensis                     | CANADA GOLDENROD         | 3  |
| 3 | Solidago gigantea                       | LATE GOLDENROD           | -3 |
| 6 | Solidago riddellii                      | RIDDELL'S GOLDENROD      | -5 |
| 6 | Sorghastrum nutans                      | INDIAN GRASS             | 3  |
| 2 | Symphotrichum lateriflorum (Aster l.)   | CALICO ASTER             | 0  |
| 3 | Symphotrichum novae-angliae (Aster n.)  | NEW ENGLAND ASTER        | -3 |
| 1 | Symphotrichum pilosum (Aster p.)        | HAIRY ASTER              | 3  |
| 3 | Thalictrum dasycarpum                   | PURPLE MEADOW-RUE        | -3 |
| 2 | Toxicodendron radicans                  | POISON-IVY               | 0  |
| * | TRAGOPOGON DUBIUS                       | GOAT'S BEARD             | 5  |
| 6 | Triadenum fraseri                       | MARSH ST. JOHN'S-WORT    | -5 |
| 4 | Verbena urticifolia                     | WHITE VERVAIN            | 0  |
| 6 | Vitis aestivalis                        | SUMMER GRAPE             | 3  |
| 3 | Vitis riparia                           | RIVER-BANK GRAPE         | 0  |

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# Matthaei Botanical Gardens

## Sinclair Meadow South

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Southern Wet Meadow

Open wetland in old creek channel at N end of property, dominated by *Acorus americanus* in the wetter E end and *Iris virginica* in the W end

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 62    | Total Species        | 4.37 | NATIVE MEAN C |
| 54    | Total Native Species | 3.81 | W/Adventives  |
| 87.1  | % Native Species     | -3.8 | NATIVE MEAN W |
| 32.12 | NATIVE FQI           | -3.5 | W/Adventives  |
| 29.97 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                             | COMMON NAME          | W  | LISTED |
|---|---|----------------------|----|--------|
| 6 | <i>Acorus americanus</i> (A. calamus)       | SWEET-FLAG           | -5 |        |
| * | AGROSTIS GIGANTEA                           | REDTOP               | -3 |        |
| 5 | <i>Amphicarpaea bracteata</i>               | HOG-PEANUT           | 0  |        |
| 7 | <i>Bidens trichosperma</i> (B. coronatus)   | TICKSEED-SUNFLOWER   | -5 |        |
| 6 | <i>Caltha palustris</i>                     | MARSH-MARIGOLD       | -5 |        |
| 7 | <i>Campanula aparinoides</i>                | MARSH BELLFLOWER     | -5 |        |
| 5 | <i>Carex comosa</i>                         | SEDGE                | -5 |        |
| 2 | <i>Carex pellita</i> (C. lanuginosa)        | SEDGE                | -5 |        |
| 4 | <i>Carex stricta</i>                        | SEDGE                | -5 |        |
| 6 | <i>Carpinus caroliniana</i>                 | BLUE-BEECH           | 0  |        |
| 7 | <i>Chelone glabra</i>                       | TURTLEHEAD           | -5 |        |
| 5 | <i>Cicuta bulbifera</i>                     | WATER HEMLOCK        | -5 |        |
| 4 | <i>Cicuta maculata</i>                      | WATER HEMLOCK        | -5 |        |
| 3 | <i>Cuscuta gronovii</i>                     | COMMON DODDER        | -3 |        |
| 4 | <i>Eleocharis erythropoda</i>               | SPIKE-RUSH           | -5 |        |
| 3 | <i>Epilobium coloratum</i>                  | CINNAMON WILLOW-HERB | -5 |        |
| 6 | <i>Epilobium leptophyllum</i>               | FEN WILLOW-HERB      | -5 |        |
| 0 | <i>Equisetum arvense</i>                    | COMMON HORSETAIL     | 0  |        |
| 7 | <i>Equisetum fluviatile</i>                 | WATER HORSETAIL      | -5 |        |
| 4 | <i>Eupatorium perfoliatum</i>               | BONESET              | -3 |        |
| 4 | <i>Eutrochium maculatum</i> (Eupatorium m.) | JOE-PYE-WEED         | -5 |        |
| * | FRANGULA ALNUS (RHAMNUS FRANGULA)           | GLOSSY BUCKTHORN     | 0  |        |
| 5 | <i>Galium asprellum</i>                     | ROUGH BEDSTRAW       | -5 |        |
| 6 | <i>Glyceria grandis</i>                     | REED MANNA GRASS     | -5 |        |
| 2 | <i>Impatiens capensis</i>                   | SPOTTED TOUCH-ME-NOT | -3 |        |
| 5 | <i>Iris virginica</i>                       | SOUTHERN BLUE FLAG   | -5 |        |
| 3 | <i>Leersia oryzoides</i>                    | CUT GRASS            | -5 |        |
| 5 | <i>Lemna minor</i>                          | COMMON DUCKWEED      | -5 |        |
| 5 | <i>Lemna turionifera</i> (L. minor)         | RED DUCKWEED         | -5 |        |
| 4 | <i>Lobelia siphilitica</i>                  | GREAT BLUE LOBELIA   | -3 |        |
| * | LYTHRUM SALICARIA                           | PURPLE LOOSESTRIFE   | -5 |        |
| 3 | <i>Mentha canadensis</i> (M. arvensis)      | WILD MINT            | -3 |        |
| 4 | <i>Nasturtium officinale</i>                | WATERCRESS           | -5 |        |
| 2 | <i>Onoclea sensibilis</i>                   | SENSITIVE FERN       | -3 |        |
| 5 | <i>Packera aurea</i> (Senecio a.)           | GOLDEN RAGWORT       | -3 |        |
| 5 | <i>Parthenocissus quinquefolia</i>          | VIRGINIA CREEPER     | 3  |        |
| 5 | <i>Persicaria punctata</i> (Polygonum p.)   | SMARTWEED            | -5 |        |
| 0 | <i>Phalaris arundinacea</i>                 | REED CANARY GRASS    | -3 |        |
| 5 | <i>Pilea fontana</i>                        | BOG CLEARWEED        | -3 |        |
| * | POA TRIVIALIS                               | BLUEGRASS            | -3 |        |
| 5 | <i>Pycnanthemum virginianum</i>             | COMMON MOUNTAIN MINT | -3 |        |
| 5 | <i>Ranunculus hispidus</i>                  | SWAMP BUTTERCUP      | 0  |        |
| * | ROSA MULTIFLORA                             | MULTIFLORA ROSE      | 3  |        |

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|   |  |                             |    |
|---|--|-----------------------------|----|
| 9 | Rumex orbiculatus                                | GREAT WATER DOCK            | -5 |
| 4 | Sagittaria latifolia                             | COMMON ARROWHEAD            | -5 |
| * | SALIX ALBA                                       | WHITE WILLOW                | -3 |
| 3 | Salix amygdaloides                               | PEACH-LEAVED WILLOW         | -3 |
| 3 | Sambucus canadensis                              | ELDERBERRY                  | -3 |
| 4 | Schoenoplectus tabernaemontani (Scirpus validus) | SOFTSTEM BULRUSH            | -5 |
| 3 | Scirpus atrovirens                               | BULRUSH                     | -5 |
| 5 | Scutellaria galericulata                         | MARSH SKULLCAP              | -5 |
| 5 | Scutellaria lateriflora                          | MAD-DOG SKULLCAP            | -5 |
| * | SOLANUM DULCAMARA                                | BITTERSWEET NIGHTSHADE      | 0  |
| 3 | Solidago gigantea                                | LATE GOLDENROD              | -3 |
| 5 | Sparganium eurycarpum                            | COMMON BUR-REED             | -5 |
| 6 | Spirodela polyrhiza                              | GREATER DUCKWEED            | -5 |
| 2 | Symphotrichum lateriflorum (Aster l.)            | CALICO ASTER                | 0  |
| 5 | Symphotrichum puniceum (Aster p.)                | SWAMP ASTER                 | -5 |
| 6 | Symplocarpus foetidus                            | SKUNK-CABBAGE               | -5 |
| 1 | Typha latifolia                                  | BROAD-LEAVED CAT-TAIL       | -5 |
| * | VIBURNUM OPULUS                                  | EUROPEAN Highbush-CRANBERRY | -3 |
| 3 | Vitis riparia                                    | RIVER-BANK GRAPE            | 0  |

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# Matthaei Botanical Gardens

## Willow Pond Marsh

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Emergent Marsh

Cat-tail marsh at the edge of man-made pond with a few other forbs around drier edges, adjacent to degraded floodplain forest and lawn

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 76    | Total Species        | 3.34 | NATIVE MEAN C |
| 58    | Total Native Species | 2.55 | W/Adventives  |
| 76.3  | % Native Species     | -2.0 | NATIVE MEAN W |
| 25.47 | NATIVE FQI           | -1.2 | W/Adventives  |
| 22.25 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                             | COMMON NAME             | W  | LISTED |
|---|---|-------------------------|----|--------|
| 0 | <i>Acalypha rhomboidea</i>                  | THREE-SEEDED MERCURY    | 3  |        |
| 0 | <i>Acer negundo</i>                         | BOX-ELDER               | 0  |        |
| 4 | <i>Agrimonia parviflora</i>                 | SWAMP AGRIMONY          | 0  |        |
| 3 | <i>Apocynum cannabinum</i> (A. sibiricum)   | INDIAN-HEMP             | 0  |        |
| 6 | <i>Asclepias incarnata</i>                  | SWAMP MILKWEED          | -5 |        |
| 1 | <i>Asclepias syriaca</i>                    | COMMON MILKWEED         | 5  |        |
| * | BERTEROA INCANA                             | HOARY ALYSSUM           | 5  |        |
| 3 | <i>Bidens cernua</i>                        | NODDING BEGGAR-TICKS    | -5 |        |
| 1 | <i>Bidens frondosa</i>                      | COMMON BEGGAR-TICKS     | -3 |        |
| * | CARDUUS ACANTHOIDES                         | PLUMELESS THISTLE       | 5  |        |
| 4 | <i>Carex stricta</i>                        | SEDGE                   | -5 |        |
| 7 | <i>Chelone glabra</i>                       | TURTLEHEAD              | -5 |        |
| * | CIRSIUM ARVENSE                             | CANADA THISTLE          | 3  |        |
| 0 | <i>Conyza canadensis</i>                    | HORSEWEED               | 3  |        |
| 2 | <i>Cornus amomum</i>                        | SILKY DOGWOOD           | -3 |        |
| 1 | <i>Cornus foemina</i>                       | GRAY DOGWOOD            | 0  |        |
| 2 | <i>Cornus sericea</i> (C. stolonifera)      | RED-OSIER               | -3 |        |
| * | DAUCUS CAROTA                               | QUEEN-ANNE'S-LACE       | 5  |        |
| 2 | <i>Echinocystis lobata</i>                  | WILD-CUCUMBER           | -3 |        |
| * | EPILOBIUM HIRSUTUM                          | GREAT HAIRY WILLOW-HERB | -3 |        |
| 2 | <i>Erigeron philadelphicus</i>              | PHILADELPHIA FLEABANE   | 0  |        |
| 4 | <i>Eupatorium perfoliatum</i>               | BONESET                 | -3 |        |
| 0 | <i>Euphorbia nutans</i>                     | EYEBANE                 | 3  |        |
| 4 | <i>Eutrochium maculatum</i> (Eupatorium m.) | JOE-PYE-WEED            | -5 |        |
| * | FRANGULA ALNUS (RHAMNUS FRANGULA)           | GLOSSY BUCKTHORN        | 0  |        |
| 5 | <i>Fraxinus americana</i>                   | WHITE ASH               | 3  |        |
| 5 | <i>Galium asprellum</i>                     | ROUGH BEDSTRAW          | -5 |        |
| 1 | <i>Geum canadense</i>                       | WHITE AVENS             | 0  |        |
| * | HESPERIS MATRONALIS                         | DAME'S ROCKET           | 3  |        |
| 2 | <i>Impatiens capensis</i>                   | SPOTTED TOUCH-ME-NOT    | -3 |        |
| 4 | <i>Laportea canadensis</i>                  | WOOD NETTLE             | -3 |        |
| 3 | <i>Leersia oryzoides</i>                    | CUT GRASS               | -5 |        |
| 5 | <i>Lemna turionifera</i> (L. minor)         | RED DUCKWEED            | -5 |        |
| * | LEONURUS CARDIACA                           | MOTHERWORT              | 5  |        |
| * | LYTHRUM SALICARIA                           | PURPLE LOOSESTRIFE      | -5 |        |
| 3 | <i>Mentha canadensis</i> (M. arvensis)      | WILD MINT               | -3 |        |
| 2 | <i>Monarda fistulosa</i>                    | WILD-BERGAMOT           | 3  |        |
| * | PASTINACA SATIVA                            | WILD PARSNIP            | 5  |        |
| * | PERSICARIA MACULOSA (POLYGONUM PERSICARIA)  | LADY'S-THUMB            | 0  |        |
| 5 | <i>Persicaria punctata</i> (Polygonum p.)   | SMARTWEED               | -5 |        |
| 0 | <i>Phalaris arundinacea</i>                 | REED CANARY GRASS       | -3 |        |
| 7 | <i>Platanus occidentalis</i>                | SYCAMORE                | -3 |        |

|   |  |                        |    |
|---|--|------------------------|----|
| 8 | <i>Pontederia cordata</i>                              | PICKEREL-WEED          | -5 |
| 1 | <i>Populus deltoides</i>                               | COTTONWOOD             | 0  |
| 5 | <i>Pycnanthemum virginianum</i>                        | COMMON MOUNTAIN MINT   | -3 |
| * | RHAMNUS CATHARTICA                                     | COMMON BUCKTHORN       | 0  |
| * | ROSA MULTIFLORA  | MULTIFLORA ROSE        | 3  |
| 5 | <i>Rosa palustris</i>                                  | SWAMP ROSE             | -5 |
| * | RUMEX CRISPUS  | CURLY DOCK             | 0  |
| 3 | <i>Sambucus canadensis</i>                             | ELDERBERRY             | -3 |
| 5 | <i>Scrophularia marilandica</i>                        | LATE FIGWORT           | 3  |
| 5 | <i>Scutellaria galericulata</i>                        | MARSH SKULLCAP         | -5 |
| 1 | <i>Solidago altissima</i>                              | TALL GOLDENROD         | 3  |
| 8 | <i>Solidago ohioensis</i>                              | OHIO GOLDENROD         | -5 |
| * | SONCHUS ARVENSIS (S. ULIGINOSUS)                       | PERENNIAL SOW-THISTLE  | 3  |
| 6 | <i>Sorghastrum nutans</i>                              | INDIAN GRASS           | 3  |
| 5 | <i>Spartina pectinata</i>                              | CORDGRASS              | -3 |
| 6 | <i>Spirodela polyrhiza</i>                             | GREATER DUCKWEED       | -5 |
| 4 | <i>Symphotrichum firmum</i> ( <i>Aster puniceus</i> )  | SMOOTH SWAMP ASTER     | -3 |
| 2 | <i>Symphotrichum lanceolatum</i> ( <i>Aster l.</i> )   | PANICLED ASTER         | -3 |
| 2 | <i>Symphotrichum lateriflorum</i> ( <i>Aster l.</i> )  | CALICO ASTER           | 0  |
| 3 | <i>Symphotrichum novae-angliae</i> ( <i>Aster n.</i> ) | NEW ENGLAND ASTER      | -3 |
| 5 | <i>Symphotrichum puniceum</i> ( <i>Aster p.</i> )      | SWAMP ASTER            | -5 |
| 6 | <i>Symplocarpus foetidus</i>                           | SKUNK-CABBAGE          | -5 |
| 3 | <i>Thalictrum dasycarpum</i>                           | PURPLE MEADOW-RUE      | -3 |
| * | THLASPI ARVENSE  | PENNY CRESS            | 5  |
| * | TYPHA xGLAUCA  | HYBRID CAT-TAIL        | -5 |
| * | TYPHA ANGUSTIFOLIA                                     | NARROW-LEAVED CAT-TAIL | -5 |
| 1 | <i>Typha latifolia</i>                                 | BROAD-LEAVED CAT-TAIL  | -5 |
| 1 | <i>Ulmus americana</i>                                 | AMERICAN ELM           | -3 |
| 1 | <i>Urtica dioica</i>                                   | STINGING NETTLE        | 0  |
| 4 | <i>Verbena hastata</i>                                 | BLUE VERVAIN           | -3 |
| 4 | <i>Verbena urticifolia</i>                             | WHITE VERVAIN          | 0  |
| 4 | <i>Vernonia missurica</i>                              | MISSOURI IRONWEED      | 0  |
| 3 | <i>Vitis riparia</i>                                   | RIVER-BANK GRAPE       | 0  |
| 5 | <i>Wolffia columbiana</i>                              | COMMON WATER MEAL      | -5 |

Also: *Lonicera* spp., *Betula* sp., *Lactuca* sp.

# Mud Lake Bog

## Big Oak Island

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Southern Forest

Open oak woods on an island in the SW corner of the property, surrounded by a large sedge meadow

#### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 100   | Total Species        | 3.85 | NATIVE MEAN C |
| 91    | Total Native Species | 3.50 | W/Adventives  |
| 91.0  | % Native Species     | 1.3  | NATIVE MEAN W |
| 36.69 | NATIVE FQI           | 1.4  | W/Adventives  |
| 35.00 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME  | COMMON NAME              | W  | LISTED |
|---|--|--------------------------|----|--------|
| 2 | <i>Acer saccharinum</i>                                    | SILVER MAPLE             | -3 |        |
| 2 | <i>Agrimonia gryposepala</i>                               | TALL AGRIMONY            | 3  |        |
| 4 | <i>Agrimonia parviflora</i>                                | SWAMP AGRIMONY           | 0  |        |
| * | <i>ALLIARIA PETIOLATA</i>                                  | GARLIC MUSTARD           | 3  |        |
| 4 | <i>Amelanchier arborea</i>                                 | JUNEBERRY                | 3  |        |
| 5 | <i>Amphicarpaea bracteata</i>                              | HOG-PEANUT               | 0  |        |
| 5 | <i>Anemone quinquefolia</i>                                | WOOD ANEMONE             | 3  |        |
| 2 | <i>Antennaria parlinii</i>                                 | SMOOTH PUSSYTOES         | 5  |        |
| 3 | <i>Apocynum androsaemifolium</i>                           | SPREADING DOGBANE        | 5  |        |
| 6 | <i>Asclepias exaltata</i>                                  | POKE MILKWEED            | 5  |        |
| 6 | <i>Asclepias incarnata</i>                                 | SWAMP MILKWEED           | -5 |        |
| 1 | <i>Asclepias syriaca</i>                                   | COMMON MILKWEED          | 5  |        |
| 5 | <i>Boehmeria cylindrica</i>                                | FALSE NETTLE             | -5 |        |
| 6 | <i>Campanula rotundifolia</i>                              | HAREBELL                 | 3  |        |
| 5 | <i>Cardamine concatenata</i> ( <i>Dentaria laciniata</i> ) | CUT-LEAVED TOOTHWORT     | 3  |        |
| 3 | <i>Carex alopecoidea</i>                                   | SEDGE                    | -3 |        |
| 3 | <i>Carex cephalophora</i>                                  | SEDGE                    | 3  |        |
| 3 | <i>Carex cristatella</i>                                   | SEDGE                    | -3 |        |
| 2 | <i>Carex pellita</i> ( <i>C. lanuginosa</i> )              | SEDGE                    | -5 |        |
| 4 | <i>Carex pensylvanica</i>                                  | SEDGE                    | 5  |        |
| 2 | <i>Carex rosea</i> ( <i>C. convoluta</i> )                 | CURLY-STYLED WOOD SEDGE  | 5  |        |
| 8 | <i>Carex tuckermanii</i>                                   | SEDGE                    | -5 |        |
| 5 | <i>Carya ovata</i>   | SHAGBARK HICKORY         | 3  |        |
| 7 | <i>Cephalanthus occidentalis</i>                           | BUTTONBUSH               | -5 |        |
| 7 | <i>Cinna arundinacea</i>                                   | WOOD REEDGRASS           | -3 |        |
| 4 | <i>Claytonia virginica</i>                                 | SPRING-BEAUTY            | 3  |        |
| 1 | <i>Cornus foemina</i>                                      | GRAY DOGWOOD             | 0  |        |
| * | <i>DACTYLIS GLOMERATA</i>                                  | ORCHARD GRASS            | 3  |        |
| 4 | <i>Danthonia spicata</i>                                   | POVERTY GRASS; OATGRASS  | 5  |        |
| 5 | <i>Dichanthelium latifolium</i> ( <i>Panicum l.</i> )      | BROAD-LEAVED PANIC GRASS | 3  |        |
| * | <i>ELAEAGNUS UMBELLATA</i>                                 | AUTUMN-OLIVE             | 3  |        |
| 4 | <i>Elymus virginicus</i>                                   | VIRGINIA WILD-RYE        | -3 |        |
| 4 | <i>Erigeron strigosus</i>                                  | DAISY FLEABANE           | 3  |        |
| 4 | <i>Euphorbia corollata</i>                                 | FLOWERING SPURGE         | 5  |        |
| 4 | <i>Eurybia macrophylla</i> ( <i>Aster m.</i> )             | BIG-LEAVED ASTER         | 5  |        |
| 4 | <i>Eutrochium maculatum</i> ( <i>Eupatorium m.</i> )       | JOE-PYE-WEED             | -5 |        |
| 5 | <i>Festuca subverticillata</i> ( <i>F. obtusa</i> )        | NODDING FESCUE           | 3  |        |
| 2 | <i>Fragaria virginiana</i>                                 | WILD STRAWBERRY          | 3  |        |
| 2 | <i>Fraxinus pennsylvanica</i>                              | RED ASH                  | -3 |        |
| 3 | <i>Galium boreale</i>                                      | NORTHERN BEDSTRAW        | 0  |        |
| 4 | <i>Galium circaezans</i>                                   | WHITE WILD LICORICE      | 3  |        |
| 4 | <i>Galium triflorum</i>                                    | FRAGRANT BEDSTRAW        | 3  |        |
| 7 | <i>Gaylussacia baccata</i>                                 | HUCKLEBERRY              | 3  |        |
| 4 | <i>Geranium maculatum</i>                                  | WILD GERANIUM            | 3  |        |



|   |   |                               |    |
|---|---|-------------------------------|----|
| 4 | <i>Glyceria striata</i>                               | FOWL MANNA GRASS              | -5 |
| 1 | <i>Hackelia virginiana</i>                            | BEGGAR'S LICE                 | 3  |
| 5 | <i>Helianthus divaricatus</i>                         | WOODLAND SUNFLOWER            | 5  |
| 5 | <i>Hylodesmum glutinosum</i> (Desmodium g.)           | CLUSTERED-LEAVED TICK-TREFOIL | 5  |
| 4 | <i>Juniperus communis</i>                             | COMMON or GROUND JUNIPER      | 3  |
| 8 | <i>Lathyrus venosus</i>                               | VEINY PEA                     | 0  |
| 5 | <i>Lonicera dioica</i>                                | RED HONEYSUCKLE               | 3  |
| 5 | <i>Luzula multiflora</i>                              | COMMON WOOD RUSH              | 3  |
| 4 | <i>Lysimachia ciliata</i>                             | FRINGED LOOSESTRIFE           | -3 |
| 4 | <i>Maianthemum canadense</i>                          | CANADA MAYFLOWER              | 3  |
| 5 | <i>Maianthemum racemosum</i> (Smilacina r.)           | FALSE SPIKENARD               | 3  |
| 0 | <i>Muhlenbergia schreberi</i>                         | NIMBLEWILL                    | 0  |
| 2 | <i>Onoclea sensibilis</i>                             | SENSITIVE FERN                | -3 |
| 5 | <i>Ostrya virginiana</i>                              | IRONWOOD; HOP-HORNBEAM        | 3  |
| 4 | <i>Persicaria virginiana</i> (Polygonum v.)           | JUMPSEED                      | 0  |
| 0 | <i>Phalaris arundinacea</i>                           | REED CANARY GRASS             | -3 |
| * | POA COMPRESSA   | CANADA BLUEGRASS              | 3  |
| 3 | <i>Podophyllum peltatum</i>                           | MAY-APPLE                     | 3  |
| 1 | <i>Populus tremuloides</i>                            | QUAKING ASPEN                 | 0  |
| 2 | <i>Potentilla simplex</i>                             | OLD-FIELD CINQUEFOIL          | 3  |
| 0 | <i>Prunella vulgaris</i>                              | SELF-HEAL                     | 0  |
| * | PRUNUS AVIUM  | SWEET CHERRY                  | 5  |
| 2 | <i>Prunus serotina</i>                                | WILD BLACK CHERRY             | 3  |
| 2 | <i>Prunus virginiana</i>                              | CHOKE CHERRY                  | 3  |
| 0 | <i>Pteridium aquilinum</i>                            | BRACKEN FERN                  | 3  |
| 5 | <i>Quercus alba</i>                                   | WHITE OAK                     | 3  |
| 4 | <i>Quercus ellipsoidalis</i> (Q. coccinea)            | HILL'S OAK                    | 5  |
| 6 | <i>Quercus velutina</i>                               | BLACK OAK                     | 5  |
| 0 | <i>Ranunculus abortivus</i>                           | SMALL-FLOWERED BUTTERCUP      | 0  |
| * | RHAMNUS CATHARTICA                                    | COMMON BUCKTHORN              | 0  |
| 7 | <i>Rhus aromatica</i>                                 | FRAGRANT SUMAC                | 5  |
| 4 | <i>Rosa carolina</i>                                  | PASTURE ROSE                  | 3  |
| * | ROSA MULTIFLORA                                       | MULTIFLORA ROSE               | 3  |
| 5 | <i>Scutellaria lateriflora</i>                        | MAD-DOG SKULLCAP              | -5 |
| 6 | <i>Solidago caesia</i>                                | BLUESTEM GOLDENROD            | 3  |
| 3 | <i>Solidago gigantea</i>                              | LATE GOLDENROD                | -3 |
| 5 | <i>Symphotrichum laeve</i> (Aster l.)                 | SMOOTH ASTER                  | 3  |
| 2 | <i>Symphotrichum lanceolatum</i> (Aster l.)           | PANICLED ASTER                | -3 |
| 2 | <i>Symphotrichum lateriflorum</i> (Aster l.)          | CALICO ASTER                  | 0  |
| 2 | <i>Symphotrichum urophyllum</i> (Aster sagittifolius) | ARROW-LEAVED ASTER            | 5  |
| 6 | <i>Symplocarpus foetidus</i>                          | SKUNK-CABBAGE                 | -5 |
| 8 | <i>Taenidia integerrima</i>                           | YELLOW-PIMPERNEL              | 5  |
| * | TARAXACUM OFFICINALE                                  | COMMON DANDELION              | 3  |
| 6 | <i>Thalictrum dioicum</i>                             | EARLY MEADOW-RUE              | 3  |
| 8 | <i>Thalictrum thalictroides</i> (Anemonella t.)       | RUE-ANEMONE                   | 3  |
| * | TORILIS JAPONICA                                      | HEDGE-PARSLEY                 | 3  |
| 2 | <i>Toxicodendron radicans</i>                         | POISON-IVY                    | 0  |
| 1 | <i>Ulmus americana</i>                                | AMERICAN ELM                  | -3 |
| 1 | <i>Urtica dioica</i>                                  | STINGING NETTLE               | 0  |
| 7 | <i>Vaccinium pallidum</i>                             | HILLSIDE BLUEBERRY            | 5  |
| 4 | <i>Verbena urticifolia</i>                            | WHITE VERVAIN                 | 0  |
| 4 | <i>Viburnum lentago</i>                               | NANNYBERRY                    | 0  |
| 8 | <i>Vicia caroliniana</i>                              | PALE or WOOD VETCH            | 5  |
| 4 | <i>Viola pubescens</i>                                | YELLOW VIOLET                 | 3  |
| 1 | <i>Viola sororia</i>                                  | COMMON BLUE VIOLET            | 0  |
| 3 | <i>Vitis riparia</i>                                  | RIVER-BANK GRAPE              | 0  |

Also: *Malus* sp., *Lonicera* sp., *Crataegus* sp., *Prenanthes* sp.

# Mud Lake Bog

## Black Spruce Bog

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Poor Conifer Swamp

Swamp forest N of bog, fairly open understory but overstory with a dense closed canopy of *Picea mariana*; ground carpeted with springy sphagnum moss

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 23    | Total Species        | 6.18 | NATIVE MEAN C |
| 22    | Total Native Species | 5.91 | W/Adventives  |
| 95.7  | % Native Species     | -2.1 | NATIVE MEAN W |
| 29.00 | NATIVE FQI           | -2.0 | W/Adventives  |
| 28.36 | W/Adventives         |      |               |

| C  | SCIENTIFIC NAME                                | COMMON NAME         | W  | LISTED |
|----|--|---------------------|----|--------|
| 1  | <i>Acer rubrum</i>                             | RED MAPLE           | 0  |        |
| 4  | <i>Amelanchier arborea</i>                     | JUNEBERRY           | 3  |        |
| 7  | <i>Betula alleghaniensis</i>                   | YELLOW BIRCH        | 0  |        |
| 10 | <i>Carex billingsii</i> (C. <i>trisperma</i> ) | SEDGE               | -5 |        |
| 4  | <i>Carex crinita</i>                           | SEDGE               | -5 |        |
| 5  | <i>Carex gracilescens</i>                      | SEDGE               | 3  |        |
| 5  | <i>Carex leptalea</i>                          | SEDGE               | -5 |        |
| 9  | <i>Carex trisperma</i>                         | SEDGE               | -5 |        |
| 5  | <i>Coptis trifolia</i>                         | GOLDTHREAD          | -3 |        |
| 6  | <i>Drosera rotundifolia</i>                    | ROUND-LEAVED SUNDEW | -5 |        |
| 8  | <i>Dulichium arundinaceum</i>                  | THREE-WAY SEDGE     | -5 |        |
| 8  | <i>Eriophorum virginicum</i>                   | TAWNY COTTON-GRASS  | -5 |        |
| *  | FRANGULA ALNUS (RHAMNUS FRANGULA)              | GLOSSY BUCKTHORN    | 0  |        |
| 7  | <i>Gaylussacia baccata</i>                     | HUCKLEBERRY         | 3  |        |
| 4  | <i>Maianthemum canadense</i>                   | CANADA MAYFLOWER    | 3  |        |
| 5  | <i>Monotropa uniflora</i>                      | INDIAN-PIPE         | 3  |        |
| 5  | <i>Osmunda cinnamomea</i>                      | CINNAMON FERN       | -3 |        |
| 6  | <i>Picea mariana</i>                           | BLACK SPRUCE        | -3 |        |
| 10 | <i>Sarracenia purpurea</i>                     | PITCHER-PLANT       | -5 |        |
| 6  | <i>Symplocarpus foetidus</i>                   | SKUNK-CABBAGE       | -5 |        |
| 5  | <i>Trientalis borealis</i>                     | STAR-FLOWER         | 0  |        |
| 6  | <i>Vaccinium corymbosum</i>                    | HIGHBUSH BLUEBERRY  | -3 |        |
| 10 | <i>Woodwardia virginica</i>                    | VIRGINIA CHAIN-FERN | -5 |        |



# Mud Lake Bog

## Bog North

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Bog

Open floating bog mat on NE side of Mud Lake, with stunted conifers among lush mossy hummocks

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 71    | Total Species        | 6.04 | NATIVE MEAN C |
| 69    | Total Native Species | 5.87 | W/Adventives  |
| 97.2  | % Native Species     | -4.3 | NATIVE MEAN W |
| 50.20 | NATIVE FQI           | -4.3 | W/Adventives  |
| 49.49 | W/Adventives         |      |               |

| C  | SCIENTIFIC NAME                          | COMMON NAME                  | W  | LISTED |
|----|--|------------------------------|----|--------|
| 1  | <i>Acer rubrum</i>                       | RED MAPLE                    | 0  |        |
| 7  | <i>Agalinis purpurea</i>                 | PURPLE FALSE FOXGLOVE        | -3 |        |
| 5  | <i>Aronia prunifolia</i>                 | CHOKEBERRY                   | -3 |        |
| 7  | <i>Betula alleghaniensis</i>             | YELLOW BIRCH                 | 0  |        |
| 8  | <i>Betula pumila</i>                     | BOG BIRCH                    | -5 |        |
| 5  | <i>Boehmeria cylindrica</i>              | FALSE NETTLE                 | -5 |        |
| 6  | <i>Brasenia schreberi</i>                | WATER-SHIELD                 | -5 |        |
| 3  | <i>Calamagrostis canadensis</i>          | BLUE-JOINT                   | -5 |        |
| 9  | <i>Calopogon tuberosus</i>               | GRASS-PINK                   | -5 |        |
| 7  | <i>Campanula aparinoides</i>             | MARSH BELLFLOWER             | -5 |        |
| 10 | <i>Carex billingsii</i> (C. trisperma)   | SEDGE                        | -5 |        |
| 8  | <i>Carex canescens</i>                   | SEDGE                        | -5 |        |
| 5  | <i>Carex comosa</i>                      | SEDGE                        | -5 |        |
| 8  | <i>Carex diandra</i>                     | SEDGE                        | -5 |        |
| 2  | <i>Carex hystericina</i>                 | SEDGE                        | -5 |        |
| 8  | <i>Carex lasiocarpa</i>                  | SEDGE                        | -5 |        |
| 10 | <i>Carex limosa</i>                      | BOG SEDGE                    | -5 |        |
| 5  | <i>Carex pseudo-cyperus</i>              | SEDGE                        | -5 |        |
| 9  | <i>Carex trisperma</i>                   | SEDGE                        | -5 |        |
| 8  | <i>Chamaedaphne calyculata</i>           | LEATHERLEAF                  | -5 |        |
| 7  | <i>Comarum palustre</i> (Potentilla p.)  | MARSH CINQUEFOIL             | -5 |        |
| 2  | <i>Cornus sericea</i> (C. stolonifera)   | RED-OSIER                    | -3 |        |
| 7  | <i>Decodon verticillatus</i>             | WHORLED or SWAMP LOOSESTRIFE | -5 |        |
| 6  | <i>Drosera rotundifolia</i>              | ROUND-LEAVED SUNDEW          | -5 |        |
| 8  | <i>Dulichium arundinaceum</i>            | THREE-WAY SEDGE              | -5 |        |
| 6  | <i>Eleocharis elliptica</i>              | GOLDEN-SEEDED SPIKE RUSH     | -5 |        |
| 4  | <i>Eleocharis erythropoda</i>            | SPIKE-RUSH                   | -5 |        |
| 5  | <i>Eleocharis palustris</i> (E. smallii) | SPIKE-RUSH                   | -5 |        |
| 7  | <i>Equisetum fluviatile</i>              | WATER HORSETAIL              | -5 |        |
| 10 | <i>Eriophorum gracile</i>                | SLENDER COTTON-GRASS         | -5 |        |
| 8  | <i>Eriophorum virginicum</i>             | TAWNY COTTON-GRASS           | -5 |        |
| 4  | <i>Eupatorium perfoliatum</i>            | BONESET                      | -3 |        |
| 5  | <i>Galium tinctorium</i>                 | STIFF BEDSTRAW               | -5 |        |
| 7  | <i>Gaylussacia baccata</i>               | HUCKLEBERRY                  | 3  |        |
| 5  | <i>Ilex verticillata</i>                 | MICHIGAN HOLLY               | -3 |        |
| 8  | <i>Juncus acuminatus</i>                 | SHARP-FRUITED RUSH           | -5 |        |
| 6  | <i>Juncus canadensis</i>                 | CANADIAN RUSH                | -5 |        |
| 5  | <i>Larix laricina</i>                    | TAMARACK                     | -3 |        |
| 5  | <i>Lemna turionifera</i> (L. minor)      | RED DUCKWEED                 | -5 |        |
| 8  | <i>Menyanthes trifoliata</i>             | BUCKBEAN                     | -5 |        |
| 8  | <i>Nuphar advena</i>                     | YELLOW POND-LILY             | -5 |        |
| 2  | <i>Onoclea sensibilis</i>                | SENSITIVE FERN               | -3 |        |
| 5  | <i>Osmunda cinnamomea</i>                | CINNAMON FERN                | -3 |        |
| 5  | <i>Osmunda regalis</i>                   | ROYAL FERN                   | -5 |        |

|    |  |                        |    |
|----|--|------------------------|----|
| 5  | <i>Phragmites australis</i> var. <i>americanus</i>               | REED                   | -3 |
| 6  | <i>Picea mariana</i>   | BLACK SPRUCE           | -3 |
| 8  | <i>Pontederia cordata</i>  | PICKEREL-WEED          | -5 |
| 6  | <i>Rhynchospora alba</i>   | BEAK-RUSH              | -5 |
| 4  | <i>Rubus pubescens</i>   | DWARF RASPBERRY        | -3 |
| 4  | <i>Sagittaria latifolia</i>                                      | COMMON ARROWHEAD       | -5 |
| 1  | <i>Salix discolor</i>  | PUSSY WILLOW           | -3 |
| 8  | <i>Salix pedicellaris</i>  | BOG WILLOW             | -5 |
| 10 | <i>Sarracenia purpurea</i>                                       | PITCHER-PLANT          | -5 |
| 5  | <i>Schoenoplectus acutus</i> ( <i>Scirpus</i> a.)                | HARDSTEM BULRUSH       | -5 |
| 4  | <i>Schoenoplectus tabernaemontani</i> ( <i>Scirpus validus</i> ) | SOFTSTEM BULRUSH       | -5 |
| 5  | <i>Scutellaria galericulata</i>                                  | MARSH SKULLCAP         | -5 |
| 4  | <i>Spiraea alba</i>  | MEADOWSWEET            | -3 |
| 2  | <i>Thelypteris palustris</i>                                     | MARSH FERN             | -3 |
| 6  | <i>Toxicodendron vernix</i>                                      | POISON SUMAC           | -5 |
| 6  | <i>Triadenum fraseri</i>   | MARSH ST. JOHN'S-WORT  | -5 |
| *  | TYPHA xGLAUCA  | HYBRID CAT-TAIL        | -5 |
| *  | TYPHA ANGUSTIFOLIA   | NARROW-LEAVED CAT-TAIL | -5 |
| 1  | <i>Typha latifolia</i>   | BROAD-LEAVED CAT-TAIL  | -5 |
| 8  | <i>Utricularia gibba</i>   | HUMPED BLADDERWORT     | -5 |
| 6  | <i>Utricularia vulgaris</i>                                      | COMMON BLADDERWORT     | -5 |
| 6  | <i>Vaccinium corymbosum</i>                                      | HIGHBUSH BLUEBERRY     | -3 |
| 8  | <i>Vaccinium macrocarpon</i>                                     | LARGE CRANBERRY        | -5 |
| 4  | <i>Vaccinium myrtilloides</i>                                    | CANADA BLUEBERRY       | -3 |
| 8  | <i>Vaccinium oxycoccos</i>                                       | SMALL CRANBERRY        | -5 |
| 10 | <i>Woodwardia virginica</i>                                      | VIRGINIA CHAIN-FERN    | -5 |
| 8  | <i>Xyris difformis</i>   | YELLOW-EYED-GRASS      | -5 |

Also: *Viola* sp.



# Mud Lake Bog

## Bog South

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Bog

On S and W end of Mud Lake, open floating bog mat of *Carex lasiocarpa*, with shrubby hummocks amidst small *Larix laricina* toward outer edges

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 76    | Total Species        | 5.58 | NATIVE MEAN C |
| 73    | Total Native Species | 5.36 | W/Adventives  |
| 96.1  | % Native Species     | -3.9 | NATIVE MEAN W |
| 47.64 | NATIVE FQI           | -3.9 | W/Adventives  |
| 46.69 | W/Adventives         |      |               |

| C  | SCIENTIFIC NAME                             | COMMON NAME                        | W  | LISTED |
|----|---|------------------------------------|----|--------|
| 1  | <i>Acer rubrum</i>                          | RED MAPLE                          | 0  |        |
| 2  | <i>Acer saccharinum</i>                     | SILVER MAPLE                       | -3 |        |
| 7  | <i>Agalinis purpurea</i>                    | PURPLE FALSE FOXGLOVE              | -3 |        |
| 10 | <i>Andromeda glaucophylla</i>               | BOG-ROSEMARY                       | -5 |        |
| 5  | <i>Aronia prunifolia</i>                    | CHOKEBERRY                         | -3 |        |
| 8  | <i>Betula pumila</i>                        | BOG BIRCH                          | -5 |        |
| 7  | <i>Bidens trichosperma</i> (B. coronatus)   | TICKSEED-SUNFLOWER                 | -5 |        |
| 3  | <i>Calamagrostis canadensis</i>             | BLUE-JOINT                         | -5 |        |
| 9  | <i>Calopogon tuberosus</i>                  | GRASS-PINK                         | -5 |        |
| 7  | <i>Campanula aparinoides</i>                | MARSH BELLFLOWER                   | -5 |        |
| 7  | <i>Carex aquatilis</i>                      | SEDGE                              | -5 |        |
| 7  | <i>Carex atlantica</i> (C. howei)           | SEDGE                              | -3 |        |
| 10 | <i>Carex chordorrhiza</i>                   | SEDGE                              | -5 |        |
| 5  | <i>Carex comosa</i>                         | SEDGE                              | -5 |        |
| 8  | <i>Carex diandra</i>                        | SEDGE                              | -5 |        |
| 2  | <i>Carex hystericina</i>                    | SEDGE                              | -5 |        |
| 6  | <i>Carex lacustris</i>                      | SEDGE                              | -5 |        |
| 8  | <i>Carex lasiocarpa</i>                     | SEDGE                              | -5 |        |
| 10 | <i>Carex limosa</i>                         | BOG SEDGE                          | -5 |        |
| 2  | <i>Carex pellita</i> (C. lanuginosa)        | SEDGE                              | -5 |        |
| 8  | <i>Chamaedaphne calyculata</i>              | LEATHERLEAF                        | -5 |        |
| 4  | <i>Cicuta maculata</i>                      | WATER HEMLOCK                      | -5 |        |
| 7  | <i>Comarum palustre</i> (Potentilla p.)     | MARSH CINQUEFOIL                   | -5 |        |
| 2  | <i>Cornus sericea</i> (C. stolonifera)      | RED-OSIER                          | -3 |        |
| 5  | <i>Cypripedium acaule</i>                   | PINK LADY-SLIPPER; MOCCASIN FLOWER | -3 |        |
| 8  | <i>Dasiphora fruticosa</i> (Potentilla f.)  | SHRUBBY CINQUEFOIL                 | -3 |        |
| 7  | <i>Decodon verticillatus</i>                | WHORLED or SWAMP LOOSESTRIFE       | -5 |        |
| 5  | <i>Doellingeria umbellata</i> (Aster u.)    | FLAT-TOPPED WHITE ASTER            | -3 |        |
| 6  | <i>Drosera rotundifolia</i>                 | ROUND-LEAVED SUNDEW                | -5 |        |
| 6  | <i>Eleocharis elliptica</i>                 | GOLDEN-SEEDED SPIKE RUSH           | -5 |        |
| 6  | <i>Epilobium leptophyllum</i>               | FEN WILLOW-HERB                    | -5 |        |
| 10 | <i>Eriophorum gracile</i>                   | SLENDER COTTON-GRASS               | -5 |        |
| 4  | <i>Eupatorium perfoliatum</i>               | BONESET                            | -3 |        |
| 4  | <i>Eutrochium maculatum</i> (Eupatorium m.) | JOE-PYE-WEED                       | -5 |        |
| 7  | <i>Gaylussacia baccata</i>                  | HUCKLEBERRY                        | 3  |        |
| 5  | <i>Ilex verticillata</i>                    | MICHIGAN HOLLY                     | -3 |        |
| 4  | <i>Juniperus communis</i>                   | COMMON or GROUND JUNIPER           | 3  |        |
| 5  | <i>Larix laricina</i>                       | TAMARACK                           | -3 |        |
| 5  | <i>Lemna minor</i>                          | COMMON DUCKWEED                    | -5 |        |
| 5  | <i>Lemna turionifera</i> (L. minor)         | RED DUCKWEED                       | -5 |        |
| 5  | <i>Liparis loeselii</i>                     | LOESEL'S TWAYBLADE                 | -3 |        |
| 2  | <i>Lycopus uniflorus</i>                    | NORTHERN BUGLE WEED                | -5 |        |
| *  | LYTHRUM SALICARIA                           | PURPLE LOOSESTRIFE                 | -5 |        |

|    |  |                         |    |
|----|--|-------------------------|----|
| 3  | <i>Mentha canadensis</i> (M. arvensis)       | WILD MINT               | -3 |
| 8  | <i>Menyanthes trifoliata</i>                 | BUCKBEAN                | -5 |
| 10 | <i>Muhlenbergia glomerata</i>                | MARSH WILD-TIMOTHY      | -5 |
| 8  | <i>Nuphar advena</i>                         | YELLOW POND-LILY        | -5 |
| 5  | <i>Osmunda regalis</i>                       | ROYAL FERN              | -5 |
| 6  | <i>Picea mariana</i>                         | BLACK SPRUCE            | -3 |
| 6  | <i>Platanthera clavellata</i> (Habenaria c.) | SMALL GREEN WOOD ORCHID | -3 |
| 8  | <i>Pontederia cordata</i>                    | PICKEREL-WEED           | -5 |
| 1  | <i>Populus tremuloides</i>                   | QUAKING ASPEN           | 0  |
| 5  | <i>Rosa palustris</i>                        | SWAMP ROSE              | -5 |
| 4  | <i>Rubus pubescens</i>                       | DWARF RASPBERRY         | -3 |
| 4  | <i>Sagittaria latifolia</i>                  | COMMON ARROWHEAD        | -5 |
| 3  | <i>Salix lucida</i>                          | SHINING WILLOW          | -3 |
| 1  | <i>Salix petiolaris</i>                      | SLENDER WILLOW          | -3 |
| 10 | <i>Sarracenia purpurea</i>                   | PITCHER-PLANT           | -5 |
| 3  | <i>Scirpus atrovirens</i>                    | BULRUSH                 | -5 |
| 5  | <i>Scutellaria galericulata</i>              | MARSH SKULLCAP          | -5 |
| 3  | <i>Solidago rugosa</i>                       | ROUGH-LEAVED GOLDENROD  | 0  |
| 4  | <i>Solidago uliginosa</i>                    | BOG GOLDENROD           | -5 |
| 4  | <i>Spiranthes cernua</i>                     | NODDING LADIES'-TRESSES | -3 |
| 9  | <i>Symphotrichum boreale</i> (Aster b.)      | NORTHERN BOG ASTER      | -5 |
| 5  | <i>Symphotrichum puniceum</i> (Aster p.)     | SWAMP ASTER             | -5 |
| 2  | <i>Thelypteris palustris</i>                 | MARSH FERN              | -3 |
| 6  | <i>Toxicodendron vernix</i>                  | POISON SUMAC            | -5 |
| 6  | <i>Triadenum fraseri</i>                     | MARSH ST. JOHN'S-WORT   | -5 |
| 5  | <i>Trientalis borealis</i>                   | STAR-FLOWER             | 0  |
| *  | TYPHA xGLAUCA                                | HYBRID CAT-TAIL         | -5 |
| *  | TYPHA ANGUSTIFOLIA                           | NARROW-LEAVED CAT-TAIL  | -5 |
| 1  | <i>Typha latifolia</i>                       | BROAD-LEAVED CAT-TAIL   | -5 |
| 10 | <i>Utricularia intermedia</i>                | FLAT-LEAVED BLADDERWORT | -5 |
| 6  | <i>Vaccinium corymbosum</i>                  | HIGHBUSH BLUEBERRY      | -3 |
| 4  | <i>Vaccinium myrtilloides</i>                | CANADA BLUEBERRY        | -3 |
| 8  | <i>Vaccinium oxycoccos</i>                   | SMALL CRANBERRY         | -5 |



# Mud Lake Bog

## Hardwood Swamp

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Southern Hardwood Swamp

Large wetland areas, situated mostly in N part of the property, composed of a mosaic of shrub thickets and sedge meadows in a thinly forested wetland dominated by *Acer saccharinum* with occasional *A. rubrum*

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 126   | Total Species        | 4.44 | NATIVE MEAN C |
| 121   | Total Native Species | 4.26 | W/Adventives  |
| 96.0  | % Native Species     | -2.8 | NATIVE MEAN W |
| 48.82 | NATIVE FQI           | -2.7 | W/Adventives  |
| 47.84 | W/Adventives         |      |               |

| C  | SCIENTIFIC NAME   | COMMON NAME               | W  | LISTED |
|----|---|---------------------------|----|--------|
| 1  | <i>Acer rubrum</i>  | RED MAPLE                 | 0  |        |
| 2  | <i>Acer saccharinum</i>                                   | SILVER MAPLE              | -3 |        |
| 1  | <i>Alisma subcordatum</i> ( <i>A. plantago-aquatica</i> ) | SOUTHERN WATER-PLANTAIN   | -5 |        |
| 5  | <i>Alnus incana</i> ( <i>A. rugosa</i> )                  | SPECKLED ALDER            | -3 |        |
| 5  | <i>Amphicarpaea bracteata</i>                             | HOG-PEANUT                | 0  |        |
| 5  | <i>Aralia nudicaulis</i>                                  | WILD SARSAPARILLA         | 3  |        |
| 5  | <i>Arisaema triphyllum</i>                                | JACK-IN-THE-PULPIT        | 0  |        |
| 5  | <i>Aronia prunifolia</i>                                  | CHOKEBERRY                | -3 |        |
| 6  | <i>Asclepias incarnata</i>                                | SWAMP MILKWEED            | -5 |        |
| 1  | <i>Asclepias syriaca</i>                                  | COMMON MILKWEED           | 5  |        |
| *  | BARBAREA VULGARIS   | YELLOW ROCKET             | 0  |        |
| 7  | <i>Betula alleghaniensis</i>                              | YELLOW BIRCH              | 0  |        |
| 8  | <i>Betula pumila</i>                                      | BOG BIRCH                 | -5 |        |
| 3  | <i>Bidens cernua</i>                                      | NODDING BEGGAR-TICKS      | -5 |        |
| 5  | <i>Bidens connata</i>                                     | PURPLE-STEMMED TICKSEED   | -3 |        |
| 7  | <i>Bidens trichosperma</i> ( <i>B. coronatus</i> )        | TICKSEED-SUNFLOWER        | -5 |        |
| 5  | <i>Boehmeria cylindrica</i>                               | FALSE NETTLE              | -5 |        |
| 6  | <i>Bromus ciliatus</i>                                    | FRINGED BROME             | -3 |        |
| 3  | <i>Calamagrostis canadensis</i>                           | BLUE-JOINT                | -5 |        |
| 6  | <i>Caltha palustris</i>                                   | MARSH-MARIGOLD            | -5 |        |
| 1  | <i>Cardamine pensylvanica</i>                             | PENNSYLVANIA BITTER CRESS | -3 |        |
| 7  | <i>Carex atlantica</i> ( <i>C. howei</i> )                | SEDGE                     | -3 |        |
| 4  | <i>Carex bebbii</i>                                       | SEDGE                     | -5 |        |
| 8  | <i>Carex canescens</i>                                    | SEDGE                     | -5 |        |
| 5  | <i>Carex comosa</i>                                       | SEDGE                     | -5 |        |
| 4  | <i>Carex crinita</i>                                      | SEDGE                     | -5 |        |
| 3  | <i>Carex cristatella</i>                                  | SEDGE                     | -3 |        |
| 10 | <i>Carex disperma</i>                                     | SEDGE                     | -5 |        |
| 2  | <i>Carex granularis</i>                                   | SEDGE                     | -3 |        |
| 2  | <i>Carex hystericina</i>                                  | SEDGE                     | -5 |        |
| 3  | <i>Carex interior</i>                                     | SEDGE                     | -5 |        |
| 6  | <i>Carex lacustris</i>                                    | SEDGE                     | -5 |        |
| 5  | <i>Carex leptalea</i>                                     | SEDGE                     | -5 |        |
| 1  | <i>Carex stipata</i>                                      | SEDGE                     | -5 |        |
| 9  | <i>Carex trisperma</i>                                    | SEDGE                     | -5 |        |
| 7  | <i>Cephalanthus occidentalis</i>                          | BUTTONBUSH                | -5 |        |
| 5  | <i>Cicuta bulbifera</i>                                   | WATER HEMLOCK             | -5 |        |
| 4  | <i>Cicuta maculata</i>                                    | WATER HEMLOCK             | -5 |        |
| 6  | <i>Cirsium muticum</i>                                    | SWAMP THISTLE             | -5 |        |
| 5  | <i>Coptis trifolia</i>                                    | GOLDTHREAD                | -3 |        |
| 2  | <i>Cornus sericea</i> ( <i>C. stolonifera</i> )           | RED-OSIER                 | -3 |        |
| 5  | <i>Corylus americana</i>                                  | HAZELNUT                  | 3  |        |
| 2  | <i>Cryptotaenia canadensis</i>                            | HONEWORT                  | 0  |        |

|    |  |                          |    |
|----|--|--------------------------|----|
| 8  | <i>Dasiphora fruticosa</i> (Potentilla f.)                     | SHRUBBY CINQUEFOIL       | -3 |
| 5  | <i>Doellingeria umbellata</i> (Aster u.)                       | FLAT-TOPPED WHITE ASTER  | -3 |
| *  | ELAEAGNUS UMBELLATA  | AUTUMN-OLIVE             | 3  |
| 7  | <i>Eleocharis acicularis</i>                                   | SPIKE-RUSH               | -5 |
| 8  | <i>Epilobium strictum</i>                                      | DOWNY WILLOW-HERB        | -5 |
| 0  | <i>Equisetum arvense</i>                                       | COMMON HORSETAIL         | 0  |
| 7  | <i>Equisetum fluviatile</i>                                    | WATER HORSETAIL          | -5 |
| 2  | <i>Erigeron philadelphicus</i>                                 | PHILADELPHIA FLEABANE    | 0  |
| 4  | <i>Eupatorium perfoliatum</i>                                  | BONESET                  | -3 |
| 4  | <i>Eutrochium maculatum</i> (Eupatorium m.)                    | JOE-PYE-WEED             | -5 |
| *  | FRANGULA ALNUS (RHAMNUS FRANGULA)                              | GLOSSY BUCKTHORN         | 0  |
| 5  | <i>Fraxinus americana</i>                                      | WHITE ASH                | 3  |
| 4  | <i>Galium triflorum</i>  | FRAGRANT BEDSTRAW        | 3  |
| 1  | <i>Geum canadense</i>  | WHITE AVENS              | 0  |
| 4  | <i>Glyceria striata</i>  | FOWL MANNA GRASS         | -5 |
| 5  | <i>Ilex verticillata</i>                                       | MICHIGAN HOLLY           | -3 |
| 4  | <i>Juniperus communis</i>                                      | COMMON or GROUND JUNIPER | 3  |
| 5  | <i>Larix laricina</i>  | TAMARACK                 | -3 |
| 7  | <i>Lathyrus palustris</i>                                      | MARSH PEA                | -3 |
| 3  | <i>Leersia oryzoides</i>                                       | CUT GRASS                | -5 |
| 5  | <i>Leersia virginica</i>                                       | WHITE GRASS              | -3 |
| 5  | <i>Lemna minor</i>   | COMMON DUCKWEED          | -5 |
| 6  | <i>Lemna trisulca</i>  | STAR DUCKWEED            | -5 |
| 5  | <i>Lemna turionifera</i> (L. minor)                            | RED DUCKWEED             | -5 |
| 5  | <i>Lilium michiganense</i>                                     | MICHIGAN LILY            | -3 |
| 7  | <i>Lindera benzoin</i>   | SPICEBUSH                | -3 |
| 5  | <i>Liparis loeselii</i>  | LOESEL'S TWAYBLADE       | -3 |
| 2  | <i>Lycopus americanus</i>                                      | COMMON WATER HOREHOUND   | -5 |
| 2  | <i>Lycopus uniflorus</i>                                       | NORTHERN BUGLE WEED      | -5 |
| 4  | <i>Maianthemum canadense</i>                                   | CANADA MAYFLOWER         | 3  |
| 10 | <i>Micranthes pensylvanica</i> (Saxifraga p.)                  | SWAMP SAXIFRAGE          | -5 |
| 2  | <i>Monarda fistulosa</i>                                       | WILD-BERGAMOT            | 3  |
| 2  | <i>Onoclea sensibilis</i>                                      | SENSITIVE FERN           | -3 |
| 5  | <i>Osmunda cinnamomea</i>                                      | CINNAMON FERN            | -3 |
| 5  | <i>Osmunda regalis</i>   | ROYAL FERN               | -5 |
| 5  | <i>Packera aurea</i> (Senecio a.)                              | GOLDEN RAGWORT           | -3 |
| 5  | <i>Parthenocissus quinquefolia</i>                             | VIRGINIA CREEPER         | 3  |
| 8  | <i>Pedicularis lanceolata</i>                                  | SWAMP-BETONY             | -3 |
| 0  | <i>Phalaris arundinacea</i>                                    | REED CANARY GRASS        | -3 |
| 5  | <i>Phragmites australis</i> var. <i>americanus</i>             | REED                     | -3 |
| 6  | <i>Platanthera clavellata</i> (Habenaria c.)                   | SMALL GREEN WOOD ORCHID  | -3 |
| 1  | <i>Populus deltoides</i>                                       | COTTONWOOD               | 0  |
| 0  | <i>Prunella vulgaris</i>                                       | SELF-HEAL                | 0  |
| 2  | <i>Prunus virginiana</i>                                       | CHOKE CHERRY             | 3  |
| 8  | <i>Quercus bicolor</i>   | SWAMP WHITE OAK          | -3 |
| 5  | <i>Quercus macrocarpa</i>                                      | BUR OAK                  | 3  |
| 10 | <i>Ranunculus flabellaris</i> ( <i>Ranunculus lapponicus</i> ) | YELLOW WATER CROWFOOT    | -5 |
| 6  | <i>Ribes hirtellum</i>   | SWAMP GOOSEBERRY         | -3 |
| *  | ROSA MULTIFLORA  | MULTIFLORA ROSE          | 3  |
| 5  | <i>Rosa palustris</i>  | SWAMP ROSE               | -5 |
| 4  | <i>Rubus pubescens</i>   | DWARF RASPBERRY          | -3 |
| 1  | <i>Rudbeckia hirta</i>   | BLACK-EYED SUSAN         | 3  |
| 1  | <i>Salix discolor</i>  | PUSSY WILLOW             | -3 |
| 1  | <i>Salix petiolaris</i>  | SLENDER WILLOW           | -3 |
| 3  | <i>Sambucus canadensis</i>                                     | ELDERBERRY               | -3 |
| 3  | <i>Scirpus atrovirens</i>                                      | BULRUSH                  | -5 |
| 5  | <i>Scirpus cyperinus</i>                                       | WOOL-GRASS               | -5 |
| 5  | <i>Scirpus pedicellatus</i> (S. <i>cyperinus</i> )             | WOOL-GRASS               | -5 |
| 5  | <i>Scutellaria lateriflora</i>                                 | MAD-DOG SKULLCAP         | -5 |
| 5  | <i>Sium suave</i>  | WATER-PARSNIP            | -5 |



|    |                                       |                        |    |
|----|---------------------------------------|------------------------|----|
| *  | SOLANUM DULCAMARA                     | BITTERSWEET NIGHTSHADE | 0  |
| 6  | Solidago patula                       | SWAMP GOLDENROD        | -5 |
| 3  | Solidago rugosa                       | ROUGH-LEAVED GOLDENROD | 0  |
| 2  | Symphotrichum lateriflorum (Aster l.) | CALICO ASTER           | 0  |
| 6  | Symphotrichum ontarionis (Aster o.)   | LAKE ONTARIO ASTER     | 0  |
| 5  | Symphotrichum puniceum (Aster p.)     | SWAMP ASTER            | -5 |
| 6  | Symplocarpus foetidus                 | SKUNK-CABBAGE          | -5 |
| 3  | Thalictrum dasycarpum                 | PURPLE MEADOW-RUE      | -3 |
| 2  | Thelypteris palustris                 | MARSH FERN             | -3 |
| 2  | Toxicodendron radicans                | POISON-IVY             | 0  |
| 6  | Toxicodendron vernix                  | POISON SUMAC           | -5 |
| 5  | Trientalis borealis                   | STAR-FLOWER            | 0  |
| 1  | Typha latifolia                       | BROAD-LEAVED CAT-TAIL  | -5 |
| 1  | Ulmus americana                       | AMERICAN ELM           | -3 |
| 6  | Vaccinium corymbosum                  | HIGHBUSH BLUEBERRY     | -3 |
| 2  | Viola affinis                         | LE CONTE'S VIOLET      | -3 |
| 5  | Viola cucullata                       | MARSH VIOLET           | -5 |
| 3  | Viola labradorica (V. conspersa)      | DOG VIOLET             | 0  |
| 6  | Viola macloskeyi                      | SMOOTH WHITE VIOLET    | -5 |
| 3  | Vitis riparia                         | RIVER-BANK GRAPE       | 0  |
| 5  | Wolffia borealis (W. punctata)        | DOTTED WATER MEAL      | -5 |
| 5  | Wolffia columbiana                    | COMMON WATER MEAL      | -5 |
| 10 | Woodwardia virginica                  | VIRGINIA CHAIN-FERN    | -5 |



# Mud Lake Bog

## Hardwood-Conifer Swamp

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Hardwood-conifer Swamp

Closed canopy forest N of Mud Lake dominated by *Acer rubrum* with occasional *Picea mariana* and *Larix laricina*

#### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 40    | Total Species        | 5.08 | NATIVE MEAN C |
| 39    | Total Native Species | 4.95 | W/Adventives  |
| 97.5  | % Native Species     | -2.5 | NATIVE MEAN W |
| 31.71 | NATIVE FQI           | -2.4 | W/Adventives  |
| 31.31 | W/Adventives         |      |               |

| C  | SCIENTIFIC NAME                             | COMMON NAME                        | W  | LISTED |
|----|---|------------------------------------|----|--------|
| 1  | <i>Acer rubrum</i>                          | RED MAPLE                          | 0  |        |
| 2  | <i>Acer saccharinum</i>                     | SILVER MAPLE                       | -3 |        |
| 5  | <i>Aralia nudicaulis</i>                    | WILD SARSAPARILLA                  | 3  |        |
| 5  | <i>Aronia prunifolia</i>                    | CHOKEBERRY                         | -3 |        |
| 7  | <i>Betula alleghaniensis</i>                | YELLOW BIRCH                       | 0  |        |
| 8  | <i>Betula pumila</i>                        | BOG BIRCH                          | -5 |        |
| 8  | <i>Carex canescens</i>                      | SEDGE                              | -5 |        |
| 5  | <i>Carex leptalea</i>                       | SEDGE                              | -5 |        |
| 1  | <i>Carex stipata</i>                        | SEDGE                              | -5 |        |
| 9  | <i>Carex trisperma</i>                      | SEDGE                              | -5 |        |
| 4  | <i>Cicuta maculata</i>                      | WATER HEMLOCK                      | -5 |        |
| 5  | <i>Coptis trifolia</i>                      | GOLDTHREAD                         | -3 |        |
| 5  | <i>Corylus americana</i>                    | HAZELNUT                           | 3  |        |
| 5  | <i>Cypripedium acaule</i>                   | PINK LADY-SLIPPER; MOCCASIN FLOWER | -3 |        |
| 5  | <i>Dryopteris carthusiana</i>               | SPINULOSE WOODFERN                 | -3 |        |
| *  | FRANGULA ALNUS (RHAMNUS FRANGULA)           | GLOSSY BUCKTHORN                   | 0  |        |
| 7  | <i>Gaylussacia baccata</i>                  | HUCKLEBERRY                        | 3  |        |
| 4  | <i>Glyceria striata</i>                     | FOWL MANNA GRASS                   | -5 |        |
| 7  | <i>Ilex mucronata</i> (Nemopanthes m.)      | MOUNTAIN HOLLY                     | -5 |        |
| 5  | <i>Ilex verticillata</i>                    | MICHIGAN HOLLY                     | -3 |        |
| 5  | <i>Larix laricina</i>                       | TAMARACK                           | -3 |        |
| 5  | <i>Liparis loeselii</i>                     | LOESEL'S TWAYBLADE                 | -3 |        |
| 2  | <i>Lycopus uniflorus</i>                    | NORTHERN BUGLE WEED                | -5 |        |
| 4  | <i>Maianthemum canadense</i>                | CANADA MAYFLOWER                   | 3  |        |
| 10 | <i>Maianthemum trifolium</i> (Smilacina t.) | FALSE MAYFLOWER                    | -5 |        |
| 5  | <i>Monotropa uniflora</i>                   | INDIAN-PIPE                        | 3  |        |
| 2  | <i>Onoclea sensibilis</i>                   | SENSITIVE FERN                     | -3 |        |
| 5  | <i>Osmunda cinnamomea</i>                   | CINNAMON FERN                      | -3 |        |
| 6  | <i>Picea mariana</i>                        | BLACK SPRUCE                       | -3 |        |
| 5  | <i>Quercus rubra</i>                        | RED OAK                            | 3  |        |
| 4  | <i>Rubus pubescens</i>                      | DWARF RASPBERRY                    | -3 |        |
| 6  | <i>Symplocarpus foetidus</i>                | SKUNK-CABBAGE                      | -5 |        |
| 2  | <i>Thelypteris palustris</i>                | MARSH FERN                         | -3 |        |
| 2  | <i>Toxicodendron radicans</i>               | POISON-IVY                         | 0  |        |
| 6  | <i>Toxicodendron vernix</i>                 | POISON SUMAC                       | -5 |        |
| 5  | <i>Trientalis borealis</i>                  | STAR-FLOWER                        | 0  |        |
| 6  | <i>Vaccinium corymbosum</i>                 | HIGHBUSH BLUEBERRY                 | -3 |        |
| 4  | <i>Vaccinium myrtilloides</i>               | CANADA BLUEBERRY                   | -3 |        |
| 6  | <i>Viola macloskeyi</i>                     | SMOOTH WHITE VIOLET                | -5 |        |
| 10 | <i>Woodwardia virginica</i>                 | VIRGINIA CHAIN-FERN                | -5 |        |

# Mud Lake Bog

## Horseshoe Island

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Southern Forest

Small open island NW of Mud Lake with widely spaced oaks and *Carex pensylvanica* groundcover, mostly surrounded by wet meadow but with hardwood swamp to the SW

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 76    | Total Species        | 3.89 | NATIVE MEAN C |
| 62    | Total Native Species | 3.17 | W/Adventives  |
| 81.6  | % Native Species     | 0.9  | NATIVE MEAN W |
| 30.61 | NATIVE FQI           | 1.3  | W/Adventives  |
| 27.64 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                                      | COMMON NAME              | W  | LISTED |
|---|--|--------------------------|----|--------|
| 1 | <i>Acer rubrum</i>                                   | RED MAPLE                | 0  |        |
| * | <i>ALLIARIA PETIOLATA</i>                            | GARLIC MUSTARD           | 3  |        |
| 5 | <i>Amphicarpaea bracteata</i>                        | HOG-PEANUT               | 0  |        |
| 5 | <i>Anemone quinquefolia</i>                          | WOOD ANEMONE             | 3  |        |
| 3 | <i>Apocynum androsaemifolium</i>                     | SPREADING DOGBANE        | 5  |        |
| 5 | <i>Arisaema triphyllum</i>                           | JACK-IN-THE-PULPIT       | 0  |        |
| 1 | <i>Asclepias syriaca</i>                             | COMMON MILKWEED          | 5  |        |
| * | <i>BERBERIS THUNBERGII</i>                           | JAPANESE BARBERRY        | 3  |        |
| 1 | <i>Carex blanda</i>                                  | SEDGE                    | 0  |        |
| 5 | <i>Carex gracilescens</i>                            | SEDGE                    | 3  |        |
| 4 | <i>Carex gracillima</i>                              | SEDGE                    | 3  |        |
| 6 | <i>Carex lacustris</i>                               | SEDGE                    | -5 |        |
| 4 | <i>Carex pensylvanica</i>                            | SEDGE                    | 5  |        |
| 5 | <i>Carya cordiformis</i>                             | BITTERNUT HICKORY        | 0  |        |
| 5 | <i>Carya glabra</i>                                  | PIGNUT HICKORY           | 3  |        |
| 5 | <i>Carya ovata</i>                                   | SHAGBARK HICKORY         | 3  |        |
| 7 | <i>Cinna arundinacea</i>                             | WOOD REEDGRASS           | -3 |        |
| * | <i>CIRSIIUM ARVENSE</i>                              | CANADA THISTLE           | 3  |        |
| 4 | <i>Claytonia virginica</i>                           | SPRING-BEAUTY            | 3  |        |
| * | <i>DACTYLIS GLOMERATA</i>                            | ORCHARD GRASS            | 3  |        |
| 5 | <i>Doellingeria umbellata</i> (Aster u.)             | FLAT-TOPPED WHITE ASTER  | -3 |        |
| * | <i>ELAEAGNUS UMBELLATA</i>                           | AUTUMN-OLIVE             | 3  |        |
| 5 | <i>Elymus hystrix</i> ( <i>Hystrix patula</i> )      | BOTTLEBRUSH GRASS        | 3  |        |
| 4 | <i>Elymus virginicus</i>                             | VIRGINIA WILD-RYE        | -3 |        |
| 0 | <i>Equisetum arvense</i>                             | COMMON HORSETAIL         | 0  |        |
| 4 | <i>Eurybia macrophylla</i> (Aster m.)                | BIG-LEAVED ASTER         | 5  |        |
| 3 | <i>Euthamia graminifolia</i>                         | GRASS-LEAVED GOLDENROD   | 0  |        |
| 5 | <i>Festuca subverticillata</i> (F. obtusa)           | NODDING FESCUE           | 3  |        |
| 5 | <i>Fraxinus americana</i>                            | WHITE ASH                | 3  |        |
| 2 | <i>Fraxinus pennsylvanica</i>                        | RED ASH                  | -3 |        |
| 3 | <i>Galium boreale</i>                                | NORTHERN BEDSTRAW        | 0  |        |
| 4 | <i>Galium triflorum</i>                              | FRAGRANT BEDSTRAW        | 3  |        |
| 4 | <i>Geranium maculatum</i>                            | WILD GERANIUM            | 3  |        |
| 1 | <i>Geum canadense</i>                                | WHITE AVENS              | 0  |        |
| 4 | <i>Glyceria striata</i>                              | FOWL MANNA GRASS         | -5 |        |
| 8 | <i>Heuchera americana</i>                            | ALUM ROOT                | 3  |        |
| * | <i>HIERACIUM CAESPITOSUM</i>                         | KING DEVIL               | 5  |        |
| * | <i>HYPERICUM PERFORATUM</i>                          | COMMON ST. JOHN'S-WORT   | 5  |        |
| 1 | <i>Juncus tenuis</i>                                 | PATH RUSH                | 0  |        |
| 4 | <i>Juniperus communis</i>                            | COMMON or GROUND JUNIPER | 3  |        |
| 3 | <i>Juniperus virginiana</i>                          | RED-CEDAR                | 3  |        |
| 5 | <i>Luzula multiflora</i>                             | COMMON WOOD RUSH         | 3  |        |
| 5 | <i>Maianthemum racemosum</i> ( <i>Smilacina r.</i> ) | FALSE SPIKENARD          | 3  |        |

|   |  |                            |    |
|---|--|----------------------------|----|
| 2 | <i>Onoclea sensibilis</i>                    | SENSITIVE FERN             | -3 |
| 4 | <i>Persicaria virginiana</i> (Polygonum v.)  | JUMPSEED                   | 0  |
| 0 | <i>Phalaris arundinacea</i>                  | REED CANARY GRASS          | -3 |
| * | POA COMPRESSA                                | CANADA BLUEGRASS           | 3  |
| * | POA PRATENSIS                                | KENTUCKY BLUEGRASS         | 3  |
| 3 | <i>Podophyllum peltatum</i>                  | MAY-APPLE                  | 3  |
| 1 | <i>Populus deltoides</i>                     | COTTONWOOD                 | 0  |
| 2 | <i>Potentilla simplex</i>                    | OLD-FIELD CINQUEFOIL       | 3  |
| 2 | <i>Prunus serotina</i>                       | WILD BLACK CHERRY          | 3  |
| 5 | <i>Quercus alba</i>                          | WHITE OAK                  | 3  |
| 8 | <i>Quercus bicolor</i>                       | SWAMP WHITE OAK            | -3 |
| 5 | <i>Quercus macrocarpa</i>                    | BUR OAK                    | 3  |
| 5 | <i>Quercus rubra</i>                         | RED OAK                    | 3  |
| * | RHAMNUS CATHARTICA                           | COMMON BUCKTHORN           | 0  |
| 7 | <i>Rhus aromatica</i>                        | FRAGRANT SUMAC             | 5  |
| 4 | <i>Ribes cynosbati</i>                       | PRICKLY or WILD GOOSEBERRY | 3  |
| 4 | <i>Rosa carolina</i>                         | PASTURE ROSE               | 3  |
| * | ROSA MULTIFLORA                              | MULTIFLORA ROSE            | 3  |
| 4 | <i>Rubus pubescens</i>                       | DWARF RASPBERRY            | -3 |
| * | SCHEDONORUS ARUNDINACEUS (FESTUCA A.)        | TALL FESCUE                | 3  |
| 5 | <i>Scutellaria lateriflora</i>               | MAD-DOG SKULLCAP           | -5 |
| 6 | <i>Solidago caesia</i>                       | BLUESTEM GOLDENROD         | 3  |
| 6 | <i>Solidago patula</i>                       | SWAMP GOLDENROD            | -5 |
| 3 | <i>Solidago rugosa</i>                       | ROUGH-LEAVED GOLDENROD     | 0  |
| 2 | <i>Symphotrichum lateriflorum</i> (Aster l.) | CALICO ASTER               | 0  |
| 6 | <i>Symplocarpus foetidus</i>                 | SKUNK-CABBAGE              | -5 |
| * | TARAXACUM OFFICINALE                         | COMMON DANDELION           | 3  |
| 1 | <i>Ulmus americana</i>                       | AMERICAN ELM               | -3 |
| * | VERBASCUM THAPSUS                            | COMMON MULLEIN             | 5  |
| 4 | <i>Viburnum lentago</i>                      | NANNYBERRY                 | 0  |
| 5 | <i>Viburnum rafinesquianum</i>               | DOWNY ARROW-WOOD           | 5  |
| 3 | <i>Viola labradorica</i> (V. conspersa)      | DOG VIOLET                 | 0  |
| 3 | <i>Vitis riparia</i>                         | RIVER-BANK GRAPE           | 0  |

Also: *Crataegus* sp.

# Mud Lake Bog

## Juniper Hill

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Southern Forest

Ecologically degraded mixed forest regrowth in old field NW of Mud Lake, grassy openings at N end with a few prairie associates present

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 61    | Total Species        | 3.49 | NATIVE MEAN C |
| 49    | Total Native Species | 2.80 | W/Adventives  |
| 80.3  | % Native Species     | 1.4  | NATIVE MEAN W |
| 24.43 | NATIVE FQI           | 1.7  | W/Adventives  |
| 21.89 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                                      | COMMON NAME                | W  | LISTED |
|---|--|----------------------------|----|--------|
| 1 | <i>Acer rubrum</i>                                   | RED MAPLE                  | 0  |        |
| 4 | <i>Agrimonia parviflora</i>                          | SWAMP AGRIMONY             | 0  |        |
| 5 | <i>Andropogon gerardii</i>                           | BIG BLUESTEM               | 0  |        |
| 3 | <i>Anemone virginiana</i>                            | THIMBLEWEED                | 3  |        |
| 3 | <i>Apocynum cannabinum</i> (A. sibiricum)            | INDIAN-HEMP                | 0  |        |
| 5 | <i>Arisaema triphyllum</i>                           | JACK-IN-THE-PULPIT         | 0  |        |
| * | BARBAREA VULGARIS                                    | YELLOW ROCKET              | 0  |        |
| * | BERBERIS THUNBERGII                                  | JAPANESE BARBERRY          | 3  |        |
| 1 | <i>Carex blanda</i>                                  | SEDGE                      | 0  |        |
| 5 | <i>Carex gracilescens</i>                            | SEDGE                      | 3  |        |
| 4 | <i>Carex gracillima</i>                              | SEDGE                      | 3  |        |
| 2 | <i>Carex granularis</i>                              | SEDGE                      | -3 |        |
| 2 | <i>Carex radiata</i> (C. rosea)                      | STRAIGHT-STYLED WOOD SEDGE | 0  |        |
| 5 | <i>Carya ovata</i>                                   | SHAGBARK HICKORY           | 3  |        |
| * | CERASTIUM FONTANUM                                   | MOUSE-EAR CHICKWEED        | 3  |        |
| 4 | <i>Claytonia virginica</i>                           | SPRING-BEAUTY              | 3  |        |
| 1 | <i>Cornus foemina</i>                                | GRAY DOGWOOD               | 0  |        |
| 5 | <i>Corylus americana</i>                             | HAZELNUT                   | 3  |        |
| * | DACTYLIS GLOMERATA                                   | ORCHARD GRASS              | 3  |        |
| 4 | <i>Danthonia spicata</i>                             | POVERTY GRASS; OATGRASS    | 5  |        |
| * | DIANTHUS ARMERIA                                     | DEPTFORD PINK              | 5  |        |
| 3 | <i>Dichanthelium implicatum</i> (Panicum i.)         | PANIC GRASS                | 0  |        |
| 5 | <i>Doellingeria umbellata</i> (Aster u.)             | FLAT-TOPPED WHITE ASTER    | -3 |        |
| * | ELAEAGNUS UMBELLATA                                  | AUTUMN-OLIVE               | 3  |        |
| 5 | <i>Elymus hystrix</i> ( <i>Hystrix patula</i> )      | BOTTLEBRUSH GRASS          | 3  |        |
| 2 | <i>Fragaria virginiana</i>                           | WILD STRAWBERRY            | 3  |        |
| 5 | <i>Fraxinus americana</i>                            | WHITE ASH                  | 3  |        |
| 4 | <i>Glyceria striata</i>                              | FOWL MANNA GRASS           | -5 |        |
| 4 | <i>Juniperus communis</i>                            | COMMON or GROUND JUNIPER   | 3  |        |
| 3 | <i>Juniperus virginiana</i>                          | RED-CEDAR                  | 3  |        |
| 8 | <i>Liatris spicata</i>                               | MARSH BLAZING-STAR         | 0  |        |
| 5 | <i>Lonicera dioica</i>                               | RED HONEYSUCKLE            | 3  |        |
| 5 | <i>Luzula multiflora</i>                             | COMMON WOOD RUSH           | 3  |        |
| 5 | <i>Maianthemum racemosum</i> ( <i>Smilacina r.</i> ) | FALSE SPIKENARD            | 3  |        |
| 2 | <i>Monarda fistulosa</i>                             | WILD-BERGAMOT              | 3  |        |
| 4 | <i>Persicaria virginiana</i> ( <i>Polygonum v.</i> ) | JUMPSEED                   | 0  |        |
| * | PHLEUM PRATENSE                                      | TIMOTHY                    | 3  |        |
| * | POA COMPRESSA  | CANADA BLUEGRASS           | 3  |        |
| * | POA PRATENSIS  | KENTUCKY BLUEGRASS         | 3  |        |
| 3 | <i>Podophyllum peltatum</i>                          | MAY-APPLE                  | 3  |        |
| 1 | <i>Populus tremuloides</i>                           | QUAKING ASPEN              | 0  |        |
| 2 | <i>Potentilla simplex</i>                            | OLD-FIELD CINQUEFOIL       | 3  |        |
| 0 | <i>Prunella vulgaris</i>                             | SELF-HEAL                  | 0  |        |

|   |  |                          |    |
|---|--|--------------------------|----|
| 2 | <i>Prunus serotina</i>                       | WILD BLACK CHERRY        | 3  |
| 5 | <i>Quercus alba</i>                          | WHITE OAK                | 3  |
| 8 | <i>Quercus bicolor</i>                       | SWAMP WHITE OAK          | -3 |
| 4 | <i>Quercus ellipsoidalis</i> (Q. coccinea)   | HILL'S OAK               | 5  |
| 5 | <i>Quercus rubra</i>                         | RED OAK                  | 3  |
| 6 | <i>Quercus velutina</i>                      | BLACK OAK                | 5  |
| 0 | <i>Ranunculus abortivus</i>                  | SMALL-FLOWERED BUTTERCUP | 0  |
| * | RHAMNUS CATHARTICA                           | COMMON BUCKTHORN         | 0  |
| * | ROSA MULTIFLORA                              | MULTIFLORA ROSE          | 3  |
| 1 | <i>Rudbeckia hirta</i>                       | BLACK-EYED SUSAN         | 3  |
| 3 | <i>Solidago juncea</i>                       | EARLY GOLDENROD          | 5  |
| 4 | <i>Sphenopholis intermedia</i>               | SLENDER WEDGEGRASS       | 0  |
| 2 | <i>Symphotrichum lateriflorum</i> (Aster l.) | CALICO ASTER             | 0  |
| * | TARAXACUM OFFICINALE                         | COMMON DANDELION         | 3  |
| 4 | <i>Viburnum lentago</i>                      | NANNYBERRY               | 0  |
| 3 | <i>Viola labradorica</i> (V. conspersa)      | DOG VIOLET               | 0  |
| 1 | <i>Viola sororia</i>                         | COMMON BLUE VIOLET       | 0  |
| 3 | <i>Vitis riparia</i>                         | RIVER-BANK GRAPE         | 0  |

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Also: *Celastrus* sp.

# Mud Lake Bog

## Little Oak Island

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Southern Forest

Small island toward W end of property with forest dominants *Carya ovata* and *Quercus alba*.; surrounded by wet meadow and shrub-carr

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 47    | Total Species        | 3.74 | NATIVE MEAN C |
| 35    | Total Native Species | 2.79 | W/Adventives  |
| 74.5  | % Native Species     | 1.9  | NATIVE MEAN W |
| 22.14 | NATIVE FQI           | 2.2  | W/Adventives  |
| 19.11 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                     | COMMON NAME                | W  | LISTED |
|---|-------------------------------------|----------------------------|----|--------|
| * | ALLIARIA PETIOLATA                  | GARLIC MUSTARD             | 3  |        |
| 6 | Asclepias exaltata                  | POKE MILKWEED              | 5  |        |
| * | BARBAREA VULGARIS                   | YELLOW ROCKET              | 0  |        |
| * | BERBERIS VULGARIS                   | COMMON BARBERRY            | 3  |        |
| 1 | Carex blanda                        | SEDGE                      | 0  |        |
| 3 | Carex cephalophora                  | SEDGE                      | 3  |        |
| 4 | Carex pensylvanica                  | SEDGE                      | 5  |        |
| 2 | Carex rosea (C. convoluta)          | CURLY-STYLED WOOD SEDGE    | 5  |        |
| 5 | Carya ovata                         | SHAGBARK HICKORY           | 3  |        |
| 4 | Claytonia virginica                 | SPRING-BEAUTY              | 3  |        |
| 1 | Cornus foemina                      | GRAY DOGWOOD               | 0  |        |
| 4 | Danthonia spicata                   | POVERTY GRASS; OATGRASS    | 5  |        |
| 5 | Doellingeria umbellata (Aster u.)   | FLAT-TOPPED WHITE ASTER    | -3 |        |
| * | ELAEAGNUS UMBELLATA                 | AUTUMN-OLIVE               | 3  |        |
| 5 | Elymus hystrix (Hystrix patula)     | BOTTLEBRUSH GRASS          | 3  |        |
| 4 | Elymus virginicus                   | VIRGINIA WILD-RYE          | -3 |        |
| 0 | Erigeron annuus                     | DAISY FLEABANE             | 3  |        |
| 5 | Festuca subverticillata (F. obtusa) | NODDING FESCUE             | 3  |        |
| 2 | Fraxinus pennsylvanica              | RED ASH                    | -3 |        |
| 3 | Galium boreale                      | NORTHERN BEDSTRAW          | 0  |        |
| 4 | Galium circaezans                   | WHITE WILD LICORICE        | 3  |        |
| 5 | Galium concinnum                    | SHINING BEDSTRAW           | 3  |        |
| 4 | Galium triflorum                    | FRAGRANT BEDSTRAW          | 3  |        |
| 4 | Geranium maculatum                  | WILD GERANIUM              | 3  |        |
| 3 | Juniperus virginiana                | RED-CEDAR                  | 3  |        |
| * | LINARIA VULGARIS                    | BUTTER-AND-EGGS            | 5  |        |
| * | LOTUS CORNICULATUS                  | BIRDFOOT TREFOIL           | 3  |        |
| 5 | Luzula multiflora                   | COMMON WOOD RUSH           | 3  |        |
| * | PHLEUM PRATENSE                     | TIMOTHY                    | 3  |        |
| * | POA COMPRESSA                       | CANADA BLUEGRASS           | 3  |        |
| * | POA PRATENSIS                       | KENTUCKY BLUEGRASS         | 3  |        |
| 2 | Potentilla simplex                  | OLD-FIELD CINQUEFOIL       | 3  |        |
| 2 | Prunus serotina                     | WILD BLACK CHERRY          | 3  |        |
| 5 | Quercus alba                        | WHITE OAK                  | 3  |        |
| 8 | Quercus bicolor                     | SWAMP WHITE OAK            | -3 |        |
| 6 | Quercus velutina                    | BLACK OAK                  | 5  |        |
| 7 | Rhus aromatica                      | FRAGRANT SUMAC             | 5  |        |
| 4 | Ribes cynosbati                     | PRICKLY or WILD GOOSEBERRY | 3  |        |
| * | ROSA MULTIFLORA                     | MULTIFLORA ROSE            | 3  |        |
| * | TARAXACUM OFFICINALE                | COMMON DANDELION           | 3  |        |
| * | TORILIS JAPONICA                    | HEDGE-PARSLEY              | 3  |        |
| 2 | Toxicodendron radicans              | POISON-IVY                 | 0  |        |
| 1 | Ulmus americana                     | AMERICAN ELM               | -3 |        |

|   |   |                  |   |
|---|---|------------------|---|
| 4 | <i>Viburnum lentago</i>                 | NANNYBERRY       | 0 |
| 5 | <i>Viburnum rafinesquianum</i>          | DOWNY ARROW-WOOD | 5 |
| 3 | <i>Viola labradorica (V. conspersa)</i> | DOG VIOLET       | 0 |
| 3 | <i>Vitis riparia</i>                    | RIVER-BANK GRAPE | 0 |

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Also: *Geum* sp.



# Mud Lake Bog

## North Island

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Southern Forest

Island with open forest dominated by *Quercus rubra*, situated in N end of the Wet Meadow with some open hardwood swamp to the SW

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 62    | Total Species        | 3.67 | NATIVE MEAN C |
| 51    | Total Native Species | 3.02 | W/Adventives  |
| 82.3  | % Native Species     | 1.7  | NATIVE MEAN W |
| 26.19 | NATIVE FQI           | 2.0  | W/Adventives  |
| 23.75 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                                 | COMMON NAME                | W  | LISTED |
|---|---|----------------------------|----|--------|
| 1 | <i>Acer rubrum</i>                              | RED MAPLE                  | 0  |        |
| 1 | <i>Achillea millefolium</i>                     | YARROW                     | 3  |        |
| 2 | <i>Agrimonia gryposepala</i>                    | TALL AGRIMONY              | 3  |        |
| 5 | <i>Amphicarpaea bracteata</i>                   | HOG-PEANUT                 | 0  |        |
| 3 | <i>Apocynum androsaemifolium</i>                | SPREADING DOGBANE          | 5  |        |
| 7 | <i>Brachyelytrum erectum</i>                    | LONG-AWNED WOOD GRASS      | 5  |        |
| 5 | <i>Bromus pubescens</i>                         | CANADA BROME               | 3  |        |
| 3 | <i>Carex aurea</i>                              | SEDGE                      | -3 |        |
| 1 | <i>Carex blanda</i>                             | SEDGE                      | 0  |        |
| 3 | <i>Carex cephalophora</i>                       | SEDGE                      | 3  |        |
| 3 | <i>Carex cristatella</i>                        | SEDGE                      | -3 |        |
| 5 | <i>Carex gracilescens</i>                       | SEDGE                      | 3  |        |
| 4 | <i>Carex gracillima</i>                         | SEDGE                      | 3  |        |
| 4 | <i>Carex pennsylvanica</i>                      | SEDGE                      | 5  |        |
| 2 | <i>Carex radiata</i> (C. rosea)                 | STRAIGHT-STYLED WOOD SEDGE | 0  |        |
| 6 | <i>Carpinus caroliniana</i>                     | BLUE-BEECH                 | 0  |        |
| 5 | <i>Carya ovata</i>                              | SHAGBARK HICKORY           | 3  |        |
| 7 | <i>Cephalanthus occidentalis</i>                | BUTTONBUSH                 | -5 |        |
| * | CIRSIUM ARVENSE                                 | CANADA THISTLE             | 3  |        |
| 4 | <i>Claytonia virginica</i>                      | SPRING-BEAUTY              | 3  |        |
| * | DACTYLIS GLOMERATA                              | ORCHARD GRASS              | 3  |        |
| 4 | <i>Danthonia spicata</i>                        | POVERTY GRASS; OATGRASS    | 5  |        |
| * | DAUCUS CAROTA                                   | QUEEN-ANNE'S-LACE          | 5  |        |
| 5 | <i>Doellingeria umbellata</i> (Aster u.)        | FLAT-TOPPED WHITE ASTER    | -3 |        |
| * | ELAEAGNUS UMBELLATA                             | AUTUMN-OLIVE               | 3  |        |
| 5 | <i>Elymus hystrix</i> ( <i>Hystrix patula</i> ) | BOTTLEBRUSH GRASS          | 3  |        |
| 5 | <i>Festuca subverticillata</i> (F. obtusa)      | NODDING FESCUE             | 3  |        |
| 2 | <i>Fragaria virginiana</i>                      | WILD STRAWBERRY            | 3  |        |
| 0 | <i>Galium aparine</i>                           | ANNUAL BEDSTRAW            | 3  |        |
| 3 | <i>Galium boreale</i>                           | NORTHERN BEDSTRAW          | 0  |        |
| 4 | <i>Geranium maculatum</i>                       | WILD GERANIUM              | 3  |        |
| 4 | <i>Glyceria striata</i>                         | FOWL MANNA GRASS           | -5 |        |
| * | HYPERICUM PERFORATUM                            | COMMON ST. JOHN'S-WORT     | 5  |        |
| 4 | <i>Juniperus communis</i>                       | COMMON or GROUND JUNIPER   | 3  |        |
| 3 | <i>Juniperus virginiana</i>                     | RED-CEDAR                  | 3  |        |
| 5 | <i>Luzula multiflora</i>                        | COMMON WOOD RUSH           | 3  |        |
| 4 | <i>Maianthemum canadense</i>                    | CANADA MAYFLOWER           | 3  |        |
| * | PHLEUM PRATENSE                                 | TIMOTHY                    | 3  |        |
| * | POA COMPRESSA                                   | CANADA BLUEGRASS           | 3  |        |
| * | POA PRATENSIS                                   | KENTUCKY BLUEGRASS         | 3  |        |
| 3 | <i>Podophyllum peltatum</i>                     | MAY-APPLE                  | 3  |        |
| 1 | <i>Populus tremuloides</i>                      | QUAKING ASPEN              | 0  |        |
| 2 | <i>Prunus serotina</i>                          | WILD BLACK CHERRY          | 3  |        |

|   |   |                          |    |
|---|---|--------------------------|----|
| 5 | <i>Quercus alba</i>                         | WHITE OAK                | 3  |
| 8 | <i>Quercus bicolor</i>                      | SWAMP WHITE OAK          | -3 |
| 5 | <i>Quercus rubra</i>                        | RED OAK                  | 3  |
| 0 | <i>Ranunculus abortivus</i>                 | SMALL-FLOWERED BUTTERCUP | 0  |
| * | ROSA MULTIFLORA                             | MULTIFLORA ROSE          | 3  |
| 1 | <i>Solidago altissima</i>                   | TALL GOLDENROD           | 3  |
| 3 | <i>Solidago rugosa</i>                      | ROUGH-LEAVED GOLDENROD   | 0  |
| 4 | <i>Sphenopholis intermedia</i>              | SLENDER WEDGEGRASS       | 0  |
| 4 | <i>Symphotrichum cordifolium</i> (Aster c.) | HEART-LEAVED ASTER       | 5  |
| 1 | <i>Symphotrichum pilosum</i> (Aster p.)     | HAIRY ASTER              | 3  |
| * | TARAXACUM OFFICINALE                        | COMMON DANDELION         | 3  |
| * | TORILIS JAPONICA                            | HEDGE-PARSLEY            | 3  |
| 2 | <i>Toxicodendron radicans</i>               | POISON-IVY               | 0  |
| 4 | <i>Viburnum lentago</i>                     | NANNYBERRY               | 0  |
| 5 | <i>Viburnum rafinesquianum</i>              | DOWNY ARROW-WOOD         | 5  |
| 8 | <i>Vicia caroliniana</i>                    | PALE or WOOD VETCH       | 5  |
| 3 | <i>Viola labradorica</i> (V. conspersa)     | DOG VIOLET               | 0  |
| 6 | <i>Vitis aestivalis</i>                     | SUMMER GRAPE             | 3  |
| 3 | <i>Vitis riparia</i>                        | RIVER-BANK GRAPE         | 0  |

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Also: *Prenanthes* sp., *Hieracium* sp., *Celastrus* sp.

# Mud Lake Bog

## Oak Woods SE

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Southern Forest

Open oak woods in ESE corner of property, adjacent to forested private property to S and E and wetlands to N and W

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 74    | Total Species        | 3.34 | NATIVE MEAN C |
| 58    | Total Native Species | 2.62 | W/Adventives  |
| 78.4  | % Native Species     | 2.0  | NATIVE MEAN W |
| 25.47 | NATIVE FQI           | 2.4  | W/Adventives  |
| 22.55 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME  | COMMON NAME                | W  | LISTED |
|---|--|----------------------------|----|--------|
| 1 | <i>Acer rubrum</i>                                       | RED MAPLE                  | 0  |        |
| 2 | <i>Agrimonia gryposepala</i>                             | TALL AGRIMONY              | 3  |        |
| * | <i>ALLIARIA PETIOLATA</i>                                | GARLIC MUSTARD             | 3  |        |
| 4 | <i>Amelanchier arborea</i>                               | JUNEBERRY                  | 3  |        |
| 3 | <i>Apocynum androsaemifolium</i>                         | SPREADING DOGBANE          | 5  |        |
| 3 | <i>Carex cephalophora</i>                                | SEDGE                      | 3  |        |
| 4 | <i>Carex gracillima</i>                                  | SEDGE                      | 3  |        |
| 3 | <i>Carex hirsutella</i>                                  | SEDGE                      | 3  |        |
| 4 | <i>Carex pensylvanica</i>                                | SEDGE                      | 5  |        |
| 2 | <i>Carex radiata</i> (C. rosea)                          | STRAIGHT-STYLED WOOD SEDGE | 0  |        |
| 1 | <i>Carex retroflexa</i>                                  | SEDGE                      | 5  |        |
| 4 | <i>Carex tenera</i>                                      | SEDGE                      | 0  |        |
| 5 | <i>Carya ovata</i>                                       | SHAGBARK HICKORY           | 3  |        |
| * | <i>CERASTIUM FONTANUM</i>                                | MOUSE-EAR CHICKWEED        | 3  |        |
| 7 | <i>Cinna arundinacea</i>                                 | WOOD REEDGRASS             | -3 |        |
| 2 | <i>Circaea canadensis</i> (C. lutetiana)                 | ENCHANTER'S-NIGHTSHADE     | 3  |        |
| * | <i>DACTYLIS GLOMERATA</i>                                | ORCHARD GRASS              | 3  |        |
| 4 | <i>Danthonia spicata</i>                                 | POVERTY GRASS; OATGRASS    | 5  |        |
| * | <i>DAUCUS CAROTA</i>                                     | QUEEN-ANNE'S-LACE          | 5  |        |
| * | <i>DIANTHUS ARMERIA</i>                                  | DEPTFORD PINK              | 5  |        |
| * | <i>ELAEAGNUS UMBELLATA</i>                               | AUTUMN-OLIVE               | 3  |        |
| 4 | <i>Eurybia macrophylla</i> (Aster m.)                    | BIG-LEAVED ASTER           | 5  |        |
| 5 | <i>Fraxinus americana</i>                                | WHITE ASH                  | 3  |        |
| 3 | <i>Galium boreale</i>                                    | NORTHERN BEDSTRAW          | 0  |        |
| 4 | <i>Galium circaezans</i>                                 | WHITE WILD LICORICE        | 3  |        |
| 4 | <i>Galium triflorum</i>                                  | FRAGRANT BEDSTRAW          | 3  |        |
| 4 | <i>Geranium maculatum</i>                                | WILD GERANIUM              | 3  |        |
| 1 | <i>Geum canadense</i>                                    | WHITE AVENS                | 0  |        |
| 4 | <i>Glyceria striata</i>                                  | FOWL MANNA GRASS           | -5 |        |
| 1 | <i>Hackelia virginiana</i>                               | BEGGAR'S LICE              | 3  |        |
| 8 | <i>Heuchera americana</i>                                | ALUM ROOT                  | 3  |        |
| * | <i>HIERACIUM CAESPITOSUM</i>                             | KING DEVIL                 | 5  |        |
| 4 | <i>Hypericum punctatum</i>                               | SPOTTED ST. JOHN'S-WORT    | 0  |        |
| 4 | <i>Juniperus communis</i>                                | COMMON or GROUND JUNIPER   | 3  |        |
| * | <i>LEUCANTHEMUM VULGARE</i> (CHRYSANTHEMUM LEUCANTHEMUM) | OX-EYE DAISY               | 5  |        |
| * | <i>LIGUSTRUM VULGARE</i>                                 | COMMON PRIVET              | 3  |        |
| 5 | <i>Lonicera dioica</i>                                   | RED HONEYSUCKLE            | 3  |        |
| 5 | <i>Luzula multiflora</i>                                 | COMMON WOOD RUSH           | 3  |        |
| 5 | <i>Maianthemum racemosum</i> (Smilacina r.)              | FALSE SPIKENARD            | 3  |        |
| 2 | <i>Onoclea sensibilis</i>                                | SENSITIVE FERN             | -3 |        |
| 4 | <i>Persicaria virginiana</i> (Polygonum v.)              | JUMPSEED                   | 0  |        |
| * | <i>PHLEUM PRATENSE</i>                                   | TIMOTHY                    | 3  |        |
| * | <i>POA COMPRESSA</i>                                     | CANADA BLUEGRASS           | 3  |        |

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|   |  |                            |    |
|---|--|----------------------------|----|
| * | POA PRATENSIS                                  | KENTUCKY BLUEGRASS         | 3  |
| 3 | Podophyllum peltatum                           | MAY-APPLE                  | 3  |
| 1 | Populus deltoides                              | COTTONWOOD                 | 0  |
| 2 | Potentilla simplex                             | OLD-FIELD CINQUEFOIL       | 3  |
| 0 | Prunella vulgaris                              | SELF-HEAL                  | 0  |
| 2 | Prunus serotina                                | WILD BLACK CHERRY          | 3  |
| 5 | Quercus alba                                   | WHITE OAK                  | 3  |
| 5 | Quercus rubra                                  | RED OAK                    | 3  |
| 6 | Quercus velutina                               | BLACK OAK                  | 5  |
| 0 | Ranunculus abortivus                           | SMALL-FLOWERED BUTTERCUP   | 0  |
| 5 | Ranunculus recurvatus                          | HOOKED CROWFOOT            | -3 |
| 4 | Ribes cynosbati                                | PRICKLY or WILD GOOSEBERRY | 3  |
| * | ROSA MULTIFLORA                                | MULTIFLORA ROSE            | 3  |
| 1 | Rubus allegheniensis                           | COMMON BLACKBERRY          | 3  |
| 1 | Rubus flagellaris                              | NORTHERN DEWBERRY          | 3  |
| 1 | Rubus occidentalis                             | BLACK RASPBERRY            | 5  |
| 2 | Rubus strigosus                                | WILD RED RASPBERRY         | 0  |
| 7 | Sisyrinchium albidum (S. hostile)              | COMMON BLUE-EYED-GRASS     | 3  |
| 4 | Sphenopholis intermedia                        | SLENDER WEDGEGRASS         | 0  |
| 2 | Symphotrichum lateriflorum (Aster l.)          | CALICO ASTER               | 0  |
| 1 | Symphotrichum pilosum (Aster p.)               | HAIRY ASTER                | 3  |
| 2 | Symphotrichum urophyllum (Aster sagittifolius) | ARROW-LEAVED ASTER         | 5  |
| * | TARAXACUM OFFICINALE                           | COMMON DANDELION           | 3  |
| 6 | Thalictrum dioicum                             | EARLY MEADOW-RUE           | 3  |
| * | THLASPI ARVENSE                                | PENNY CRESS                | 5  |
| 2 | Toxicodendron radicans                         | POISON-IVY                 | 0  |
| * | TRIFOLIUM PRATENSE                             | RED CLOVER                 | 3  |
| 1 | Ulmus americana                                | AMERICAN ELM               | -3 |
| 7 | Vaccinium pallidum                             | HILLSIDE BLUEBERRY         | 5  |
| 5 | Viburnum rafinesquianum                        | DOWNY ARROW-WOOD           | 5  |
| 3 | Vitis riparia                                  | RIVER-BANK GRAPE           | 0  |

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Also: Juncus sp., Crataegus sp.

# Mud Lake Bog

## Oak-Hickory North

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Southern Forest

Oak-hickory woods at N end of property, with disturbance from power line cut through level N portion and higher quality S area gradually sloping down to wetland meadow

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 137   | Total Species        | 3.65 | NATIVE MEAN C |
| 110   | Total Native Species | 2.93 | W/Adventives  |
| 80.3  | % Native Species     | 1.4  | NATIVE MEAN W |
| 38.33 | NATIVE FQI           | 1.6  | W/Adventives  |
| 34.35 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME  | COMMON NAME             | W  | LISTED |
|---|--|-------------------------|----|--------|
| 1 | <i>Acer rubrum</i>   | RED MAPLE               | 0  |        |
| 1 | <i>Achillea millefolium</i>                                | YARROW                  | 3  |        |
| 2 | <i>Agrimonia gryposepala</i>                               | TALL AGRIMONY           | 3  |        |
| 4 | <i>Agrimonia parviflora</i>                                | SWAMP AGRIMONY          | 0  |        |
| * | AGROSTIS GIGANTEA  | REDTOP                  | -3 |        |
| * | ALLIARIA PETIOLATA   | GARLIC MUSTARD          | 3  |        |
| 5 | <i>Amphicarpaea bracteata</i>                              | HOG-PEANUT              | 0  |        |
| 3 | <i>Anemone virginiana</i>                                  | THIMBLEWEED             | 3  |        |
| 3 | <i>Apocynum androsaemifolium</i>                           | SPREADING DOGBANE       | 5  |        |
| 5 | <i>Arisaema triphyllum</i>                                 | JACK-IN-THE-PULPIT      | 0  |        |
| 6 | <i>Asclepias exaltata</i>                                  | POKE MILKWEED           | 5  |        |
| * | BARBAREA VULGARIS  | YELLOW ROCKET           | 0  |        |
| 5 | <i>Boehmeria cylindrica</i>                                | FALSE NETTLE            | -5 |        |
| 5 | <i>Bromus pubescens</i>                                    | CANADA BROME            | 3  |        |
| 6 | <i>Campanula rotundifolia</i>                              | HAREBELL                | 3  |        |
| 5 | <i>Cardamine concatenata</i> ( <i>Dentaria laciniata</i> ) | CUT-LEAVED TOOTHWORT    | 3  |        |
| 1 | <i>Carex blanda</i>  | SEDGE                   | 0  |        |
| 3 | <i>Carex cephalophora</i>                                  | SEDGE                   | 3  |        |
| 4 | <i>Carex crinita</i>                                       | SEDGE                   | -5 |        |
| 5 | <i>Carex gracilescens</i>                                  | SEDGE                   | 3  |        |
| 4 | <i>Carex gracillima</i>                                    | SEDGE                   | 3  |        |
| 4 | <i>Carex lupulina</i>                                      | SEDGE                   | -5 |        |
| 5 | <i>Carex normalis</i>                                      | SEDGE                   | -3 |        |
| 4 | <i>Carex tenera</i>  | SEDGE                   | 0  |        |
| 3 | <i>Carex tribuloides</i>                                   | SEDGE                   | -3 |        |
| 1 | <i>Carex vulpinoidea</i>                                   | SEDGE                   | -5 |        |
| 5 | <i>Carya glabra</i>  | PIGNET HICKORY          | 3  |        |
| 5 | <i>Carya ovata</i>   | SHAGBARK HICKORY        | 3  |        |
| * | CATALPA SPECIOSA   | NORTHERN CATALPA        | 3  |        |
| * | CELASTRUS ORBICULATUS                                      | ORIENTAL BITTERSWEET    | 5  |        |
| 7 | <i>Cephalanthus occidentalis</i>                           | BUTTONBUSH              | -5 |        |
| * | CERASTIUM FONTANUM   | MOUSE-EAR CHICKWEED     | 3  |        |
| * | CICHORIUM INTYBUS  | CHICORY                 | 3  |        |
| 7 | <i>Cinna arundinacea</i>                                   | WOOD REEDGRASS          | -3 |        |
| 2 | <i>Circaea canadensis</i> ( <i>C. lutetiana</i> )          | ENCHANTER'S-NIGHTSHADE  | 3  |        |
| * | CIRSIUM VULGARE  | BULL THISTLE            | 3  |        |
| 4 | <i>Claytonia virginica</i>                                 | SPRING-BEAUTY           | 3  |        |
| 3 | <i>Clinopodium vulgare</i>                                 | WILD-BASIL              | 5  |        |
| 1 | <i>Cornus foemina</i>                                      | GRAY DOGWOOD            | 0  |        |
| 5 | <i>Corylus americana</i>                                   | HAZELNUT                | 3  |        |
| * | DACTYLIS GLOMERATA   | ORCHARD GRASS           | 3  |        |
| 4 | <i>Danthonia spicata</i>                                   | POVERTY GRASS; OATGRASS | 5  |        |
| * | DAUCUS CAROTA  | QUEEN-ANNE'S-LACE       | 5  |        |

|   |   |                               |    |
|---|---|-------------------------------|----|
| 3 | <i>Dichanthelium implicatum</i> ( <i>Panicum</i> i.)  | PANIC GRASS                   | 0  |
| 4 | <i>Dioscorea villosa</i> ( <i>Dioscorea villosa</i> ) | WILD YAM                      | 0  |
| 5 | <i>Doellingeria umbellata</i> ( <i>Aster</i> u.)      | FLAT-TOPPED WHITE ASTER       | -3 |
| 5 | <i>Dryopteris carthusiana</i>                         | SPINULOSE WOODFERN            | -3 |
| * | ELAEAGNUS UMBELLATA                                   | AUTUMN-OLIVE                  | 3  |
| 5 | <i>Elymus hystrix</i> ( <i>Hystrix patula</i> )       | BOTTLEBRUSH GRASS             | 3  |
| 0 | <i>Erigeron annuus</i>                                | DAISY FLEABANE                | 3  |
| 2 | <i>Erigeron philadelphicus</i>                        | PHILADELPHIA FLEABANE         | 0  |
| 4 | <i>Euphorbia corollata</i>                            | FLOWERING SPURGE              | 5  |
| 4 | <i>Eurybia macrophylla</i> ( <i>Aster</i> m.)         | BIG-LEAVED ASTER              | 5  |
| 2 | <i>Fragaria virginiana</i>                            | WILD STRAWBERRY               | 3  |
| * | FRANGULA ALNUS (RHAMNUS FRANGULA)                     | GLOSSY BUCKTHORN              | 0  |
| 5 | <i>Fraxinus americana</i>                             | WHITE ASH                     | 3  |
| 6 | <i>Fraxinus nigra</i>                                 | BLACK ASH                     | -3 |
| 3 | <i>Galium boreale</i>                                 | NORTHERN BEDSTRAW             | 0  |
| 4 | <i>Galium triflorum</i>                               | FRAGRANT BEDSTRAW             | 3  |
| 4 | <i>Geranium maculatum</i>                             | WILD GERANIUM                 | 3  |
| 1 | <i>Geum canadense</i>                                 | WHITE AVENS                   | 0  |
| 4 | <i>Geum vernum</i>                                    | SPRING AVENS                  | 3  |
| 4 | <i>Glyceria striata</i>                               | FOWL MANNA GRASS              | -5 |
| 5 | <i>Helianthus divaricatus</i>                         | WOODLAND SUNFLOWER            | 5  |
| 6 | <i>Hepatica americana</i>                             | ROUND-LOBED HEPATICA          | 5  |
| 5 | <i>Hylodesmum glutinosum</i> ( <i>Desmodium</i> g.)   | CLUSTERED-LEAVED TICK-TREFOIL | 5  |
| * | HYLOTELEPHIUM TELEPHIUM (SEDUM T.)                    | LIVE-FOREVER                  | 5  |
| * | HYPERICUM PERFORATUM                                  | COMMON ST. JOHN'S-WORT        | 5  |
| 5 | <i>Juglans nigra</i>                                  | BLACK WALNUT                  | 3  |
| 1 | <i>Juncus dudleyi</i>                                 | DUDLEY'S RUSH                 | -3 |
| 1 | <i>Juncus tenuis</i>                                  | PATH RUSH                     | 0  |
| 4 | <i>Juniperus communis</i>                             | COMMON or GROUND JUNIPER      | 3  |
| 5 | <i>Lespedeza frutescens</i> ( <i>L. violacea</i> )    | VIOLET BUSH-CLOVER            | 5  |
| * | LIGUSTRUM VULGARE                                     | COMMON PRIVET                 | 3  |
| * | LONICERA xBELLA                                       | HYBRID HONEYSUCKLE            | 3  |
| 5 | <i>Luzula multiflora</i>                              | COMMON WOOD RUSH              | 3  |
| * | LYSIMACHIA NUMMULARIA                                 | MONEYWORT                     | -3 |
| 5 | <i>Menispermum canadense</i>                          | MOONSEED                      | 0  |
| 2 | <i>Monarda fistulosa</i>                              | WILD-BERGAMOT                 | 3  |
| 0 | <i>Muhlenbergia schreberi</i>                         | NIMBLEWILL                    | 0  |
| 2 | <i>Onoclea sensibilis</i>                             | SENSITIVE FERN                | -3 |
| 5 | <i>Ostrya virginiana</i>                              | IRONWOOD; HOP-HORNBEAM        | 3  |
| 0 | <i>Oxalis stricta</i> ( <i>O. fontana</i> )           | YELLOW WOOD-SORREL            | 3  |
| 5 | <i>Parthenocissus quinquefolia</i>                    | VIRGINIA CREEPER              | 3  |
| 4 | <i>Persicaria virginiana</i> ( <i>Polygonum</i> v.)   | JUMPSEED                      | 0  |
| * | PHLEUM PRATENSE                                       | TIMOTHY                       | 3  |
| 0 | <i>Plantago rugelii</i>                               | RED-STALKED PLANTAIN          | 0  |
| * | POA COMPRESSA   | CANADA BLUEGRASS              | 3  |
| * | POA PRATENSIS   | KENTUCKY BLUEGRASS            | 3  |
| 3 | <i>Podophyllum peltatum</i>                           | MAY-APPLE                     | 3  |
| 1 | <i>Populus deltoides</i>                              | COTTONWOOD                    | 0  |
| 2 | <i>Potentilla simplex</i>                             | OLD-FIELD CINQUEFOIL          | 3  |
| 2 | <i>Prunus serotina</i>                                | WILD BLACK CHERRY             | 3  |
| 5 | <i>Quercus alba</i>                                   | WHITE OAK                     | 3  |
| 8 | <i>Quercus bicolor</i>                                | SWAMP WHITE OAK               | -3 |
| 5 | <i>Quercus rubra</i>                                  | RED OAK                       | 3  |
| 6 | <i>Quercus velutina</i>                               | BLACK OAK                     | 5  |
| 0 | <i>Ranunculus abortivus</i>                           | SMALL-FLOWERED BUTTERCUP      | 0  |
| 5 | <i>Ranunculus recurvatus</i>                          | HOOKEED CROWFOOT              | -3 |
| * | RHAMNUS CATHARTICA                                    | COMMON BUCKTHORN              | 0  |
| 2 | <i>Rhus typhina</i>                                   | STAGHORN SUMAC                | 3  |
| * | ROBINIA PSEUDOACACIA                                  | BLACK LOCUST                  | 3  |
| 4 | <i>Rosa carolina</i>                                  | PASTURE ROSE                  | 3  |

|   |   |                            |    |
|---|---|----------------------------|----|
| * | ROSA MULTIFLORA                                 | MULTIFLORA ROSE            | 3  |
| 1 | Rubus allegheniensis                            | COMMON BLACKBERRY          | 3  |
| 1 | Rubus occidentalis                              | BLACK RASPBERRY            | 5  |
| 1 | Rudbeckia hirta                                 | BLACK-EYED SUSAN           | 3  |
| 3 | Salix amygdaloides                              | PEACH-LEAVED WILLOW        | -3 |
| 7 | Sisyrinchium albidum (S. hastile)               | COMMON BLUE-EYED-GRASS     | 3  |
| 6 | Solidago caesia                                 | BLUESTEM GOLDENROD         | 3  |
| 1 | Solidago canadensis                             | CANADA GOLDENROD           | 3  |
| 2 | Solidago nemoralis                              | OLD-FIELD GOLDENROD        | 5  |
| 4 | Sphenopholis intermedia                         | SLENDER WEDGEGRASS         | 0  |
| 4 | Symphyotrichum cordifolium (Aster c.)           | HEART-LEAVED ASTER         | 5  |
| 5 | Symphyotrichum laeve (Aster l.)                 | SMOOTH ASTER               | 3  |
| 2 | Symphyotrichum lateriflorum (Aster l.)          | CALICO ASTER               | 0  |
| 3 | Symphyotrichum novae-angliae (Aster n.)         | NEW ENGLAND ASTER          | -3 |
| 4 | Symphyotrichum oolentangiense (Aster o.)        | PRAIRIE HEART-LEAVED ASTER | 5  |
| 2 | Symphyotrichum urophyllum (Aster sagittifolius) | ARROW-LEAVED ASTER         | 5  |
| * | TARAXACUM OFFICINALE                            | COMMON DANDELION           | 3  |
| 6 | Thalictrum dioicum                              | EARLY MEADOW-RUE           | 3  |
| 8 | Thalictrum thalictroides (Anemonella t.)        | RUE-ANEMONE                | 3  |
| 5 | Tilia americana                                 | BASSWOOD                   | 3  |
| * | TORILIS JAPONICA                                | HEDGE-PARSLEY              | 3  |
| 2 | Toxicodendron radicans                          | POISON-IVY                 | 0  |
| 5 | Triosteum aurantiacum                           | HORSE-GENTIAN              | 5  |
| 1 | Ulmus americana                                 | AMERICAN ELM               | -3 |
| * | VERBASCUM THAPSUS                               | COMMON MULLEIN             | 5  |
| 4 | Verbena urticifolia                             | WHITE VERVAIN              | 0  |
| * | VERONICA SERPYLLIFOLIA                          | THYME-LEAVED SPEEDWELL     | 0  |
| 8 | Veronicastrum virginicum                        | CULVER'S-ROOT              | 0  |
| 4 | Viburnum lentago                                | NANNYBERRY                 | 0  |
| 5 | Viburnum rafinesquianum                         | DOWNY ARROW-WOOD           | 5  |
| 5 | Viola cucullata                                 | MARSH VIOLET               | -5 |
| 1 | Viola sororia                                   | COMMON BLUE VIOLET         | 0  |
| 3 | Vitis riparia                                   | RIVER-BANK GRAPE           | 0  |
| 3 | Zanthoxylum americanum                          | PRICKLY-ASH                | 3  |



# Mud Lake Bog

## Prairie Fen

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Prairie Fen

Small prairie fen in NW end of property, about one foot higher than surrounding wet meadow, with some native fen plants persisting, but generally degraded ecologically

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 110   | Total Species        | 4.31 | NATIVE MEAN C |
| 105   | Total Native Species | 4.12 | W/Adventives  |
| 95.5  | % Native Species     | -2.2 | NATIVE MEAN W |
| 44.21 | NATIVE FQI           | -2.1 | W/Adventives  |
| 43.19 | W/Adventives         |      |               |

| C  | SCIENTIFIC NAME                             | COMMON NAME             | W  | LISTED |
|----|---|-------------------------|----|--------|
| 1  | <i>Acer rubrum</i>                          | RED MAPLE               | 0  |        |
| 2  | <i>Acer saccharinum</i>                     | SILVER MAPLE            | -3 |        |
| 2  | <i>Agrimonia gryposepala</i>                | TALL AGRIMONY           | 3  |        |
| 4  | <i>Agrimonia parviflora</i>                 | SWAMP AGRIMONY          | 0  |        |
| *  | AGROSTIS GIGANTEA                           | REDTOP                  | -3 |        |
| 5  | <i>Andropogon gerardii</i>                  | BIG BLUESTEM            | 0  |        |
| 3  | <i>Anemone virginiana</i>                   | THIMBLEWEED             | 3  |        |
| 3  | <i>Apocynum androsaemifolium</i>            | SPREADING DOGBANE       | 5  |        |
| 5  | <i>Arisaema triphyllum</i>                  | JACK-IN-THE-PULPIT      | 0  |        |
| 5  | <i>Aronia prunifolia</i>                    | CHOKEBERRY              | -3 |        |
| 6  | <i>Asclepias incarnata</i>                  | SWAMP MILKWEED          | -5 |        |
| 1  | <i>Asclepias syriaca</i>                    | COMMON MILKWEED         | 5  |        |
| 8  | <i>Betula pumila</i>                        | BOG BIRCH               | -5 |        |
| 7  | <i>Bidens trichosperma</i> (B. coronatus)   | TICKSEED-SUNFLOWER      | -5 |        |
| 5  | <i>Boehmeria cylindrica</i>                 | FALSE NETTLE            | -5 |        |
| 6  | <i>Bromus ciliatus</i>                      | FRINGED BROME           | -3 |        |
| 3  | <i>Calamagrostis canadensis</i>             | BLUE-JOINT              | -5 |        |
| 6  | <i>Caltha palustris</i>                     | MARSH-MARIGOLD          | -5 |        |
| 2  | <i>Calystegia sepium</i>                    | HEDGE BINDWEED          | 0  |        |
| 10 | <i>Carex buxbaumii</i>                      | SEDGE                   | -5 |        |
| 2  | <i>Carex hystericina</i>                    | SEDGE                   | -5 |        |
| 6  | <i>Carex lacustris</i>                      | SEDGE                   | -5 |        |
| 5  | <i>Carex sartwellii</i>                     | SEDGE                   | -5 |        |
| 1  | <i>Carex stipata</i>                        | SEDGE                   | -5 |        |
| 4  | <i>Carex stricta</i>                        | SEDGE                   | -5 |        |
| 1  | <i>Carex vulpinoidea</i>                    | SEDGE                   | -5 |        |
| 7  | <i>Chelone glabra</i>                       | TURTLEHEAD              | -5 |        |
| 6  | <i>Cirsium muticum</i>                      | SWAMP THISTLE           | -5 |        |
| 4  | <i>Clematis virginiana</i>                  | VIRGIN'S BOWER          | 0  |        |
| 5  | <i>Comandra umbellata</i>                   | BASTARD-TOADFLAX        | 3  |        |
| 2  | <i>Cornus amomum</i>                        | SILKY DOGWOOD           | -3 |        |
| 1  | <i>Cornus foemina</i>                       | GRAY DOGWOOD            | 0  |        |
| 3  | <i>Cuscuta gronovii</i>                     | COMMON DODDER           | -3 |        |
| 8  | <i>Dasiphora fruticosa</i> (Potentilla f.)  | SHRUBBY CINQUEFOIL      | -3 |        |
| 5  | <i>Doellingeria umbellata</i> (Aster u.)    | FLAT-TOPPED WHITE ASTER | -3 |        |
| 7  | <i>Equisetum fluviatile</i>                 | WATER HORSETAIL         | -5 |        |
| 2  | <i>Erigeron philadelphicus</i>              | PHILADELPHIA FLEABANE   | 0  |        |
| 4  | <i>Eupatorium perfoliatum</i>               | BONESET                 | -3 |        |
| 3  | <i>Euthamia graminifolia</i>                | GRASS-LEAVED GOLDENROD  | 0  |        |
| 4  | <i>Eutrochium maculatum</i> (Eupatorium m.) | JOE-PYE-WEED            | -5 |        |
| *  | FRANGULA ALNUS (RHAMNUS FRANGULA)           | GLOSSY BUCKTHORN        | 0  |        |
| 6  | <i>Fraxinus nigra</i>                       | BLACK ASH               | -3 |        |
| 5  | <i>Galium asprellum</i>                     | ROUGH BEDSTRAW          | -5 |        |



|    |  |                        |    |
|----|--|------------------------|----|
| 3  | <i>Galium boreale</i>                              | NORTHERN BEDSTRAW      | 0  |
| 4  | <i>Galium triflorum</i>                            | FRAGRANT BEDSTRAW      | 3  |
| 4  | <i>Glyceria striata</i>                            | FOWL MANNA GRASS       | -5 |
| 5  | <i>Helianthus giganteus</i>                        | TALL SUNFLOWER         | -3 |
| 10 | <i>Hypoxis hirsuta</i>                             | STAR-GRASS             | 0  |
| 5  | <i>Ilex verticillata</i>                           | MICHIGAN HOLLY         | -3 |
| 3  | <i>Juniperus virginiana</i>                        | RED-CEDAR              | 3  |
| 5  | <i>Larix laricina</i>                              | TAMARACK               | -3 |
| 7  | <i>Lathyrus palustris</i>                          | MARSH PEA              | -3 |
| 8  | <i>Liatris spicata</i>                             | MARSH BLAZING-STAR     | 0  |
| 4  | <i>Lobelia siphilitica</i>                         | GREAT BLUE LOBELIA     | -3 |
| 2  | <i>Lycopus americanus</i>                          | COMMON WATER HOREHOUND | -5 |
| 10 | <i>Lysimachia quadriflora</i>                      | WHORLED LOOSESTRIFE    | -5 |
| 4  | <i>Maianthemum canadense</i>                       | CANADA MAYFLOWER       | 3  |
| 3  | <i>Mentha canadensis</i> (M. arvensis)             | WILD MINT              | -3 |
| 3  | <i>Muhlenbergia mexicana</i>                       | LEAFY SATIN GRASS      | -3 |
| 2  | <i>Onoclea sensibilis</i>                          | SENSITIVE FERN         | -3 |
| 6  | <i>Oxypolis rigidior</i>                           | COWBANE                | -5 |
| 5  | <i>Packera aurea</i> (Senecio a.)                  | GOLDEN RAGWORT         | -3 |
| 5  | <i>Parthenocissus quinquefolia</i>                 | VIRGINIA CREEPER       | 3  |
| 0  | <i>Phalaris arundinacea</i>                        | REED CANARY GRASS      | -3 |
| 5  | <i>Phragmites australis</i> var. <i>americanus</i> | REED                   | -3 |
| 3  | <i>Podophyllum peltatum</i>                        | MAY-APPLE              | 3  |
| 1  | <i>Populus tremuloides</i>                         | QUAKING ASPEN          | 0  |
| 0  | <i>Prunella vulgaris</i>                           | SELF-HEAL              | 0  |
| 2  | <i>Prunus virginiana</i>                           | CHOKE CHERRY           | 3  |
| 5  | <i>Pycnanthemum virginianum</i>                    | COMMON MOUNTAIN MINT   | -3 |
| 8  | <i>Quercus bicolor</i>                             | SWAMP WHITE OAK        | -3 |
| 8  | <i>Quercus palustris</i>                           | PIN OAK                | -3 |
| 8  | <i>Rhamnus alnifolia</i>                           | ALDER-LEAVED BUCKTHORN | -5 |
| 6  | <i>Ribes americanum</i>                            | WILD BLACK CURRANT     | -3 |
| *  | ROSA MULTIFLORA                                    | MULTIFLORA ROSE        | 3  |
| 4  | <i>Rubus pubescens</i>                             | DWARF RASPBERRY        | -3 |
| 2  | <i>Rubus strigosus</i>                             | WILD RED RASPBERRY     | 0  |
| 1  | <i>Rudbeckia hirta</i>                             | BLACK-EYED SUSAN       | 3  |
| 9  | <i>Salix candida</i>                               | HOARY WILLOW           | -5 |
| 1  | <i>Salix discolor</i>                              | PUSSY WILLOW           | -3 |
| 1  | <i>Salix petiolaris</i>                            | SLENDER WILLOW         | -3 |
| 6  | <i>Salix sericea</i>                               | SILKY WILLOW           | -5 |
| 3  | <i>Scirpus atrovirens</i>                          | BULRUSH                | -5 |
| 5  | <i>Scutellaria galericulata</i>                    | MARSH SKULLCAP         | -5 |
| 1  | <i>Solidago canadensis</i>                         | CANADA GOLDENROD       | 3  |
| 3  | <i>Solidago gigantea</i>                           | LATE GOLDENROD         | -3 |
| 3  | <i>Solidago juncea</i>                             | EARLY GOLDENROD        | 5  |
| 6  | <i>Solidago patula</i>                             | SWAMP GOLDENROD        | -5 |
| 6  | <i>Solidago riddellii</i>                          | RIDDELL'S GOLDENROD    | -5 |
| 3  | <i>Solidago rugosa</i>                             | ROUGH-LEAVED GOLDENROD | 0  |
| 4  | <i>Spiraea alba</i>                                | MEADOWSWEET            | -3 |
| 9  | <i>Symphyotrichum boreale</i> (Aster b.)           | NORTHERN BOG ASTER     | -5 |
| 4  | <i>Symphyotrichum firmum</i> (Aster puniceus)      | SMOOTH SWAMP ASTER     | -3 |
| 2  | <i>Symphyotrichum lanceolatum</i> (Aster l.)       | PANICLED ASTER         | -3 |
| 3  | <i>Symphyotrichum novae-angliae</i> (Aster n.)     | NEW ENGLAND ASTER      | -3 |
| 6  | <i>Symplocarpus foetidus</i>                       | SKUNK-CABBAGE          | -5 |
| *  | TARAXACUM OFFICINALE                               | COMMON DANDELION       | 3  |
| 3  | <i>Thalictrum dasycarpum</i>                       | PURPLE MEADOW-RUE      | -3 |
| 2  | <i>Thelypteris palustris</i>                       | MARSH FERN             | -3 |
| 2  | <i>Toxicodendron radicans</i>                      | POISON-IVY             | 0  |
| 6  | <i>Toxicodendron vernix</i>                        | POISON SUMAC           | -5 |
| 1  | <i>Ulmus americana</i>                             | AMERICAN ELM           | -3 |
| 10 | <i>Valeriana uliginosa</i>                         | SWAMP VALERIAN         | -5 |

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|   |   |                             |    |
|---|---|-----------------------------|----|
| 6 | <i>Viburnum dentatum</i>                      | ARROW-WOOD                  | 0  |
| 4 | <i>Viburnum lentago</i>                       | NANNYBERRY                  | 0  |
| * | VIBURNUM OPULUS                               | EUROPEAN Highbush-CRANBERRY | -3 |
| 5 | <i>Viburnum trilobum</i> ( <i>V. opulus</i> ) | AMERICAN Highbush-CRANBERRY | -3 |
| 2 | <i>Viola affinis</i>                          | LE CONTE'S VIOLET           | -3 |
| 8 | <i>Viola nephrophylla</i>                     | NORTHERN BOG VIOLET         | -3 |
| 3 | <i>Vitis riparia</i>                          | RIVER-BANK GRAPE            | 0  |

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# Mud Lake Bog

## Shrub-carr

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Southern Shrub-carr

Areas of shrub thickets occurring throughout the property, with occasional *Acer* spp. or *Larix laricina* present and some small wet meadow openings

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 51    | Total Species        | 4.64 | NATIVE MEAN C |
| 50    | Total Native Species | 4.55 | W/Adventives  |
| 98.0  | % Native Species     | -3.0 | NATIVE MEAN W |
| 32.81 | NATIVE FQI           | -2.9 | W/Adventives  |
| 32.49 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                                      | COMMON NAME                  | W  | LISTED |
|---|--|------------------------------|----|--------|
| 1 | <i>Acer rubrum</i>                                   | RED MAPLE                    | 0  |        |
| 5 | <i>Aronia prunifolia</i>                             | CHOKEBERRY                   | -3 |        |
| 7 | <i>Betula alleghaniensis</i>                         | YELLOW BIRCH                 | 0  |        |
| 6 | <i>Bromus ciliatus</i>                               | FRINGED BROME                | -3 |        |
| 3 | <i>Calamagrostis canadensis</i>                      | BLUE-JOINT                   | -5 |        |
| 5 | <i>Carex comosa</i>                                  | SEDGE                        | -5 |        |
| 6 | <i>Carex lacustris</i>                               | SEDGE                        | -5 |        |
| 5 | <i>Carex leptalea</i>                                | SEDGE                        | -5 |        |
| 4 | <i>Carex lupulina</i>                                | SEDGE                        | -5 |        |
| 5 | <i>Cicuta bulbifera</i>                              | WATER HEMLOCK                | -5 |        |
| 7 | <i>Cinna arundinacea</i>                             | WOOD REEDGRASS               | -3 |        |
| 5 | <i>Coptis trifolia</i>                               | GOLDTHREAD                   | -3 |        |
| 5 | <i>Corylus americana</i>                             | HAZELNUT                     | 3  |        |
| 3 | <i>Cuscuta gronovii</i>                              | COMMON DODDER                | -3 |        |
| 7 | <i>Decodon verticillatus</i>                         | WHORLED or SWAMP LOOSESTRIFE | -5 |        |
| 5 | <i>Dryopteris carthusiana</i>                        | SPINULOSE WOODFERN           | -3 |        |
| 5 | <i>Dryopteris intermedia</i>                         | EVERGREEN WOODFERN           | 0  |        |
| 3 | <i>Epilobium coloratum</i>                           | CINNAMON WILLOW-HERB         | -5 |        |
| 6 | <i>Epilobium leptophyllum</i>                        | FEN WILLOW-HERB              | -5 |        |
| 7 | <i>Equisetum fluviatile</i>                          | WATER HORSETAIL              | -5 |        |
| 4 | <i>Eupatorium perfoliatum</i>                        | BONESET                      | -3 |        |
| 6 | <i>Fraxinus nigra</i>                                | BLACK ASH                    | -3 |        |
| 5 | <i>Galium tinctorium</i>                             | STIFF BEDSTRAW               | -5 |        |
| 4 | <i>Glyceria striata</i>                              | FOWL MANNA GRASS             | -5 |        |
| 5 | <i>Ilex verticillata</i>                             | MICHIGAN HOLLY               | -3 |        |
| 2 | <i>Impatiens capensis</i>                            | SPOTTED TOUCH-ME-NOT         | -3 |        |
| 4 | <i>Maianthemum canadense</i>                         | CANADA MAYFLOWER             | 3  |        |
| 2 | <i>Onoclea sensibilis</i>                            | SENSITIVE FERN               | -3 |        |
| 5 | <i>Osmunda cinnamomea</i>                            | CINNAMON FERN                | -3 |        |
| 6 | <i>Osmunda claytoniana</i>                           | INTERRUPTED FERN             | 0  |        |
| 5 | <i>Osmunda regalis</i>                               | ROYAL FERN                   | -5 |        |
| 6 | <i>Platanthera clavellata</i> ( <i>Habenaria</i> c.) | SMALL GREEN WOOD ORCHID      | -3 |        |
| 5 | <i>Rosa palustris</i>                                | SWAMP ROSE                   | -5 |        |
| 4 | <i>Rubus pubescens</i>                               | DWARF RASPBERRY              | -3 |        |
| 5 | <i>Scutellaria galericulata</i>                      | MARSH SKULLCAP               | -5 |        |
| 5 | <i>Scutellaria lateriflora</i>                       | MAD-DOG SKULLCAP             | -5 |        |
| 5 | <i>Sium suave</i>                                    | WATER-PARSNIP                | -5 |        |
| * | <i>SOLANUM DULCAMARA</i>                             | BITTERSWEET NIGHTSHADE       | 0  |        |
| 3 | <i>Solidago gigantea</i>                             | LATE GOLDENROD               | -3 |        |
| 6 | <i>Solidago patula</i>                               | SWAMP GOLDENROD              | -5 |        |
| 3 | <i>Solidago rugosa</i>                               | ROUGH-LEAVED GOLDENROD       | 0  |        |
| 6 | <i>Symplocarpus foetidus</i>                         | SKUNK-CABBAGE                | -5 |        |
| 2 | <i>Thelypteris palustris</i>                         | MARSH FERN                   | -3 |        |

|   |                        |                    |    |
|---|------------------------|--------------------|----|
| 6 | Toxicodendron vernix   | POISON SUMAC       | -5 |
| 5 | Trientalis borealis    | STAR-FLOWER        | 0  |
| 6 | Vaccinium corymbosum   | HIGHBUSH BLUEBERRY | -3 |
| 4 | Vaccinium myrtilloides | CANADA BLUEBERRY   | -3 |
| 4 | Viburnum lentago       | NANNYBERRY         | 0  |
| 2 | Viola affinis          | LE CONTE'S VIOLET  | -3 |
| 4 | Viola pubescens        | YELLOW VIOLET      | 3  |
| 3 | Vitis riparia          | RIVER-BANK GRAPE   | 0  |

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Also: Bidens sp., Quercus sp.

# Mud Lake Bog

## Swamp White Oak Woods

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Mesic Southern Forest

Fairly open mesic forest NW of Mud Lake, dominated by *Quercus bicolor*, with large trees occurring by the adjacent wetland

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 91    | Total Species        | 3.42 | NATIVE MEAN C |
| 76    | Total Native Species | 2.86 | W/Adventives  |
| 83.5  | % Native Species     | 0.4  | NATIVE MEAN W |
| 29.82 | NATIVE FQI           | 0.7  | W/Adventives  |
| 27.26 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                              | COMMON NAME                | W  | LISTED |
|---|--|----------------------------|----|--------|
| 1 | <i>Acer rubrum</i>                           | RED MAPLE                  | 0  |        |
| 2 | <i>Agrimonia gryposepala</i>                 | TALL AGRIMONY              | 3  |        |
| 4 | <i>Agrimonia parviflora</i>                  | SWAMP AGRIMONY             | 0  |        |
| * | AGROSTIS GIGANTEA                            | REDTOP                     | -3 |        |
| * | ALLIARIA PETIOLATA                           | GARLIC MUSTARD             | 3  |        |
| 5 | <i>Amphicarpaea bracteata</i>                | HOG-PEANUT                 | 0  |        |
| 3 | <i>Apocynum cannabinum</i> (A. sibiricum)    | INDIAN-HEMP                | 0  |        |
| 5 | <i>Arisaema triphyllum</i>                   | JACK-IN-THE-PULPIT         | 0  |        |
| * | BARBAREA VULGARIS                            | YELLOW ROCKET              | 0  |        |
| 5 | <i>Bromus pubescens</i>                      | CANADA BROME               | 3  |        |
| 1 | <i>Carex blanda</i>                          | SEDGE                      | 0  |        |
| 3 | <i>Carex cephalophora</i>                    | SEDGE                      | 3  |        |
| 4 | <i>Carex crinita</i>                         | SEDGE                      | -5 |        |
| 3 | <i>Carex cristatella</i>                     | SEDGE                      | -3 |        |
| 5 | <i>Carex gracilescens</i>                    | SEDGE                      | 3  |        |
| 4 | <i>Carex gracillima</i>                      | SEDGE                      | 3  |        |
| 5 | <i>Carex hirtifolia</i>                      | SEDGE                      | 3  |        |
| 6 | <i>Carex lacustris</i>                       | SEDGE                      | -5 |        |
| 2 | <i>Carex pellita</i> (C. lanuginosa)         | SEDGE                      | -5 |        |
| 4 | <i>Carex pensylvanica</i>                    | SEDGE                      | 5  |        |
| 2 | <i>Carex radiata</i> (C. rosea)              | STRAIGHT-STYLED WOOD SEDGE | 0  |        |
| 2 | <i>Carex rosea</i> (C. convoluta)            | CURLY-STYLED WOOD SEDGE    | 5  |        |
| 4 | <i>Carex scabrata</i>                        | SEDGE                      | -5 |        |
| 4 | <i>Carex tenera</i>                          | SEDGE                      | 0  |        |
| 1 | <i>Carex vulpinoidea</i>                     | SEDGE                      | -5 |        |
| 5 | <i>Carya glabra</i>                          | PIGNOCK HICKORY            | 3  |        |
| 5 | <i>Carya ovata</i>                           | SHAGBARK HICKORY           | 3  |        |
| 2 | <i>Circaea canadensis</i> (C. lutetiana)     | ENCHANTER'S-NIGHTSHADE     | 3  |        |
| 4 | <i>Claytonia virginica</i>                   | SPRING-BEAUTY              | 3  |        |
| 1 | <i>Cornus foemina</i>                        | GRAY DOGWOOD               | 0  |        |
| * | DACTYLIS GLOMERATA                           | ORCHARD GRASS              | 3  |        |
| 4 | <i>Danthonia spicata</i>                     | POVERTY GRASS; OATGRASS    | 5  |        |
| 3 | <i>Dichanthelium implicatum</i> (Panicum i.) | PANIC GRASS                | 0  |        |
| 5 | <i>Dichanthelium latifolium</i> (Panicum l.) | BROAD-LEAVED PANIC GRASS   | 3  |        |
| 5 | <i>Doellingeria umbellata</i> (Aster u.)     | FLAT-TOPPED WHITE ASTER    | -3 |        |
| * | ELAEAGNUS UMBELLATA                          | AUTUMN-OLIVE               | 3  |        |
| 5 | <i>Elymus hystrix</i> (Hystrix patula)       | BOTTLEBRUSH GRASS          | 3  |        |
| 4 | <i>Elymus virginicus</i>                     | VIRGINIA WILD-RYE          | -3 |        |
| 0 | <i>Equisetum arvense</i>                     | COMMON HORSETAIL           | 0  |        |
| 2 | <i>Erigeron philadelphicus</i>               | PHILADELPHIA FLEABANE      | 0  |        |
| 3 | <i>Euthamia graminifolia</i>                 | GRASS-LEAVED GOLDENROD     | 0  |        |
| 2 | <i>Fragaria virginiana</i>                   | WILD STRAWBERRY            | 3  |        |
| * | FRANGULA ALNUS (RHAMNUS FRANGULA)            | GLOSSY BUCKTHORN           | 0  |        |
| 5 | <i>Fraxinus americana</i>                    | WHITE ASH                  | 3  |        |

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|   |  |                             |    |
|---|--|-----------------------------|----|
| 2 | <i>Fraxinus pennsylvanica</i>                                  | RED ASH                     | -3 |
| 4 | <i>Galium triflorum</i>  | FRAGRANT BEDSTRAW           | 3  |
| 4 | <i>Geranium maculatum</i>                                      | WILD GERANIUM               | 3  |
| 4 | <i>Geum vernum</i>   | SPRING AVENS                | 3  |
| 4 | <i>Glyceria striata</i>  | FOWL MANNA GRASS            | -5 |
| * | HYPERICUM PERFORATUM   | COMMON ST. JOHN'S-WORT      | 5  |
| 4 | <i>Hypericum punctatum</i>                                     | SPOTTED ST. JOHN'S-WORT     | 0  |
| 1 | <i>Juncus tenuis</i>   | PATH RUSH                   | 0  |
| 4 | <i>Juniperus communis</i>                                      | COMMON or GROUND JUNIPER    | 3  |
| 3 | <i>Juniperus virginiana</i>                                    | RED-CEDAR                   | 3  |
| 8 | <i>Liatris spicata</i>   | MARSH BLAZING-STAR          | 0  |
| 5 | <i>Luzula multiflora</i>                                       | COMMON WOOD RUSH            | 3  |
| 2 | <i>Onoclea sensibilis</i>                                      | SENSITIVE FERN              | -3 |
| 5 | <i>Ostrya virginiana</i>                                       | IRONWOOD; HOP-HORNBEAM      | 3  |
| 2 | <i>Penstemon digitalis</i>                                     | FOXGLOVE BEARD-TONGUE       | 0  |
| 0 | <i>Phalaris arundinacea</i>                                    | REED CANARY GRASS           | -3 |
| * | PHLEUM PRATENSE  | TIMOTHY                     | 3  |
| * | POA COMPRESSA  | CANADA BLUEGRASS            | 3  |
| * | POA PRATENSIS  | KENTUCKY BLUEGRASS          | 3  |
| 3 | <i>Podophyllum peltatum</i>                                    | MAY-APPLE                   | 3  |
| 1 | <i>Populus deltoides</i>                                       | COTTONWOOD                  | 0  |
| 2 | <i>Potentilla simplex</i>                                      | OLD-FIELD CINQUEFOIL        | 3  |
| 2 | <i>Prunus serotina</i>   | WILD BLACK CHERRY           | 3  |
| 2 | <i>Prunus virginiana</i>                                       | CHOKE CHERRY                | 3  |
| 8 | <i>Quercus bicolor</i>   | SWAMP WHITE OAK             | -3 |
| 4 | <i>Quercus ellipsoidalis</i> ( <i>Q. coccinea</i> )            | HILL'S OAK                  | 5  |
| 5 | <i>Ranunculus recurvatus</i>                                   | HOOKEED CROWFOOT            | -3 |
| * | RHAMNUS CATHARTICA   | COMMON BUCKTHORN            | 0  |
| * | ROSA MULTIFLORA  | MULTIFLORA ROSE             | 3  |
| 4 | <i>Rubus pubescens</i>   | DWARF RASPBERRY             | -3 |
| 2 | <i>Rubus strigosus</i>   | WILD RED RASPBERRY          | 0  |
| 3 | <i>Salix amygdaloides</i>                                      | PEACH-LEAVED WILLOW         | -3 |
| 5 | <i>Scutellaria lateriflora</i>                                 | MAD-DOG SKULLCAP            | -5 |
| 3 | <i>Solidago rugosa</i>   | ROUGH-LEAVED GOLDENROD      | 0  |
| 2 | <i>Symphotrichum lateriflorum</i> ( <i>Aster l.</i> )          | CALICO ASTER                | 0  |
| 2 | <i>Symphotrichum urophyllum</i> ( <i>Aster sagittifolius</i> ) | ARROW-LEAVED ASTER          | 5  |
| * | TARAXACUM OFFICINALE   | COMMON DANDELION            | 3  |
| * | TORILIS JAPONICA   | HEDGE-PARSLEY               | 3  |
| 2 | <i>Toxicodendron radicans</i>                                  | POISON-IVY                  | 0  |
| * | VERBASCUM THAPSUS  | COMMON MULLEIN              | 5  |
| 4 | <i>Viburnum lentago</i>  | NANNYBERRY                  | 0  |
| 5 | <i>Viburnum rafinesquianum</i>                                 | DOWNY ARROW-WOOD            | 5  |
| 5 | <i>Viburnum trilobum</i> ( <i>V. opulus</i> )                  | AMERICAN Highbush-CRANBERRY | -3 |
| 2 | <i>Viola affinis</i>   | LE CONTE'S VIOLET           | -3 |
| 3 | <i>Viola labradorica</i> ( <i>V. conspersa</i> )               | DOG VIOLET                  | 0  |
| 3 | <i>Vitis riparia</i>   | RIVER-BANK GRAPE            | 0  |
| 6 | <i>Zizia aurea</i>   | GOLDEN ALEXANDERS           | 0  |

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# Mud Lake Bog

## Tamarack Swamp

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Rich Tamarack Swamp

Shady forest by bog with dominant *Larix laricina* growing from mossy root hummocks; channels between hummocks a slurry of peat and muck; shrubby, with *Toxicodendron vernix* frequent

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 94    | Total Species        | 5.33 | NATIVE MEAN C |
| 90    | Total Native Species | 5.11 | W/Adventives  |
| 95.7  | % Native Species     | -3.6 | NATIVE MEAN W |
| 50.60 | NATIVE FQI           | -3.5 | W/Adventives  |
| 49.51 | W/Adventives         |      |               |

| C  | SCIENTIFIC NAME                             | COMMON NAME                        | W  | LISTED |
|----|---|------------------------------------|----|--------|
| 1  | <i>Acer rubrum</i>                          | RED MAPLE                          | 0  |        |
| 2  | <i>Acer saccharinum</i>                     | SILVER MAPLE                       | -3 |        |
| 5  | <i>Aronia prunifolia</i>                    | CHOKEBERRY                         | -3 |        |
| 6  | <i>Asclepias incarnata</i>                  | SWAMP MILKWEED                     | -5 |        |
| 7  | <i>Betula alleghaniensis</i>                | YELLOW BIRCH                       | 0  |        |
| 8  | <i>Betula pumila</i>                        | BOG BIRCH                          | -5 |        |
| 5  | <i>Bidens connata</i>                       | PURPLE-STEMMED TICKSEED            | -3 |        |
| 7  | <i>Bidens trichosperma</i> (B. coronatus)   | TICKSEED-SUNFLOWER                 | -5 |        |
| 5  | <i>Boehmeria cylindrica</i>                 | FALSE NETTLE                       | -5 |        |
| 6  | <i>Bromus ciliatus</i>                      | FRINGED BROME                      | -3 |        |
| 3  | <i>Calamagrostis canadensis</i>             | BLUE-JOINT                         | -5 |        |
| 6  | <i>Caltha palustris</i>                     | MARSH-MARIGOLD                     | -5 |        |
| 7  | <i>Campanula aparinoides</i>                | MARSH BELLFLOWER                   | -5 |        |
| 10 | <i>Carex billingsii</i> (C. trisperma)      | SEDGE                              | -5 |        |
| 8  | <i>Carex canescens</i>                      | SEDGE                              | -5 |        |
| 5  | <i>Carex comosa</i>                         | SEDGE                              | -5 |        |
| 4  | <i>Carex crinita</i>                        | SEDGE                              | -5 |        |
| 10 | <i>Carex disperma</i>                       | SEDGE                              | -5 |        |
| 3  | <i>Carex interior</i>                       | SEDGE                              | -5 |        |
| 6  | <i>Carex lacustris</i>                      | SEDGE                              | -5 |        |
| 5  | <i>Carex leptalea</i>                       | SEDGE                              | -5 |        |
| 4  | <i>Carex stricta</i>                        | SEDGE                              | -5 |        |
| 9  | <i>Carex trisperma</i>                      | SEDGE                              | -5 |        |
| 8  | <i>Chamaedaphne calyculata</i>              | LEATHERLEAF                        | -5 |        |
| 5  | <i>Cicuta bulbifera</i>                     | WATER HEMLOCK                      | -5 |        |
| 7  | <i>Comarum palustre</i> (Potentilla p.)     | MARSH CINQUEFOIL                   | -5 |        |
| 1  | <i>Cornus foemina</i>                       | GRAY DOGWOOD                       | 0  |        |
| 2  | <i>Cornus sericea</i> (C. stolonifera)      | RED-OSIER                          | -3 |        |
| 5  | <i>Cypripedium acaule</i>                   | PINK LADY-SLIPPER; MOCCASIN FLOWER | -3 |        |
| 8  | <i>Dasiphora fruticosa</i> (Potentilla f.)  | SHRUBBY CINQUEFOIL                 | -3 |        |
| 7  | <i>Decodon verticillatus</i>                | WHORLED or SWAMP LOOSESTRIFE       | -5 |        |
| 6  | <i>Drosera rotundifolia</i>                 | ROUND-LEAVED SUNDEW                | -5 |        |
| 8  | <i>Dulichium arundinaceum</i>               | THREE-WAY SEDGE                    | -5 |        |
| 6  | <i>Epilobium leptophyllum</i>               | FEN WILLOW-HERB                    | -5 |        |
| 7  | <i>Equisetum fluviatile</i>                 | WATER HORSETAIL                    | -5 |        |
| 4  | <i>Eupatorium perfoliatum</i>               | BONESET                            | -3 |        |
| 4  | <i>Eutrochium maculatum</i> (Eupatorium m.) | JOE-PYE-WEED                       | -5 |        |
| *  | FRANGULA ALNUS (RHAMNUS FRANGULA)           | GLOSSY BUCKTHORN                   | 0  |        |
| 6  | <i>Fraxinus nigra</i>                       | BLACK ASH                          | -3 |        |
| 8  | <i>Galium labradoricum</i>                  | BOG BEDSTRAW                       | -5 |        |
| 5  | <i>Ilex verticillata</i>                    | MICHIGAN HOLLY                     | -3 |        |
| 5  | <i>Larix laricina</i>                       | TAMARACK                           | -3 |        |
| 7  | <i>Lathyrus palustris</i>                   | MARSH PEA                          | -3 |        |

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|    |  |                        |    |
|----|--|------------------------|----|
| 5  | Lemna minor                            | COMMON DUCKWEED        | -5 |
| 5  | Lemna turionifera (L. minor)           | RED DUCKWEED           | -5 |
| 5  | Liparis loeselii                       | LOESEL'S TWAYBLADE     | -3 |
| 5  | Lonicera dioica                        | RED HONEYSUCKLE        | 3  |
| 2  | Lycopus uniflorus                      | NORTHERN BUGLE WEED    | -5 |
| *  | LYTHRUM SALICARIA                      | PURPLE LOOSESTRIFE     | -5 |
| 4  | Maianthemum canadense                  | CANADA MAYFLOWER       | 3  |
| 2  | Onoclea sensibilis                     | SENSITIVE FERN         | -3 |
| 5  | Osmunda cinnamomea                     | CINNAMON FERN          | -3 |
| 5  | Osmunda regalis                        | ROYAL FERN             | -5 |
| 5  | Parthenocissus quinquefolia            | VIRGINIA CREEPER       | 3  |
| 8  | Pedicularis lanceolata                 | SWAMP-BETONY           | -3 |
| 5  | Phragmites australis var. americanus   | REED                   | -3 |
| 5  | Pilea fontana                          | BOG CLEARWEED          | -3 |
| 5  | Pilea pumila                           | CLEARWEED              | -3 |
| 10 | Platanthera flava (Habenaria f.)       | TUBERCLED ORCHID       | -3 |
| 8  | Quercus bicolor                        | SWAMP WHITE OAK        | -3 |
| 5  | Quercus rubra                          | RED OAK                | 3  |
| 6  | Ribes americanum                       | WILD BLACK CURRANT     | -3 |
| 6  | Ribes hirtellum                        | SWAMP GOOSEBERRY       | -3 |
| 5  | Rosa palustris                         | SWAMP ROSE             | -5 |
| 4  | Rubus pubescens                        | DWARF RASPBERRY        | -3 |
| 2  | Rubus strigosus                        | WILD RED RASPBERRY     | 0  |
| *  | RUMEX OBTUSIFOLIUS                     | BITTER DOCK            | 0  |
| 9  | Rumex orbiculatus                      | GREAT WATER DOCK       | -5 |
| 4  | Sagittaria latifolia                   | COMMON ARROWHEAD       | -5 |
| 9  | Salix candida                          | HOARY WILLOW           | -5 |
| 1  | Salix discolor                         | PUSSY WILLOW           | -3 |
| 1  | Salix petiolaris                       | SLENDER WILLOW         | -3 |
| 10 | Sarracenia purpurea                    | PITCHER-PLANT          | -5 |
| 5  | Scutellaria galericulata               | MARSH SKULLCAP         | -5 |
| 5  | Scutellaria lateriflora                | MAD-DOG SKULLCAP       | -5 |
| *  | SOLANUM DULCAMARA                      | BITTERSWEET NIGHTSHADE | 0  |
| 3  | Solidago gigantea                      | LATE GOLDENROD         | -3 |
| 6  | Solidago patula                        | SWAMP GOLDENROD        | -5 |
| 3  | Solidago rugosa                        | ROUGH-LEAVED GOLDENROD | 0  |
| 9  | Symphotrichum boreale (Aster b.)       | NORTHERN BOG ASTER     | -5 |
| 4  | Symphotrichum firmum (Aster puniceus)  | SMOOTH SWAMP ASTER     | -3 |
| 3  | Symphotrichum novae-angliae (Aster n.) | NEW ENGLAND ASTER      | -3 |
| 5  | Symphotrichum puniceum (Aster p.)      | SWAMP ASTER            | -5 |
| 2  | Thelypteris palustris                  | MARSH FERN             | -3 |
| 6  | Toxicodendron vernix                   | POISON SUMAC           | -5 |
| 6  | Triadenum fraseri                      | MARSH ST. JOHN'S-WORT  | -5 |
| 5  | Trientalis borealis                    | STAR-FLOWER            | 0  |
| 1  | Typha latifolia                        | BROAD-LEAVED CAT-TAIL  | -5 |
| 1  | Ulmus americana                        | AMERICAN ELM           | -3 |
| 6  | Vaccinium corymbosum                   | HIGHBUSH BLUEBERRY     | -3 |
| 8  | Vaccinium macrocarpon                  | LARGE CRANBERRY        | -5 |
| 4  | Vaccinium myrtilloides                 | CANADA BLUEBERRY       | -3 |
| 5  | Viola cucullata                        | MARSH VIOLET           | -5 |
| 6  | Viola macloskeyi                       | SMOOTH WHITE VIOLET    | -5 |

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# Mud Lake Bog

## Wet Meadow

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Southern Wet Meadow

Large open wet meadow, usually inundated, situated between Mud Lake and surrounding uplands, very diverse in some places but dominated by *Carex lacustris* in many areas

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 133   | Total Species        | 4.43 | NATIVE MEAN C |
| 126   | Total Native Species | 4.20 | W/Adventives  |
| 94.7  | % Native Species     | -3.2 | NATIVE MEAN W |
| 49.71 | NATIVE FQI           | -3.1 | W/Adventives  |
| 48.38 | W/Adventives         |      |               |

| C  | SCIENTIFIC NAME                                   | COMMON NAME             | W  | LISTED |
|----|---|-------------------------|----|--------|
| 1  | <i>Acer rubrum</i>                                | RED MAPLE               | 0  |        |
| 2  | <i>Acer saccharinum</i>                           | SILVER MAPLE            | -3 |        |
| 5  | <i>Alnus incana</i> (A. <i>rugosa</i> )           | SPECKLED ALDER          | -3 |        |
| 5  | <i>Aronia prunifolia</i>                          | CHOKEBERRY              | -3 |        |
| 6  | <i>Asclepias incarnata</i>                        | SWAMP MILKWEED          | -5 |        |
| 8  | <i>Betula pumila</i>                              | BOG BIRCH               | -5 |        |
| 3  | <i>Bidens cernua</i>                              | NODDING BEGGAR-TICKS    | -5 |        |
| 5  | <i>Bidens connata</i>                             | PURPLE-STEMMED TICKSEED | -3 |        |
| 1  | <i>Bidens frondosa</i>                            | COMMON BEGGAR-TICKS     | -3 |        |
| 7  | <i>Bidens trichosperma</i> (B. <i>coronatus</i> ) | TICKSEED-SUNFLOWER      | -5 |        |
| 5  | <i>Boehmeria cylindrica</i>                       | FALSE NETTLE            | -5 |        |
| 6  | <i>Bromus ciliatus</i>                            | FRINGED BROME           | -3 |        |
| 3  | <i>Calamagrostis canadensis</i>                   | BLUE-JOINT              | -5 |        |
| 6  | <i>Caltha palustris</i>                           | MARSH-MARIGOLD          | -5 |        |
| 2  | <i>Calystegia sepium</i>                          | HEDGE BINDWEED          | 0  |        |
| 7  | <i>Campanula aparinoides</i>                      | MARSH BELLFLOWER        | -5 |        |
| 5  | <i>Carex comosa</i>                               | SEDGE                   | -5 |        |
| 3  | <i>Carex cristatella</i>                          | SEDGE                   | -3 |        |
| 6  | <i>Carex lacustris</i>                            | SEDGE                   | -5 |        |
| 8  | <i>Carex lasiocarpa</i>                           | SEDGE                   | -5 |        |
| 2  | <i>Carex pellita</i> (C. <i>lanuginosa</i> )      | SEDGE                   | -5 |        |
| 10 | <i>Carex prairea</i>                              | SEDGE                   | -3 |        |
| 5  | <i>Carex sartwellii</i>                           | SEDGE                   | -5 |        |
| 1  | <i>Carex stipata</i>                              | SEDGE                   | -5 |        |
| 4  | <i>Carex stricta</i>                              | SEDGE                   | -5 |        |
| *  | CERASTIUM FONTANUM                                | MOUSE-EAR CHICKWEED     | 3  |        |
| 7  | <i>Chelone glabra</i>                             | TURTLEHEAD              | -5 |        |
| 5  | <i>Cicuta bulbifera</i>                           | WATER HEMLOCK           | -5 |        |
| 6  | <i>Cirsium muticum</i>                            | SWAMP THISTLE           | -5 |        |
| 7  | <i>Comarum palustre</i> (Potentilla p.)           | MARSH CINQUEFOIL        | -5 |        |
| 2  | <i>Cornus amomum</i>                              | SILKY DOGWOOD           | -3 |        |
| 2  | <i>Cornus sericea</i> (C. <i>stolonifera</i> )    | RED-OSIER               | -3 |        |
| 3  | <i>Cuscuta gronovii</i>                           | COMMON DODDER           | -3 |        |
| 8  | <i>Dasiphora fruticosa</i> (Potentilla f.)        | SHRUBBY CINQUEFOIL      | -3 |        |
| 5  | <i>Doellingeria umbellata</i> (Aster u.)          | FLAT-TOPPED WHITE ASTER | -3 |        |
| 6  | <i>Dryopteris cristata</i>                        | CRESTED SHIELD FERN     | -5 |        |
| *  | ELAEAGNUS UMBELLATA                               | AUTUMN-OLIVE            | 3  |        |
| 6  | <i>Epilobium leptophyllum</i>                     | FEN WILLOW-HERB         | -5 |        |
| 8  | <i>Epilobium strictum</i>                         | DOWNY WILLOW-HERB       | -5 |        |
| 7  | <i>Equisetum fluviatile</i>                       | WATER HORSETAIL         | -5 |        |
| 2  | <i>Erechtites hieraciifolius</i>                  | FIREWEED                | 3  |        |
| 4  | <i>Eupatorium perfoliatum</i>                     | BONESET                 | -3 |        |
| 3  | <i>Euthamia graminifolia</i>                      | GRASS-LEAVED GOLDENROD  | 0  |        |

|    |   |                         |    |
|----|---|-------------------------|----|
| 4  | <i>Eutrochium maculatum</i> (Eupatorium m.)           | JOE-PYE-WEED            | -5 |
| 5  | <i>Fraxinus americana</i>                             | WHITE ASH               | 3  |
| 5  | <i>Galium asprellum</i>                               | ROUGH BEDSTRAW          | -5 |
| 8  | <i>Galium labradoricum</i>                            | BOG BEDSTRAW            | -5 |
| 6  | <i>Galium trifidum</i>                                | SMALL BEDSTRAW          | -3 |
| 4  | <i>Galium triflorum</i>                               | FRAGRANT BEDSTRAW       | 3  |
| 4  | <i>Glyceria striata</i>                               | FOWL MANNA GRASS        | -5 |
| 5  | <i>Helianthus giganteus</i>                           | TALL SUNFLOWER          | -3 |
| 5  | <i>Ilex verticillata</i>                              | MICHIGAN HOLLY          | -3 |
| 2  | <i>Impatiens capensis</i>                             | SPOTTED TOUCH-ME-NOT    | -3 |
| 5  | <i>Iris virginica</i>                                 | SOUTHERN BLUE FLAG      | -5 |
| 3  | <i>Juniperus virginiana</i>                           | RED-CEDAR               | 3  |
| 5  | <i>Larix laricina</i>                                 | TAMARACK                | -3 |
| 7  | <i>Lathyrus palustris</i>                             | MARSH PEA               | -3 |
| 3  | <i>Leersia oryzoides</i>                              | CUT GRASS               | -5 |
| 5  | <i>Lemna turionifera</i> (L. minor)                   | RED DUCKWEED            | -5 |
| 4  | <i>Ludwigia palustris</i>                             | WATER-PURSLANE          | -5 |
| 2  | <i>Lycopus americanus</i>                             | COMMON WATER HOREHOUND  | -5 |
| 2  | <i>Lycopus uniflorus</i>                              | NORTHERN BUGLE WEED     | -5 |
| 6  | <i>Lysimachia thysiflora</i>                          | TUFTED LOOSESTRIFE      | -5 |
| *  | LYTHRUM SALICARIA                                     | PURPLE LOOSESTRIFE      | -5 |
| 3  | <i>Mentha canadensis</i> (M. arvensis)                | WILD MINT               | -3 |
| 10 | <i>Muhlenbergia glomerata</i>                         | MARSH WILD-TIMOTHY      | -5 |
| 3  | <i>Muhlenbergia mexicana</i>                          | LEAFY SATIN GRASS       | -3 |
| 2  | <i>Onoclea sensibilis</i>                             | SENSITIVE FERN          | -3 |
| 5  | <i>Osmunda cinnamomea</i>                             | CINNAMON FERN           | -3 |
| 5  | <i>Osmunda regalis</i>                                | ROYAL FERN              | -5 |
| 6  | <i>Oxypolis rigidior</i>                              | COWBANE                 | -5 |
| 4  | <i>Parthenocissus inserta</i>                         | THICKET CREEPER         | 3  |
| 5  | <i>Parthenocissus quinquefolia</i>                    | VIRGINIA CREEPER        | 3  |
| 8  | <i>Pedicularis lanceolata</i>                         | SWAMP-BETONY            | -3 |
| 5  | <i>Persicaria hydropiperoides</i> (Polygonum h.)      | MILD WATER-PEPPER       | -5 |
| 5  | <i>Persicaria punctata</i> (Polygonum p.)             | SMARTWEED               | -5 |
| 5  | <i>Persicaria sagittata</i> (Polygonum s.)            | ARROW-LEAVED TEAR-THUMB | -5 |
| 0  | <i>Phalaris arundinacea</i>                           | REED CANARY GRASS       | -3 |
| 5  | <i>Phragmites australis</i> var. <i>americanus</i>    | REED                    | -3 |
| *  | PHRAGMITES AUSTRALIS var. AUSTRALIS                   | REED                    | -3 |
| 5  | <i>Pilea fontana</i>                                  | BOG CLEARWEED           | -3 |
| 1  | <i>Populus deltoides</i>                              | COTTONWOOD              | 0  |
| 1  | <i>Populus tremuloides</i>                            | QUAKING ASPEN           | 0  |
| 5  | <i>Pycnanthemum virginianum</i>                       | COMMON MOUNTAIN MINT    | -3 |
| 8  | <i>Quercus bicolor</i>                                | SWAMP WHITE OAK         | -3 |
| 10 | <i>Ranunculus flabellaris</i> (Ranunculus lapponicus) | YELLOW WATER CROWFOOT   | -5 |
| 1  | <i>Ranunculus sceleratus</i>                          | CURSED CROWFOOT         | -5 |
| *  | RHAMNUS CATHARTICA                                    | COMMON BUCKTHORN        | 0  |
| 6  | <i>Ribes americanum</i>                               | WILD BLACK CURRANT      | -3 |
| 6  | <i>Ribes hirtellum</i>                                | SWAMP GOOSEBERRY        | -3 |
| 5  | <i>Rosa palustris</i>                                 | SWAMP ROSE              | -5 |
| 1  | <i>Rubus occidentalis</i>                             | BLACK RASPBERRY         | 5  |
| 4  | <i>Rubus pubescens</i>                                | DWARF RASPBERRY         | -3 |
| 9  | <i>Rumex orbiculatus</i>                              | GREAT WATER DOCK        | -5 |
| 4  | <i>Sagittaria latifolia</i>                           | COMMON ARROWHEAD        | -5 |
| 9  | <i>Salix candida</i>                                  | HOARY WILLOW            | -5 |
| 1  | <i>Salix discolor</i>                                 | PUSSY WILLOW            | -3 |
| 1  | <i>Salix exigua</i>                                   | SANDBAR WILLOW          | -3 |
| 1  | <i>Salix petiolaris</i>                               | SLENDER WILLOW          | -3 |
| 6  | <i>Salix sericea</i>                                  | SILKY WILLOW            | -5 |
| 3  | <i>Sambucus canadensis</i>                            | ELDERBERRY              | -3 |
| 3  | <i>Scirpus atrovirens</i>                             | BULRUSH                 | -5 |
| 5  | <i>Scirpus cyperinus</i>                              | WOOL-GRASS              | -5 |

|   |  |                        |    |
|---|--|------------------------|----|
| 5 | <i>Scutellaria galericulata</i>                        | MARSH SKULLCAP         | -5 |
| 5 | <i>Scutellaria lateriflora</i>                         | MAD-DOG SKULLCAP       | -5 |
| 5 | <i>Sium suave</i>                                      | WATER-PARSNIP          | -5 |
| * | SOLANUM DULCAMARA                                      | BITTERSWEET NIGHTSHADE | 0  |
| 1 | <i>Solidago altissima</i>                              | TALL GOLDENROD         | 3  |
| 1 | <i>Solidago canadensis</i>                             | CANADA GOLDENROD       | 3  |
| 3 | <i>Solidago gigantea</i>                               | LATE GOLDENROD         | -3 |
| 3 | <i>Solidago juncea</i>                                 | EARLY GOLDENROD        | 5  |
| 3 | <i>Solidago rugosa</i>                                 | ROUGH-LEAVED GOLDENROD | 0  |
| 4 | <i>Solidago uliginosa</i>                              | BOG GOLDENROD          | -5 |
| 6 | <i>Sparganium emersum</i> ( <i>S. chlorocarpum</i> )   | GREEN-FRUITED BUR-REED | -5 |
| 5 | <i>Sparganium eurycarpum</i>                           | COMMON BUR-REED        | -5 |
| 5 | <i>Spartina pectinata</i>                              | CORDGRASS              | -3 |
| 4 | <i>Spiraea alba</i>                                    | MEADOWSWEET            | -3 |
| 9 | <i>Symphyotrichum boreale</i> ( <i>Aster b.</i> )      | NORTHERN BOG ASTER     | -5 |
| 4 | <i>Symphyotrichum firmum</i> ( <i>Aster puniceus</i> ) | SMOOTH SWAMP ASTER     | -3 |
| 2 | <i>Symphyotrichum lanceolatum</i> ( <i>Aster l.</i> )  | PANICLED ASTER         | -3 |
| 5 | <i>Symphyotrichum puniceum</i> ( <i>Aster p.</i> )     | SWAMP ASTER            | -5 |
| 6 | <i>Symplocarpus foetidus</i>                           | SKUNK-CABBAGE          | -5 |
| 3 | <i>Thalictrum dasycarpum</i>                           | PURPLE MEADOW-RUE      | -3 |
| 2 | <i>Thelypteris palustris</i>                           | MARSH FERN             | -3 |
| 2 | <i>Toxicodendron radicans</i>                          | POISON-IVY             | 0  |
| 6 | <i>Toxicodendron vernix</i>                            | POISON SUMAC           | -5 |
| * | TYPHA ANGUSTIFOLIA                                     | NARROW-LEAVED CAT-TAIL | -5 |
| 1 | <i>Typha latifolia</i>                                 | BROAD-LEAVED CAT-TAIL  | -5 |
| 1 | <i>Ulmus americana</i>                                 | AMERICAN ELM           | -3 |
| 1 | <i>Urtica dioica</i>                                   | STINGING NETTLE        | 0  |
| 6 | <i>Viburnum dentatum</i>                               | ARROW-WOOD             | 0  |
| 4 | <i>Viburnum lentago</i>                                | NANNYBERRY             | 0  |
| 3 | <i>Vitis riparia</i>                                   | RIVER-BANK GRAPE       | 0  |

Also: *Lonicera* sp., *Erigeron* sp., *Viola* sp.



# Nichols Arboretum

## Alex Dow Field - Prairie

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Prairie

Open prairie at E end of property dominated by *Andropogon gerardii* with a mix of native prairie forbs, both naturally occurring and planted

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 155   | Total Species        | 3.47 | NATIVE MEAN C |
| 103   | Total Native Species | 2.30 | W/Adventives  |
| 66.5  | % Native Species     | 2.4  | NATIVE MEAN W |
| 35.18 | NATIVE FQI           | 2.7  | W/Adventives  |
| 28.67 | W/Adventives         |      |               |

| C  | SCIENTIFIC NAME  | COMMON NAME            | W  | LISTED |
|----|--|------------------------|----|--------|
| 0  | <i>Acer negundo</i>                                      | BOX-ELDER              | 0  |        |
| 5  | <i>Acer saccharum</i>                                    | SUGAR MAPLE            | 3  |        |
| 1  | <i>Achillea millefolium</i>                              | YARROW                 | 3  |        |
| 4  | <i>Ageratina altissima</i> ( <i>Eupatorium rugosum</i> ) | WHITE SNAKEROOT        | 3  |        |
| 0  | <i>Ambrosia artemisiifolia</i>                           | COMMON RAGWEED         | 3  |        |
| 0  | <i>Ambrosia trifida</i>                                  | GIANT RAGWEED          | 0  |        |
| 5  | <i>Andropogon gerardii</i>                               | BIG BLUESTEM           | 0  |        |
| 3  | <i>Antennaria neglecta</i>                               | CAT'S FOOT             | 5  |        |
| 2  | <i>Antennaria parlinii</i>                               | SMOOTH PUSSYTOES       | 5  |        |
| 3  | <i>Apocynum cannabinum</i> ( <i>A. sibiricum</i> )       | INDIAN-HEMP            | 0  |        |
| *  | ARCTIUM MINUS  | COMMON BURDOCK         | 3  |        |
| 1  | <i>Asclepias syriaca</i>                                 | COMMON MILKWEED        | 5  |        |
| 5  | <i>Asclepias tuberosa</i>                                | BUTTERFLY-WEED         | 5  |        |
| *  | ASPARAGUS OFFICINALIS                                    | GARDEN ASPARAGUS       | 3  |        |
| *  | BARBAREA VULGARIS  | YELLOW ROCKET          | 0  |        |
| 1  | <i>Bidens frondosa</i>                                   | COMMON BEGGAR-TICKS    | -3 |        |
| *  | BROMUS INERMIS   | SMOOTH BROME           | 5  |        |
| *  | CARDAMINE IMPATIENS                                      | BITTER CRESS           | 3  |        |
| *  | CARDUUS NUTANS   | MUSK THISTLE           | 3  |        |
| 10 | <i>Carex bicknellii</i>                                  | SEDGE                  | 0  |        |
| 1  | <i>Carex blanda</i>                                      | SEDGE                  | 0  |        |
| 3  | <i>Carex cephalophora</i>                                | SEDGE                  | 3  |        |
| 5  | <i>Carex hirtifolia</i>                                  | SEDGE                  | 3  |        |
| 7  | <i>Carex muehlenbergii</i>                               | SEDGE                  | 5  |        |
| 5  | <i>Carex normalis</i>                                    | SEDGE                  | -3 |        |
| 4  | <i>Carex pensylvanica</i>                                | SEDGE                  | 5  |        |
| 1  | <i>Carex retroflexa</i>                                  | SEDGE                  | 5  |        |
| 4  | <i>Carex scoparia</i>                                    | SEDGE                  | -3 |        |
| 5  | <i>Carya glabra</i>                                      | PIGNET HICKORY         | 3  |        |
| 9  | <i>Castanea dentata</i>                                  | AMERICAN CHESTNUT      | 5  | E      |
| *  | CATALPA SPECIOSA   | NORTHERN CATALPA       | 3  |        |
| *  | CELASTRUS ORBICULATUS                                    | ORIENTAL BITTERSWEET   | 5  |        |
| 5  | <i>Celtis occidentalis</i>                               | HACKBERRY              | 0  |        |
| *  | CENTAUREA STOEBE ( <i>C. MACULOSA</i> )                  | SPOTTED KNAPWEED       | 5  |        |
| *  | CERASTIUM FONTANUM                                       | MOUSE-EAR CHICKWEED    | 3  |        |
| *  | CHELIDONIUM MAJUS  | CELANDINE              | 5  |        |
| *  | CICHORIUM INTYBUS  | CHICORY                | 3  |        |
| 2  | <i>Circaea canadensis</i> ( <i>C. lutetiana</i> )        | ENCHANTER'S-NIGHTSHADE | 3  |        |
| *  | CIRSIUM ARVENSE  | CANADA THISTLE         | 3  |        |
| *  | CIRSIUM VULGARE  | BULL THISTLE           | 3  |        |
| 0  | <i>Conyza canadensis</i>                                 | HORSEWEED              | 3  |        |
| 9  | <i>Coreopsis palmata</i>                                 | PRAIRIE COREOPSIS      | 5  | T      |
| 7  | <i>Coreopsis tripteris</i>                               | TALL COREOPSIS         | 0  |        |

|   |  |                           |    |
|---|--|---------------------------|----|
| 1 | <i>Cornus foemina</i>  | GRAY DOGWOOD              | 0  |
| 2 | <i>Cryptotaenia canadensis</i>                               | HONEWORT                  | 0  |
| * | DACTYLIS GLOMERATA   | ORCHARD GRASS             | 3  |
| * | DAUCUS CAROTA  | QUEEN-ANNE'S-LACE         | 5  |
| 3 | <i>Desmodium canadense</i>                                   | SHOWY TICK-TREFOIL        | 0  |
| 6 | <i>Desmodium illinoense</i>                                  | PRAIRIE TICK-TREFOIL      | 5  |
| * | DIANTHUS ARMERIA   | DEPTFORD PINK             | 5  |
| 5 | <i>Dichanthelium oligosanthes</i> ( <i>Panicum</i> o.)       | PANIC GRASS               | 3  |
| 3 | <i>Digitaria cognata</i> ( <i>Leptoloma</i> c.)              | FALL WITCH GRASS          | 5  |
| 4 | <i>Dioscorea villosa</i> ( <i>Dioscorea villosa</i> )        | WILD YAM                  | 0  |
| * | ELYMUS REPENS (AGROPYRON R.)                                 | QUACK GRASS               | 3  |
| 2 | <i>Erechtites hieraciifolius</i>                             | FIREWEED                  | 3  |
| 0 | <i>Erigeron annuus</i>                                       | DAISY FLEABANE            | 3  |
| 2 | <i>Erigeron philadelphicus</i>                               | PHILADELPHIA FLEABANE     | 0  |
| 4 | <i>Euphorbia corollata</i>                                   | FLOWERING SPURGE          | 5  |
| * | FESTUCA TRACHYPHYLLA (F. OVINA)                              | SHEEP FESCUE              | 5  |
| * | FRANGULA ALNUS (RHAMNUS FRANGULA)                            | GLOSSY BUCKTHORN          | 0  |
| 5 | <i>Fraxinus americana</i>                                    | WHITE ASH                 | 3  |
| 0 | <i>Galium aparine</i>  | ANNUAL BEDSTRAW           | 3  |
| 4 | <i>Galium triflorum</i>                                      | FRAGRANT BEDSTRAW         | 3  |
| 1 | <i>Geum canadense</i>  | WHITE AVENS               | 0  |
| * | GEUM URBANUM   | AVENS                     | 5  |
| * | GLECHOMA HEDERACEA   | GROUND-IVY                | 3  |
| 5 | <i>Helianthus divaricatus</i>                                | WOODLAND SUNFLOWER        | 5  |
| 5 | <i>Helianthus giganteus</i>                                  | TALL SUNFLOWER            | -3 |
| * | HESPERIS MATRONALIS  | DAME'S ROCKET             | 3  |
| * | HIERACIUM CAESPITOSUM  | KING DEVIL                | 5  |
| * | HYPERICUM PERFORATUM   | COMMON ST. JOHN'S-WORT    | 5  |
| 6 | <i>Impatiens pallida</i>                                     | PALE TOUCH-ME-NOT         | -3 |
| 5 | <i>Juglans nigra</i>   | BLACK WALNUT              | 3  |
| 1 | <i>Juncus tenuis</i>   | PATH RUSH                 | 0  |
| 2 | <i>Lactuca canadensis</i>                                    | TALL LETTUCE              | 3  |
| 5 | <i>Lespedeza capitata</i>                                    | ROUND-HEADED BUSH-CLOVER  | 3  |
| * | LIGUSTRUM VULGARE  | COMMON PRIVET             | 3  |
| * | LINARIA VULGARIS   | BUTTER-AND-EGGS           | 5  |
| * | LONICERA xBELLA  | HYBRID HONEYSUCKLE        | 3  |
| * | LONICERA MAACKII   | AMUR HONEYSUCKLE          | 5  |
| 5 | <i>Maianthemum racemosum</i> ( <i>Smilacina</i> r.)          | FALSE SPIKENARD           | 3  |
| * | MALUS PUMILA   | APPLE                     | 5  |
| * | MEDICAGO LUPULINA  | BLACK MEDICK              | 3  |
| 2 | <i>Monarda fistulosa</i>                                     | WILD-BERGAMOT             | 3  |
| * | MYOSOTIS ARVENSIS  | FIELD SCORPION-GRASS      | 3  |
| * | NEPETA CATARIA   | CATNIP                    | 3  |
| 2 | <i>Oenothera biennis</i>                                     | COMMON EVENING-PRIMROSE   | 3  |
| 0 | <i>Oxalis dillenii</i> ( <i>O. stricta</i> )                 | COMMON YELLOW WOOD-SORREL | 3  |
| 0 | <i>Oxalis stricta</i> ( <i>O. fontana</i> )                  | YELLOW WOOD-SORREL        | 3  |
| 4 | <i>Panicum virgatum</i>                                      | SWITCH GRASS              | 0  |
| 5 | <i>Parthenocissus quinquefolia</i>                           | VIRGINIA CREEPER          | 3  |
| 4 | <i>Persicaria virginiana</i> ( <i>Polygonum</i> v.)          | JUMPSEED                  | 0  |
| * | PHLEUM PRATENSE  | TIMOTHY                   | 3  |
| 3 | <i>Physalis heterophylla</i>                                 | CLAMMY GROUND-CHERRY      | 5  |
| * | PLANTAGO LANCEOLATA  | ENGLISH PLANTAIN          | 3  |
| 0 | <i>Plantago rugelii</i>                                      | RED-STALKED PLANTAIN      | 0  |
| * | POA PRATENSIS  | KENTUCKY BLUEGRASS        | 3  |
| * | POTENTILLA INDICA (DUCHESNEA I.)                             | INDIAN-STRAWBERRY         | 3  |
| * | POTENTILLA RECTA   | ROUGH-FRUITED CINQUEFOIL  | 5  |
| 0 | <i>Prunella vulgaris</i>                                     | SELF-HEAL                 | 0  |
| 2 | <i>Prunus virginiana</i>                                     | CHOKE CHERRY              | 3  |
| 2 | <i>Pseudognaphalium obtusifolium</i> ( <i>Gnaphalium</i> o.) | OLD-FIELD BALSAM          | 5  |
| 4 | <i>Quercus ellipsoidalis</i> ( <i>Q. coccinea</i> )          | HILL'S OAK                | 5  |

|    |   |                            |    |   |
|----|---|----------------------------|----|---|
| 5  | Quercus macrocarpa                              | BUR OAK                    | 3  |   |
| 5  | Quercus rubra                                   | RED OAK                    | 3  |   |
| 6  | Quercus velutina                                | BLACK OAK                  | 5  |   |
| 4  | Ratibida pinnata                                | YELLOW CONEFLOWER          | 5  |   |
| *  | RHAMNUS CATHARTICA                              | COMMON BUCKTHORN           | 0  |   |
| 2  | Rhus glabra                                     | SMOOTH SUMAC               | 5  |   |
| 2  | Rhus typhina                                    | STAGHORN SUMAC             | 3  |   |
| 4  | Rosa carolina                                   | PASTURE ROSE               | 3  |   |
| *  | ROSA MULTIFLORA                                 | MULTIFLORA ROSE            | 3  |   |
| 5  | Rosa setigera                                   | PRAIRIE ROSE               | 3  |   |
| 1  | Rubus allegheniensis                            | COMMON BLACKBERRY          | 3  |   |
| 4  | Rubus hispidus                                  | SWAMP DEWBERRY             | -3 |   |
| 1  | Rubus occidentalis                              | BLACK RASPBERRY            | 5  |   |
| 2  | Rubus pensilvanicus                             | DEWBERRY                   | 3  |   |
| 1  | Rudbeckia hirta                                 | BLACK-EYED SUSAN           | 3  |   |
| *  | RUMEX ACETOSELLA                                | SHEEP SORREL               | 3  |   |
| *  | RUMEX CRISPUS                                   | CURLY DOCK                 | 0  |   |
| *  | RUMEX OBTUSIFOLIUS                              | BITTER DOCK                | 0  |   |
| *  | SAPONARIA OFFICINALIS                           | BOUNCING BET               | 3  |   |
| 5  | Schizachyrium scoparium (Andropogon s.)         | LITTLE BLUESTEM            | 3  |   |
| *  | SILENE LATIFOLIA (S. PRATENSIS)                 | WHITE CAMPION              | 5  |   |
| 10 | Silphium integrifolium                          | ROSIN WEED                 | 0  | T |
| 6  | Silphium terebinthinaceum                       | PRAIRIE-DOCK               | 0  |   |
| *  | SOLANUM DULCAMARA                               | BITTERSWEET NIGHTSHADE     | 0  |   |
| 1  | Solidago altissima                              | TALL GOLDENROD             | 3  |   |
| 1  | Solidago canadensis                             | CANADA GOLDENROD           | 3  |   |
| 3  | Solidago juncea                                 | EARLY GOLDENROD            | 5  |   |
| 2  | Solidago nemoralis                              | OLD-FIELD GOLDENROD        | 5  |   |
| 5  | Solidago rigida                                 | STIFF GOLDENROD            | 3  |   |
| 5  | Solidago speciosa                               | SHOWY GOLDENROD            | 5  |   |
| 6  | Sorghastrum nutans                              | INDIAN GRASS               | 3  |   |
| 3  | Symphyotrichum ericoides (Aster e.)             | HEATH ASTER                | 3  |   |
| 5  | Symphyotrichum laeve (Aster l.)                 | SMOOTH ASTER               | 3  |   |
| 2  | Symphyotrichum lateriflorum (Aster l.)          | CALICO ASTER               | 0  |   |
| 4  | Symphyotrichum oolentangiense (Aster o.)        | PRAIRIE HEART-LEAVED ASTER | 5  |   |
| 1  | Symphyotrichum pilosum (Aster p.)               | HAIRY ASTER                | 3  |   |
| 2  | Symphyotrichum urophyllum (Aster sagittifolius) | ARROW-LEAVED ASTER         | 5  |   |
| 8  | Taenidia integerrima                            | YELLOW-PIMPERNEL           | 5  |   |
| *  | TARAXACUM OFFICINALE                            | COMMON DANDELION           | 3  |   |
| 5  | Tilia americana                                 | BASSWOOD                   | 3  |   |
| 2  | Toxicodendron radicans                          | POISON-IVY                 | 0  |   |
| *  | TRAGOPOGON PRATENSIS                            | COMMON GOAT'S BEARD        | 5  |   |
| *  | TRIFOLIUM HYBRIDUM                              | ALSIKE CLOVER              | 3  |   |
| *  | TRIFOLIUM REPENS                                | WHITE CLOVER               | 3  |   |
| 3  | Turritis glabra (Arabis g.)                     | TOWER MUSTARD              | 5  |   |
| *  | VERBASCUM THAPSUS                               | COMMON MULLEIN             | 5  |   |
| 4  | Verbena urticifolia                             | WHITE VERVAIN              | 0  |   |
| 4  | Vernonia missurica                              | MISSOURI IRONWEED          | 0  |   |
| 8  | Veronicastrum virginicum                        | CULVER'S-ROOT              | 0  |   |
| *  | VICIA TETRASPERMA                               | SPARROW VETCH              | 5  |   |
| 3  | Vitis riparia                                   | RIVER-BANK GRAPE           | 0  |   |
| 6  | Zizia aurea                                     | GOLDEN ALEXANDERS          | 0  |   |

Also: Malus sp., Lonicera spp., Prunus sp., Desmodium (glabellum?), Baptisia australis

# Nichols Arboretum

## Alex Dow Field - Savanna

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Oak Openings

Mixed oak forest between Dow Field Prairie and railroad tracks, with open canopy, interspersed with small areas of prairie and thickets

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 121   | Total Species        | 3.87 | NATIVE MEAN C |
| 90    | Total Native Species | 2.88 | W/Adventives  |
| 74.4  | % Native Species     | 2.6  | NATIVE MEAN W |
| 36.68 | NATIVE FQI           | 2.8  | W/Adventives  |
| 31.64 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME  | COMMON NAME                   | W  | LISTED |
|---|--|-------------------------------|----|--------|
| 0 | <i>Acer negundo</i>                                      | BOX-ELDER                     | 0  |        |
| 1 | <i>Achillea millefolium</i>                              | YARROW                        | 3  |        |
| 4 | <i>Ageratina altissima</i> ( <i>Eupatorium rugosum</i> ) | WHITE SNAKEROOT               | 3  |        |
| 5 | <i>Andropogon gerardii</i>                               | BIG BLUESTEM                  | 0  |        |
| 5 | <i>Anemone quinquefolia</i>                              | WOOD ANEMONE                  | 3  |        |
| 3 | <i>Anemone virginiana</i>                                | THIMBLEWEED                   | 3  |        |
| 2 | <i>Antennaria parlinii</i>                               | SMOOTH PUSSYTOES              | 5  |        |
| 3 | <i>Apocynum androsaemifolium</i>                         | SPREADING DOGBANE             | 5  |        |
| * | ARCTIUM MINUS  | COMMON BURDOCK                | 3  |        |
| 1 | <i>Asclepias syriaca</i>                                 | COMMON MILKWEED               | 5  |        |
| * | ASPARAGUS OFFICINALIS                                    | GARDEN ASPARAGUS              | 3  |        |
| 5 | <i>Boechera laevigata</i> ( <i>Arabis l.</i> )           | SMOOTH BANK CRESS             | 5  |        |
| * | CARDAMINE IMPATIENS                                      | BITTER CRESS                  | 3  |        |
| 5 | <i>Carex hirtifolia</i>                                  | SEDGE                         | 3  |        |
| 4 | <i>Carex pensylvanica</i>                                | SEDGE                         | 5  |        |
| * | CELASTRUS ORBICULATUS                                    | ORIENTAL BITTERSWEET          | 5  |        |
| * | CENTAUREA STOEBE ( <i>C. MACULOSA</i> )                  | SPOTTED KNAPWEED              | 5  |        |
| * | CHELIDONIUM MAJUS  | CELANDINE                     | 5  |        |
| * | CIRSIUM VULGARE  | BULL THISTLE                  | 3  |        |
| * | CONVALLARIA MAJALIS                                      | LILY-OF-THE-VALLEY            | 5  |        |
| 7 | <i>Coreopsis tripteris</i>                               | TALL COREOPSIS                | 0  |        |
| 5 | <i>Corylus americana</i>                                 | HAZELNUT                      | 3  |        |
| * | DACTYLIS GLOMERATA                                       | ORCHARD GRASS                 | 3  |        |
| * | DAUCUS CAROTA  | QUEEN-ANNE'S-LACE             | 5  |        |
| 5 | <i>Desmodium glabellum</i> ( <i>D. paniculatum</i> )     | TICK-TREFOIL                  | 5  |        |
| 6 | <i>Desmodium illinoense</i>                              | PRAIRIE TICK-TREFOIL          | 5  |        |
| * | DIANTHUS ARMERIA   | DEPTFORD PINK                 | 5  |        |
| 3 | <i>Dichanthelium implicatum</i> ( <i>Panicum i.</i> )    | PANIC GRASS                   | 0  |        |
| 5 | <i>Dichanthelium latifolium</i> ( <i>Panicum l.</i> )    | BROAD-LEAVED PANIC GRASS      | 3  |        |
| 0 | <i>Erigeron annuus</i>                                   | DAISY FLEABANE                | 3  |        |
| 4 | <i>Euphorbia corollata</i>                               | FLOWERING SPURGE              | 5  |        |
| 3 | <i>Euthamia graminifolia</i>                             | GRASS-LEAVED GOLDENROD        | 0  |        |
| * | FRANGULA ALNUS ( <i>RHAMNUS FRANGULA</i> )               | GLOSSY BUCKTHORN              | 0  |        |
| 2 | <i>Fraxinus pennsylvanica</i>                            | RED ASH                       | -3 |        |
| 4 | <i>Galium triflorum</i>                                  | FRAGRANT BEDSTRAW             | 3  |        |
| 4 | <i>Geranium maculatum</i>                                | WILD GERANIUM                 | 3  |        |
| * | GLECHOMA HEDERACEA                                       | GROUND-IVY                    | 3  |        |
| 5 | <i>Helianthus divaricatus</i>                            | WOODLAND SUNFLOWER            | 5  |        |
| 4 | <i>Helianthus strumosus</i>                              | PALE-LEAVED SUNFLOWER         | 5  |        |
| * | HESPERIS MATRONALIS                                      | DAME'S ROCKET                 | 3  |        |
| 5 | <i>Hylodesmum glutinosum</i> ( <i>Desmodium g.</i> )     | CLUSTERED-LEAVED TICK-TREFOIL | 5  |        |
| * | HYPERICUM PERFORATUM                                     | COMMON ST. JOHN'S-WORT        | 5  |        |
| 5 | <i>Lechea mucronata</i> ( <i>L. villosa</i> )            | HAIRY PINWEED                 | 5  |        |

|    |  |                           |    |
|----|--|---------------------------|----|
| 5  | <i>Lespedeza capitata</i>                            | ROUND-HEADED BUSH-CLOVER  | 3  |
| 5  | <i>Lespedeza frutescens</i> (L. violacea)            | VIOLET BUSH-CLOVER        | 5  |
| 5  | <i>Liatris scariosa</i>                              | NORTHERN BLAZING-STAR     | 5  |
| *  | LINARIA VULGARIS                                     | BUTTER-AND-EGGS           | 5  |
| *  | LONICERA xBELLA                                      | HYBRID HONEYSUCKLE        | 3  |
| *  | LONICERA MORROWII                                    | MORROW HONEYSUCKLE        | 3  |
| 7  | <i>Lupinus perennis</i>                              | WILD LUPINE               | 5  |
| 5  | <i>Maianthemum racemosum</i> (Smilacina r.)          | FALSE SPIKENARD           | 3  |
| 5  | <i>Maianthemum stellatum</i> (Smilacina s.)          | STARRY FALSE SOLOMON-SEAL | 0  |
| *  | MALUS BACCATA  | SIBERIAN CRAB             | 5  |
| *  | MELILOTUS ALBUS                                      | WHITE SWEET-CLOVER        | 3  |
| 2  | <i>Monarda fistulosa</i>                             | WILD-BERGAMOT             | 3  |
| 2  | <i>Oenothera biennis</i>                             | COMMON EVENING-PRIMROSE   | 3  |
| 0  | <i>Oxalis stricta</i> (O. fontana)                   | YELLOW WOOD-SORREL        | 3  |
| 4  | <i>Panicum virgatum</i>                              | SWITCH GRASS              | 0  |
| 5  | <i>Parthenocissus quinquefolia</i>                   | VIRGINIA CREEPER          | 3  |
| *  | PHLEUM PRATENSE                                      | TIMOTHY                   | 3  |
| 2  | <i>Phytolacca americana</i>                          | POKEWEED                  | 3  |
| *  | POA COMPRESSA  | CANADA BLUEGRASS          | 3  |
| *  | POA PRATENSIS  | KENTUCKY BLUEGRASS        | 3  |
| 1  | <i>Populus deltoides</i>                             | COTTONWOOD                | 0  |
| 4  | <i>Populus grandidentata</i>                         | BIG-TOOTH ASPEN           | 3  |
| 1  | <i>Populus tremuloides</i>                           | QUAKING ASPEN             | 0  |
| *  | POTENTILLA INDICA (DUCHESNEA I.)                     | INDIAN-STRAWBERRY         | 3  |
| *  | POTENTILLA RECTA                                     | ROUGH-FRUITED CINQUEFOIL  | 5  |
| 2  | <i>Prunus serotina</i>                               | WILD BLACK CHERRY         | 3  |
| 2  | <i>Pseudognaphalium obtusifolium</i> (Gnaphalium o.) | OLD-FIELD BALSAM          | 5  |
| 8  | <i>Quercus bicolor</i>                               | SWAMP WHITE OAK           | -3 |
| 5  | <i>Quercus macrocarpa</i>                            | BUR OAK                   | 3  |
| 5  | <i>Quercus rubra</i>                                 | RED OAK                   | 3  |
| 6  | <i>Quercus velutina</i>                              | BLACK OAK                 | 5  |
| 0  | <i>Ranunculus abortivus</i>                          | SMALL-FLOWERED BUTTERCUP  | 0  |
| 10 | <i>Ranunculus fascicularis</i>                       | EARLY BUTTERCUP           | 3  |
| 5  | <i>Ranunculus recurvatus</i>                         | HOOKED CROWFOOT           | -3 |
| 4  | <i>Ratibida pinnata</i>                              | YELLOW CONEFLOWER         | 5  |
| 2  | <i>Rhus typhina</i>                                  | STAGHORN SUMAC            | 3  |
| *  | ROBINIA PSEUDOACACIA                                 | BLACK LOCUST              | 3  |
| *  | ROSA MULTIFLORA                                      | MULTIFLORA ROSE           | 3  |
| 5  | <i>Rosa setigera</i>                                 | PRAIRIE ROSE              | 3  |
| 1  | <i>Rubus allegheniensis</i>                          | COMMON BLACKBERRY         | 3  |
| 1  | <i>Rubus occidentalis</i>                            | BLACK RASPBERRY           | 5  |
| 1  | <i>Rudbeckia hirta</i>                               | BLACK-EYED SUSAN          | 3  |
| 5  | <i>Rudbeckia triloba</i>                             | THREE-LOBED CONEFLOWER    | 3  |
| *  | RUMEX OBTUSIFOLIUS                                   | BITTER DOCK               | 0  |
| 5  | <i>Sanguinaria canadensis</i>                        | BLOODROOT                 | 3  |
| 5  | <i>Schizachyrium scoparium</i> (Andropogon s.)       | LITTLE BLUESTEM           | 3  |
| *  | SILENE LATIFOLIA (S. PRATENSIS)                      | WHITE CAMPION             | 5  |
| 6  | <i>Silphium terebinthinaceum</i>                     | PRAIRIE-DOCK              | 0  |
| 7  | <i>Sisyrinchium albidum</i> (S. hastile)             | COMMON BLUE-EYED-GRASS    | 3  |
| 5  | <i>Smilax lasioneura</i>                             | CARRION-FLOWER            | 5  |
| 1  | <i>Solidago altissima</i>                            | TALL GOLDENROD            | 3  |
| 1  | <i>Solidago canadensis</i>                           | CANADA GOLDENROD          | 3  |
| 6  | <i>Solidago flexicaulis</i>                          | ZIGZAG GOLDENROD          | 3  |
| 3  | <i>Solidago juncea</i>                               | EARLY GOLDENROD           | 5  |
| 2  | <i>Solidago nemoralis</i>                            | OLD-FIELD GOLDENROD       | 5  |
| 5  | <i>Solidago rigida</i>                               | STIFF GOLDENROD           | 3  |
| 5  | <i>Solidago speciosa</i>                             | SHOWY GOLDENROD           | 5  |
| 6  | <i>Sorghastrum nutans</i>                            | INDIAN GRASS              | 3  |
| *  | STELLARIA MEDIA                                      | COMMON CHICKWEED          | 3  |
| 3  | <i>Symphotrichum ericoides</i> (Aster e.)            | HEATH ASTER               | 3  |



|   |   |                            |    |
|---|---|----------------------------|----|
| 5 | <i>Symphotrichum laeve</i> (Aster l.)                 | SMOOTH ASTER               | 3  |
| 3 | <i>Symphotrichum novae-angliae</i> (Aster n.)         | NEW ENGLAND ASTER          | -3 |
| 4 | <i>Symphotrichum oolentangiense</i> (Aster o.)        | PRAIRIE HEART-LEAVED ASTER | 5  |
| 1 | <i>Symphotrichum pilosum</i> (Aster p.)               | HAIRY ASTER                | 3  |
| 2 | <i>Symphotrichum urophyllum</i> (Aster sagittifolius) | ARROW-LEAVED ASTER         | 5  |
| 8 | <i>Taenidia integerrima</i>                           | YELLOW-PIMPERNEL           | 5  |
| 5 | <i>Tilia americana</i>                                | BASSWOOD                   | 3  |
| 2 | <i>Toxicodendron radicans</i>                         | POISON-IVY                 | 0  |
| 5 | <i>Trillium grandiflorum</i>                          | COMMON TRILLIUM            | 3  |
| 5 | <i>Triosteum aurantiacum</i>                          | HORSE-GENTIAN              | 5  |
| 1 | <i>Ulmus americana</i>                                | AMERICAN ELM               | -3 |
| 4 | <i>Verbena urticifolia</i>                            | WHITE VERVAIN              | 0  |
| * | VERONICA SERPYLLIFOLIA                                | THYME-LEAVED SPEEDWELL     | 0  |
| 8 | <i>Veronicastrum virginicum</i>                       | CULVER'S-ROOT              | 0  |
| 5 | <i>Viola cucullata</i>                                | MARSH VIOLET               | -5 |
| 1 | <i>Viola sororia</i>                                  | COMMON BLUE VIOLET         | 0  |
| 3 | <i>Vitis riparia</i>                                  | RIVER-BANK GRAPE           | 0  |
| 6 | <i>Zizia aurea</i>                                    | GOLDEN ALEXANDERS          | 0  |

Also: *Prunus* sp., *Crataegus* sp., *Agrostis* sp.

# Nichols Arboretum

## East Oak Woodlands

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Southern Forest

Open rich oak forest situated on the hillsides and ridges of a glacial moraine, S of Dow Field Prairie

#### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 194   | Total Species        | 4.44 | NATIVE MEAN C |
| 152   | Total Native Species | 3.48 | W/Adventives  |
| 78.4  | % Native Species     | 1.9  | NATIVE MEAN W |
| 54.75 | NATIVE FQI           | 2.3  | W/Adventives  |
| 48.46 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME  | COMMON NAME             | W  | LISTED |
|---|--|-------------------------|----|--------|
| 0 | <i>Acer negundo</i>                                      | BOX-ELDER               | 0  |        |
| * | ACER PLATANOIDES   | NORWAY MAPLE            | 5  |        |
| 1 | <i>Acer rubrum</i>                                       | RED MAPLE               | 0  |        |
| 5 | <i>Acer saccharum</i>                                    | SUGAR MAPLE             | 3  |        |
| 7 | <i>Actaea pachypoda</i>                                  | DOLL'S-EYES             | 5  |        |
| 7 | <i>Actaea rubra</i>                                      | RED BANE BERRY          | 3  |        |
| 6 | <i>Adiantum pedatum</i>                                  | MAIDENHAIR FERN         | 3  |        |
| 5 | <i>Aesculus glabra</i>                                   | OHIO BUCKEYE            | 0  |        |
| * | AESCULUS HIPPOCASTANUM                                   | HORSE-CHESTNUT          | 5  |        |
| 4 | <i>Ageratina altissima</i> ( <i>Eupatorium rugosum</i> ) | WHITE SNAKEROOT         | 3  |        |
| 5 | <i>Agrimonia pubescens</i>                               | SOFT AGRIMONY           | 5  |        |
| * | AILANTHUS ALTISSIMA                                      | TREE-OF-HEAVEN          | 5  |        |
| * | ALLIARIA PETIOLATA                                       | GARLIC MUSTARD          | 3  |        |
| 5 | <i>Amphicarpaea bracteata</i>                            | HOG-PEANUT              | 0  |        |
| 5 | <i>Anemone quinquefolia</i>                              | WOOD ANEMONE            | 3  |        |
| 3 | <i>Anemone virginiana</i>                                | THIMBLEWEED             | 3  |        |
| 5 | <i>Aralia nudicaulis</i>                                 | WILD SARSAPARILLA       | 3  |        |
| * | ARCTIUM MINUS  | COMMON BURDOCK          | 3  |        |
| 5 | <i>Arisaema triphyllum</i>                               | JACK-IN-THE-PULPIT      | 0  |        |
| 6 | <i>Asclepias exaltata</i>                                | POKE MILKWEED           | 5  |        |
| 4 | <i>Athyrium filix-femina</i>                             | LADY FERN               | 0  |        |
| * | BERBERIS VULGARIS  | COMMON BARBERRY         | 3  |        |
| 2 | <i>Betula papyrifera</i>                                 | PAPER BIRCH             | 3  |        |
| 5 | <i>Boechera laevigata</i> ( <i>Arabis l.</i> )           | SMOOTH BANK CRESS       | 5  |        |
| * | CARDAMINE IMPATIENS                                      | BITTER CRESS            | 3  |        |
| 5 | <i>Carex albursina</i>                                   | SEDGE                   | 5  |        |
| 1 | <i>Carex blanda</i>                                      | SEDGE                   | 0  |        |
| 3 | <i>Carex cephalophora</i>                                | SEDGE                   | 3  |        |
| 5 | <i>Carex digitalis</i>                                   | SEDGE                   | 5  |        |
| 5 | <i>Carex hirtifolia</i>                                  | SEDGE                   | 3  |        |
| 8 | <i>Carex laxiculmis</i>                                  | SEDGE                   | 3  |        |
| 8 | <i>Carex laxiflora</i>                                   | SEDGE                   | 0  |        |
| 5 | <i>Carex normalis</i>                                    | SEDGE                   | -3 |        |
| 4 | <i>Carex pennsylvanica</i>                               | SEDGE                   | 5  |        |
| 2 | <i>Carex rosea</i> ( <i>C. convoluta</i> )               | CURLY-STYLED WOOD SEDGE | 5  |        |
| 6 | <i>Carpinus caroliniana</i>                              | BLUE-BEECH              | 0  |        |
| 5 | <i>Carya cordiformis</i>                                 | BITTERNUT HICKORY       | 0  |        |
| 5 | <i>Carya glabra</i>                                      | PIG NUT HICKORY         | 3  |        |
| 5 | <i>Carya ovata</i>                                       | SHAGBARK HICKORY        | 3  |        |
| 9 | <i>Castanea dentata</i>                                  | AMERICAN CHESTNUT       | 5  | E      |
| * | CATALPA SPECIOSA   | NORTHERN CATALPA        | 3  |        |
| * | CELASTRUS ORBICULATUS                                    | ORIENTAL BITTERSWEET    | 5  |        |
| 5 | <i>Celtis occidentalis</i>                               | HACKBERRY               | 0  |        |
| 8 | <i>Cercis canadensis</i>                                 | REDBUD                  | 3  |        |

|    |                                       |                               |    |
|----|---------------------------------------|-------------------------------|----|
| *  | CHELIDONIUM MAJUS                     | CELANDINE                     | 5  |
| 2  | Circaea canadensis (C. lutetiana)     | ENCHANTER'S-NIGHTSHADE        | 3  |
| *  | CIRSIUM VULGARE                       | BULL THISTLE                  | 3  |
| 4  | Claytonia virginica                   | SPRING-BEAUTY                 | 3  |
| *  | CLEMATIS TERNIFLORA                   | SWEET-AUTUMN CLEMATIS         | 5  |
| 4  | Clematis virginiana                   | VIRGIN'S BOWER                | 0  |
| 8  | Collinsonia canadensis                | RICHWEED                      | 0  |
| *  | CONVALLARIA MAJALIS                   | LILY-OF-THE-VALLEY            | 5  |
| 5  | Cornus alternifolia                   | ALTERNATE-LEAVED DOGWOOD      | 3  |
| 5  | Corylus americana                     | HAZELNUT                      | 3  |
| 2  | Cryptotaenia canadensis               | HONEWORT                      | 0  |
| 4  | Danthonia spicata                     | POVERTY GRASS; OATGRASS       | 5  |
| 3  | Dichantherium implicatum (Panicum i.) | PANIC GRASS                   | 0  |
| 5  | Dichantherium latifolium (Panicum l.) | BROAD-LEAVED PANIC GRASS      | 3  |
| 4  | Dioscorea villosa (Dioscorea villosa) | WILD YAM                      | 0  |
| 5  | Dryopteris carthusiana                | SPINULOSE WOODFERN            | -3 |
| 2  | Erechtites hieraciifolius             | FIREWEED                      | 3  |
| 2  | Erigeron philadelphicus               | PHILADELPHIA FLEABANE         | 0  |
| 5  | Erigeron pulchellus                   | ROBIN'S-PLANTAIN              | 3  |
| 5  | Erythronium americanum                | YELLOW TROUT LILY             | 5  |
| *  | EUONYMUS EUROPAEA                     | SPINDLE TREE                  | 5  |
| *  | EUONYMUS FORTUNEI                     | WINTERCREEPER                 | 5  |
| 5  | Eutrochium purpureum (Eupatorium p.)  | GREEN-STEMMED JOE-PYE-WEED    | 0  |
| 6  | Fagus grandifolia                     | AMERICAN BEECH                | 3  |
| *  | FRANGULA ALNUS (RHAMNUS FRANGULA)     | GLOSSY BUCKTHORN              | 0  |
| 5  | Fraxinus americana                    | WHITE ASH                     | 3  |
| 2  | Fraxinus pennsylvanica                | RED ASH                       | -3 |
| 0  | Galium aparine                        | ANNUAL BEDSTRAW               | 3  |
| 4  | Galium circaezans                     | WHITE WILD LICORICE           | 3  |
| 5  | Galium concinnum                      | SHINING BEDSTRAW              | 3  |
| *  | GALIUM ODORATUM                       | SWEET WOODRUFF                | 5  |
| 4  | Galium triflorum                      | FRAGRANT BEDSTRAW             | 3  |
| 4  | Geranium maculatum                    | WILD GERANIUM                 | 3  |
| 3  | Geranium robertianum                  | HERB ROBERT                   | 3  |
| 1  | Geum canadense                        | WHITE AVENS                   | 0  |
| *  | GEUM URBANUM                          | AVENS                         | 5  |
| *  | GLECHOMA HEDERACEA                    | GROUND-IVY                    | 3  |
| 4  | Glyceria striata                      | FOWL MANNA GRASS              | -5 |
| 1  | Hackelia virginiana                   | BEGGAR'S LICE                 | 3  |
| *  | HALESIA CAROLINA                      | SILVER-BELL                   | 5  |
| 5  | Hamamelis virginiana                  | WITCH-HAZEL                   | 3  |
| 8  | Hepatica acutiloba                    | SHARP-LOBED HEPATICA          | 5  |
| 6  | Hepatica americana                    | ROUND-LOBED HEPATICA          | 5  |
| 3  | Heracleum maximum                     | COW-PARSNIP                   | -3 |
| *  | HESPERIS MATRONALIS                   | DAME'S ROCKET                 | 3  |
| 8  | Heuchera americana                    | ALUM ROOT                     | 3  |
| 4  | Hydrophyllum virginianum              | VIRGINIA WATERLEAF            | 0  |
| 5  | Hylodesmum glutinosum (Desmodium g.)  | CLUSTERED-LEAVED TICK-TREFOIL | 5  |
| 10 | Hypoxis hirsuta                       | STAR-GRASS                    | 0  |
| 6  | Impatiens pallida                     | PALE TOUCH-ME-NOT             | -3 |
| 5  | Juglans nigra                         | BLACK WALNUT                  | 3  |
| 1  | Juncus tenuis                         | PATH RUSH                     | 0  |
| *  | KALOPANAX SEPTEMLOBUS                 | CASTOR ARALIA                 | 5  |
| 2  | Lactuca canadensis                    | TALL LETTUCE                  | 3  |
| 4  | Laportea canadensis                   | WOOD NETTLE                   | -3 |
| 5  | Leersia virginica                     | WHITE GRASS                   | -3 |
| *  | LEONURUS CARDIACA                     | MOTHERWORT                    | 5  |
| *  | LIGUSTRUM VULGARE                     | COMMON PRIVET                 | 3  |
| 7  | Lindera benzoin                       | SPICEBUSH                     | -3 |
| 4  | Lobelia spicata                       | PALE SPIKED LOBELIA           | 0  |

|    |  |                            |    |   |
|----|--|----------------------------|----|---|
| 5  | <i>Lonicera dioica</i>                               | RED HONEYSUCKLE            | 3  |   |
| 5  | <i>Luzula multiflora</i>                             | COMMON WOOD RUSH           | 3  |   |
| 5  | <i>Maianthemum racemosum</i> ( <i>Smilacina r.</i> ) | FALSE SPIKENARD            | 3  |   |
| 10 | <i>Mertensia virginica</i>                           | VIRGINIA BLUEBELLS         | 0  | E |
| 3  | <i>Muhlenbergia frondosa</i>                         | COMMON SATIN GRASS         | -3 |   |
| 0  | <i>Muhlenbergia schreberi</i>                        | NIMBLEWILL                 | 0  |   |
| 2  | <i>Onoclea sensibilis</i>                            | SENSITIVE FERN             | -3 |   |
| 4  | <i>Osmorhiza claytonii</i>                           | HAIRY SWEET-CICELY         | 3  |   |
| 3  | <i>Osmorhiza longistylis</i>                         | SMOOTH SWEET-CICELY        | 3  |   |
| 5  | <i>Ostrya virginiana</i>                             | IRONWOOD; HOP-HORNBEAM     | 3  |   |
| 0  | <i>Oxalis stricta</i> ( <i>O. fontana</i> )          | YELLOW WOOD-SORREL         | 3  |   |
| 4  | <i>Parthenocissus inserta</i>                        | THICKET CREEPER            | 3  |   |
| 5  | <i>Parthenocissus quinquefolia</i>                   | VIRGINIA CREEPER           | 3  |   |
| 5  | <i>Penstemon hirsutus</i>                            | HAIRY BEARD-TONGUE         | 5  |   |
| 4  | <i>Persicaria virginiana</i> ( <i>Polygonum v.</i> ) | JUMPSEED                   | 0  |   |
| *  | PHELLODENDRON AMURENSE                               | AMUR CORK-TREE             | 5  |   |
| 4  | <i>Phryma leptostachya</i>                           | LOPSEED                    | 3  |   |
| 2  | <i>Phytolacca americana</i>                          | POKEWEED                   | 3  |   |
| 3  | <i>Picea glauca</i>                                  | WHITE SPRUCE               | 3  |   |
| 5  | <i>Pilea pumila</i>                                  | CLEARWEED                  | -3 |   |
| 6  | <i>Pinus resinosa</i>                                | RED PINE                   | 3  |   |
| *  | PINUS SYLVESTRIS                                     | SCOTCH PINE                | 3  |   |
| 9  | <i>Poa alsodes</i>                                   | BLUEGRASS                  | 0  |   |
| *  | POA COMPRESSA  | CANADA BLUEGRASS           | 3  |   |
| *  | POA PRATENSIS  | KENTUCKY BLUEGRASS         | 3  |   |
| 3  | <i>Podophyllum peltatum</i>                          | MAY-APPLE                  | 3  |   |
| 4  | <i>Populus grandidentata</i>                         | BIG-TOOTH ASPEN            | 3  |   |
| *  | POTENTILLA INDICA ( <i>DUCHESNEA l.</i> )            | INDIAN-STRAWBERRY          | 3  |   |
| 2  | <i>Potentilla simplex</i>                            | OLD-FIELD CINQUEFOIL       | 3  |   |
| 5  | <i>Prenanthes altissima</i>                          | TALL WHITE LETTUCE         | 3  |   |
| 0  | <i>Prunella vulgaris</i>                             | SELF-HEAL                  | 0  |   |
| *  | PRUNUS AVIUM   | SWEET CHERRY               | 5  |   |
| 2  | <i>Prunus serotina</i>                               | WILD BLACK CHERRY          | 3  |   |
| 6  | <i>Pyrola elliptica</i>                              | LARGE-LEAVED SHINLEAF      | 3  |   |
| 5  | <i>Quercus alba</i>                                  | WHITE OAK                  | 3  |   |
| 4  | <i>Quercus ellipsoidalis</i> ( <i>Q. coccinea</i> )  | HILL'S OAK                 | 5  |   |
| 5  | <i>Quercus rubra</i>                                 | RED OAK                    | 3  |   |
| 6  | <i>Quercus velutina</i>                              | BLACK OAK                  | 5  |   |
| 0  | <i>Ranunculus abortivus</i>                          | SMALL-FLOWERED BUTTERCUP   | 0  |   |
| 10 | <i>Ranunculus fascicularis</i>                       | EARLY BUTTERCUP            | 3  |   |
| 5  | <i>Ranunculus recurvatus</i>                         | HOOKED CROWFOOT            | -3 |   |
| *  | RHAMNUS CATHARTICA                                   | COMMON BUCKTHORN           | 0  |   |
| *  | RHODOTYPOS SCANDENS                                  | JETBEAD                    | 5  |   |
| 2  | <i>Rhus typhina</i>                                  | STAGHORN SUMAC             | 3  |   |
| 4  | <i>Ribes cynosbati</i>                               | PRICKLY or WILD GOOSEBERRY | 3  |   |
| *  | ROBINIA PSEUDOACACIA                                 | BLACK LOCUST               | 3  |   |
| 1  | <i>Rubus allegheniensis</i>                          | COMMON BLACKBERRY          | 3  |   |
| *  | RUMEX CRISPUS  | CURLY DOCK                 | 0  |   |
| *  | RUMEX OBTUSIFOLIUS                                   | BITTER DOCK                | 0  |   |
| 3  | <i>Sambucus canadensis</i>                           | ELDERBERRY                 | -3 |   |
| 5  | <i>Sanguinaria canadensis</i>                        | BLOODROOT                  | 3  |   |
| 2  | <i>Sanicula odorata</i> ( <i>S. gregaria</i> )       | BLACK SNAKEROOT            | 0  |   |
| 5  | <i>Sassafras albidum</i>                             | SASSAFRAS                  | 3  |   |
| 5  | <i>Smilax hispida</i> ( <i>S. tamnoides</i> )        | BRISTLY GREENBRIER         | 0  |   |
| 5  | <i>Smilax lasioneura</i>                             | CARRION-FLOWER BLUESTEM    | 5  |   |
| 6  | <i>Solidago caesia</i>                               | GOLDENROD CANADA           | 3  |   |
| 1  | <i>Solidago canadensis</i>                           | GOLDENROD SLENDER          | 3  |   |
| 4  | <i>Sphenopholis intermedia</i>                       | WEDGEGRASS HEART-LEAVED    | 0  |   |
| 4  | <i>Symphotrichum cordifolium</i> ( <i>Aster c.</i> ) | ASTER                      | 5  |   |

|   |   |                             |    |   |
|---|---|-----------------------------|----|---|
| 5 | <i>Symphotrichum laeve</i> (Aster l.)                 | SMOOTH ASTER                | 3  |   |
| 2 | <i>Symphotrichum lanceolatum</i> (Aster l.)           | PANICLED ASTER              | -3 |   |
| 2 | <i>Symphotrichum lateriflorum</i> (Aster l.)          | CALICO ASTER                | 0  |   |
| 2 | <i>Symphotrichum urophyllum</i> (Aster sagittifolius) | ARROW-LEAVED ASTER          | 5  |   |
| 6 | <i>Symplocarpus foetidus</i>                          | SKUNK-CABBAGE               | -5 |   |
| 8 | <i>Taenidia integerrima</i>                           | YELLOW-PIMPERNEL            | 5  |   |
| * | TARAXACUM OFFICINALE                                  | COMMON DANDELION            | 3  |   |
| 6 | <i>Thalictrum dioicum</i>                             | EARLY MEADOW-RUE            | 3  |   |
| 8 | <i>Thalictrum thalictroides</i> (Anemonella t.)       | RUE-ANEMONE                 | 3  |   |
| 5 | <i>Tilia americana</i>                                | BASSWOOD                    | 3  |   |
| * | TILIA CORDATA   | LITTLE-LEAF LINDEN          | 5  |   |
| 2 | <i>Toxicodendron radicans</i>                         | POISON-IVY                  | 0  |   |
| 5 | <i>Trillium grandiflorum</i>                          | COMMON TRILLIUM             | 3  |   |
| 8 | <i>Trillium recurvatum</i>                            | PRAIRIE TRILLIUM            | 3  | T |
| 5 | <i>Triosteum aurantiacum</i>                          | HORSE-GENTIAN               | 5  |   |
| 5 | <i>Tsuga canadensis</i>                               | HEMLOCK                     | 3  |   |
| 1 | <i>Ulmus americana</i>                                | AMERICAN ELM                | -3 |   |
| 5 | <i>Uvularia sessilifolia</i>                          | MERRYBELLS                  | 3  |   |
| * | VERBASCUM THAPSUS                                     | COMMON MULLEIN              | 5  |   |
| 4 | <i>Verbena urticifolia</i>                            | WHITE VERVAIN               | 0  |   |
| 8 | <i>Veronicastrum virginicum</i>                       | CULVER'S-ROOT               | 0  |   |
| 6 | <i>Viburnum acerifolium</i>                           | MAPLE-LEAVED VIBURNUM       | 5  |   |
| * | VIBURNUM LANTANA                                      | WAYFARING TREE              | 5  |   |
| * | VIBURNUM OPULUS                                       | EUROPEAN Highbush-Cranberry | -3 |   |
| 5 | <i>Viburnum rafinesquianum</i>                        | Downy Arrow-wood            | 5  |   |
| * | VINCA MINOR   | PERIWINKLE                  | 5  |   |
| * | VIOLA ODORATA   | ENGLISH or SWEET VIOLET     | 5  |   |
| 4 | <i>Viola pubescens</i>                                | YELLOW VIOLET               | 3  |   |
| 6 | <i>Vitis aestivalis</i>                               | SUMMER GRAPE                | 3  |   |
| 3 | <i>Vitis riparia</i>                                  | RIVER-BANK GRAPE            | 0  |   |

Also: *Crataegus* sp., *Taxus*, *Clethrastis kentuckya*, *Philadelphus*, *Betula (nigra?)*

# Nichols Arboretum

## Forest Hills Woods

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Southern Forest

Very disturbed oak forest on a ridge and east-facing slope just E of Forest Hills Cemetery

#### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 54    | Total Species        | 3.82 | NATIVE MEAN C |
| 34    | Total Native Species | 2.41 | W/Adventives  |
| 63.0  | % Native Species     | 2.1  | NATIVE MEAN W |
| 22.29 | NATIVE FQI           | 2.7  | W/Adventives  |
| 17.69 | W/Adventives         |      |               |

| C  | SCIENTIFIC NAME                      | COMMON NAME              | W  | LISTED |
|----|--------------------------------------|--------------------------|----|--------|
| *  | ACER PLATANOIDES                     | NORWAY MAPLE             | 5  |        |
| 5  | Acer saccharum                       | SUGAR MAPLE              | 3  |        |
| *  | AILANTHUS ALTISSIMA                  | TREE-OF-HEAVEN           | 5  |        |
| *  | ARCTIUM MINUS                        | COMMON BURDOCK           | 3  |        |
| 5  | Boechera laevigata (Arabis l.)       | SMOOTH BANK CRESS        | 5  |        |
| *  | CARDAMINE IMPATIENS                  | BITTER CRESS             | 3  |        |
| 1  | Carex blanda                         | SEDGE                    | 0  |        |
| 5  | Carya glabra                         | PIGNOCK HICKORY          | 3  |        |
| 8  | Cercis canadensis                    | REDBUD                   | 3  |        |
| *  | CHELIDONIUM MAJUS                    | CELANDINE                | 5  |        |
| *  | CIRSIIUM ARVENSE                     | CANADA THISTLE           | 3  |        |
| 8  | Collinsonia canadensis               | RICHWEED                 | 0  |        |
| *  | CONVALLARIA MAJALIS                  | LILY-OF-THE-VALLEY       | 5  |        |
| 5  | Cornus alternifolia                  | ALTERNATE-LEAVED DOGWOOD | 3  |        |
| 2  | Cryptotaenia canadensis              | HONEWORT                 | 0  |        |
| 4  | Cystopteris fragilis                 | FRAGILE FERN             | 3  |        |
| *  | DACTYLIS GLOMERATA                   | ORCHARD GRASS            | 3  |        |
| 2  | Echinocystis lobata                  | WILD-CUCUMBER            | -3 |        |
| 5  | Elymus hystrix (Hystrix patula)      | BOTTLEBRUSH GRASS        | 3  |        |
| 0  | Erigeron annuus                      | DAISY FLEABANE           | 3  |        |
| 5  | Erythronium americanum               | YELLOW TROUT LILY        | 5  |        |
| *  | EUONYMUS EUROPAEA                    | SPINDLE TREE             | 5  |        |
| *  | EUONYMUS FORTUNEI                    | WINTERCREEPER            | 5  |        |
| 0  | Galium aparine                       | ANNUAL BEDSTRAW          | 3  |        |
| 4  | Geranium maculatum                   | WILD GERANIUM            | 3  |        |
| 1  | Geum canadense                       | WHITE AVENS              | 0  |        |
| *  | HESPERIS MATRONALIS                  | DAME'S ROCKET            | 3  |        |
| 5  | Juglans nigra                        | BLACK WALNUT             | 3  |        |
| *  | LIGUSTRUM VULGARE                    | COMMON PRIVET            | 3  |        |
| *  | LONICERA MAACKII                     | AMUR HONEYSUCKLE         | 5  |        |
| 5  | Maianthemum racemosum (Smilacina r.) | FALSE SPIKENARD          | 3  |        |
| 3  | Osmorhiza longistylis                | SMOOTH SWEET-CICELY      | 3  |        |
| 5  | Parthenocissus quinquefolia          | VIRGINIA CREEPER         | 3  |        |
| 4  | Phryma leptostachya                  | LOPSEED                  | 3  |        |
| 5  | Pilea pumila                         | CLEARWEED                | -3 |        |
| 3  | Pinus strobus                        | WHITE PINE               | 3  |        |
| *  | PINUS SYLVESTRIS                     | SCOTCH PINE              | 3  |        |
| 3  | Podophyllum peltatum                 | MAY-APPLE                | 3  |        |
| 5  | Quercus alba                         | WHITE OAK                | 3  |        |
| 0  | Ranunculus abortivus                 | SMALL-FLOWERED BUTTERCUP | 0  |        |
| 10 | Ranunculus fascicularis              | EARLY BUTTERCUP          | 3  |        |
| *  | RHAMNUS CATHARTICA                   | COMMON BUCKTHORN         | 0  |        |
| 2  | Rhus typhina                         | STAGHORN SUMAC           | 3  |        |
| *  | ROBINIA PSEUDOACACIA                 | BLACK LOCUST             | 3  |        |

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|   |                               |                    |   |
|---|-------------------------------|--------------------|---|
| 1 | Rubus occidentalis            | BLACK RASPBERRY    | 5 |
| 5 | Smilax hispida (S. tamnoides) | BRISTLY GREENBRIER | 0 |
| * | STELLARIA MEDIA               | COMMON CHICKWEED   | 3 |
| * | TARAXACUM OFFICINALE          | COMMON DANDELION   | 3 |
| 5 | Tilia americana               | BASSWOOD           | 3 |
| * | TORILIS JAPONICA              | HEDGE-PARSLEY      | 3 |
| 5 | Tsuga canadensis              | HEMLOCK            | 3 |
| * | VINCA MINOR                   | PERIWINKLE         | 5 |
| 1 | Viola sororia                 | COMMON BLUE VIOLET | 0 |
| 3 | Vitis riparia                 | RIVER-BANK GRAPE   | 0 |

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Also: Lonicera spp., Narcissus, Hedera helix

# Nichols Arboretum

## Forested Wetland

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Floodplain Forest

Small floodplain forest in the center of property, along an intermittent stream running N to the Huron River

#### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 163   | Total Species        | 4.34 | NATIVE MEAN C |
| 128   | Total Native Species | 3.40 | W/Adventives  |
| 78.5  | % Native Species     | 0.5  | NATIVE MEAN W |
| 49.06 | NATIVE FQI           | 0.9  | W/Adventives  |
| 43.47 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME  | COMMON NAME             | W  | LISTED |
|---|--|-------------------------|----|--------|
| 0 | <i>Acer negundo</i>  | BOX-ELDER               | 0  |        |
| 2 | <i>Acer saccharinum</i>                                    | SILVER MAPLE            | -3 |        |
| 5 | <i>Acer saccharum</i>                                      | SUGAR MAPLE             | 3  |        |
| 7 | <i>Actaea pachypoda</i>                                    | DOLL'S-EYES             | 5  |        |
| 7 | <i>Actaea rubra</i>  | RED BANE BERRY          | 3  |        |
| 4 | <i>Ageratina altissima</i> ( <i>Eupatorium rugosum</i> )   | WHITE SNAKEROOT         | 3  |        |
| * | <i>AILANTHUS ALTISSIMA</i>                                 | TREE-OF-HEAVEN          | 5  |        |
| * | <i>ALLIARIA PETIOLATA</i>                                  | GARLIC MUSTARD          | 3  |        |
| 7 | <i>Allium burdickii</i> ( <i>A. tricoccum</i> )            | WILD LEEK               | 3  |        |
| * | <i>ALNUS GLUTINOSA</i>                                     | BLACK ALDER             | -3 |        |
| * | <i>AMPELOPSIS BREVIPEDUNCULATA</i>                         | PORCELAIN VINE          | 5  |        |
| 5 | <i>Amphicarpaea bracteata</i>                              | HOG-PEANUT              | 0  |        |
| 5 | <i>Anemone quinquefolia</i>                                | WOOD ANEMONE            | 3  |        |
| 3 | <i>Anemone virginiana</i>                                  | THIMBLEWEED             | 3  |        |
| 3 | <i>Apios americana</i>                                     | GROUNDNUT               | -3 |        |
| * | <i>ARCTIUM MINUS</i>                                       | COMMON BURDOCK          | 3  |        |
| 5 | <i>Arisaema triphyllum</i>                                 | JACK-IN-THE-PULPIT      | 0  |        |
| 5 | <i>Asarum canadense</i>                                    | WILD-GINGER             | 5  |        |
| 6 | <i>Asclepias incarnata</i>                                 | SWAMP MILKWEED          | -5 |        |
| 9 | <i>Asimina triloba</i>                                     | PAWPAW                  | 0  |        |
| 4 | <i>Athyrium filix-femina</i>                               | LADY FERN               | 0  |        |
| * | <i>BERBERIS THUNBERGII</i>                                 | JAPANESE BARBERRY       | 3  |        |
| 7 | <i>Betula alleghaniensis</i>                               | YELLOW BIRCH            | 0  |        |
| 5 | <i>Boehmeria cylindrica</i>                                | FALSE NETTLE            | -5 |        |
| 5 | <i>Cardamine concatenata</i> ( <i>Dentaria laciniata</i> ) | CUT-LEAVED TOOTHWORT    | 3  |        |
| * | <i>CARDAMINE IMPATIENS</i>                                 | BITTER CRESS            | 3  |        |
| 5 | <i>Carex hirtifolia</i>                                    | SEDGE                   | 3  |        |
| 8 | <i>Carex laxiculmis</i>                                    | SEDGE                   | 3  |        |
| 4 | <i>Carex pensylvanica</i>                                  | SEDGE                   | 5  |        |
| 2 | <i>Carex rosea</i> ( <i>C. convoluta</i> )                 | CURLY-STYLED WOOD SEDGE | 5  |        |
| 4 | <i>Carex stricta</i>                                       | SEDGE                   | -5 |        |
| 6 | <i>Carpinus caroliniana</i>                                | BLUE-BEECH              | 0  |        |
| 5 | <i>Carya cordiformis</i>                                   | BITTERNUT HICKORY       | 0  |        |
| 5 | <i>Carya glabra</i>  | PIGNUT HICKORY          | 3  |        |
| 5 | <i>Carya ovata</i>   | SHAGBARK HICKORY        | 3  |        |
| * | <i>CATALPA SPECIOSA</i>                                    | NORTHERN CATALPA        | 3  |        |
| * | <i>CELASTRUS ORBICULATUS</i>                               | ORIENTAL BITTERSWEET    | 5  |        |
| 5 | <i>Celtis occidentalis</i>                                 | HACKBERRY               | 0  |        |
| 7 | <i>Cephalanthus occidentalis</i>                           | BUTTONBUSH              | -5 |        |
| * | <i>CHELIDONIUM MAJUS</i>                                   | CELANDINE               | 5  |        |
| 7 | <i>Chelone glabra</i>                                      | TURTLEHEAD              | -5 |        |
| 4 | <i>Cicuta maculata</i>                                     | WATER HEMLOCK           | -5 |        |
| 2 | <i>Circaea canadensis</i> ( <i>C. lutetiana</i> )          | ENCHANTER'S-NIGHTSHADE  | 3  |        |
| * | <i>CIRSIIUM ARVENSE</i>                                    | CANADA THISTLE          | 3  |        |



|   |   |                               |    |
|---|---|-------------------------------|----|
| 4 | <i>Claytonia virginica</i>                            | SPRING-BEAUTY                 | 3  |
| 4 | <i>Clematis virginiana</i>                            | VIRGIN'S BOWER                | 0  |
| 8 | <i>Collinsonia canadensis</i>                         | RICHWEED                      | 0  |
| * | CONVALLARIA MAJALIS                                   | LILY-OF-THE-VALLEY            | 5  |
| 5 | <i>Cornus alternifolia</i>                            | ALTERNATE-LEAVED DOGWOOD      | 3  |
| 2 | <i>Cornus amomum</i>                                  | SILKY DOGWOOD                 | -3 |
| 2 | <i>Cryptotaenia canadensis</i>                        | HONEWORT                      | 0  |
| * | DACTYLIS GLOMERATA                                    | ORCHARD GRASS                 | 3  |
| * | DAUCUS CAROTA   | QUEEN-ANNE'S-LACE             | 5  |
| 4 | <i>Dioscorea villosa</i> ( <i>Dioscorea villosa</i> ) | WILD YAM                      | 0  |
| 4 | <i>Elymus virginicus</i>                              | VIRGINIA WILD-RYE             | -3 |
| 2 | <i>Erechtites hieraciifolius</i>                      | FIREWEED                      | 3  |
| 5 | <i>Erythronium americanum</i>                         | YELLOW TROUT LILY             | 5  |
| * | EUONYMUS FORTUNEI                                     | WINTERCREEPER                 | 5  |
| 4 | <i>Eupatorium perfoliatum</i>                         | BONESET                       | -3 |
| 4 | <i>Eutrochium maculatum</i> ( <i>Eupatorium m.</i> )  | JOE-PYE-WEED                  | -5 |
| 5 | <i>Eutrochium purpureum</i> ( <i>Eupatorium p.</i> )  | GREEN-STEMMED JOE-PYE-WEED    | 0  |
| 5 | <i>Fraxinus americana</i>                             | WHITE ASH                     | 3  |
| 2 | <i>Fraxinus pennsylvanica</i>                         | RED ASH                       | -3 |
| 0 | <i>Galium aparine</i>                                 | ANNUAL BEDSTRAW               | 3  |
| 5 | <i>Galium asprellum</i>                               | ROUGH BEDSTRAW                | -5 |
| 4 | <i>Geranium maculatum</i>                             | WILD GERANIUM                 | 3  |
| 1 | <i>Geum canadense</i>                                 | WHITE AVENS                   | 0  |
| * | GEUM URBANUM  | AVENS                         | 5  |
| * | GLECHOMA HEDERACEA                                    | GROUND-IVY                    | 3  |
| 4 | <i>Glyceria striata</i>                               | FOWL MANNA GRASS              | -5 |
| 1 | <i>Hackelia virginiana</i>                            | BEGGAR'S LICE                 | 3  |
| 5 | <i>Hamamelis virginiana</i>                           | WITCH-HAZEL                   | 3  |
| 5 | <i>Helianthus decapetalus</i>                         | PALE SUNFLOWER                | 3  |
| 6 | <i>Helianthus tuberosus</i>                           | JERUSALEM-ARTICHOKE           | 0  |
| 3 | <i>Heracleum maximum</i>                              | COW-PARSNIP                   | -3 |
| * | HESPERIS MATRONALIS                                   | DAME'S ROCKET                 | 3  |
| 5 | <i>Hylodesmum glutinosum</i> ( <i>Desmodium g.</i> )  | CLUSTERED-LEAVED TICK-TREFOIL | 5  |
| 2 | <i>Impatiens capensis</i>                             | SPOTTED TOUCH-ME-NOT          | -3 |
| 6 | <i>Impatiens pallida</i>                              | PALE TOUCH-ME-NOT             | -3 |
| * | IRIS PSEUDACORUS                                      | YELLOW FLAG                   | -5 |
| 5 | <i>Juglans nigra</i>                                  | BLACK WALNUT                  | 3  |
| 4 | <i>Laportea canadensis</i>                            | WOOD NETTLE                   | -3 |
| 5 | <i>Leersia virginica</i>                              | WHITE GRASS                   | -3 |
| * | LEONURUS CARDIACA                                     | MOTHERWORT                    | 5  |
| * | LIGUSTRUM OBTUSIFOLIUM                                | BORDER PRIVET                 | 3  |
| * | LIGUSTRUM VULGARE                                     | COMMON PRIVET                 | 3  |
| 5 | <i>Lilium michiganense</i>                            | MICHIGAN LILY                 | -3 |
| 7 | <i>Lindera benzoin</i>                                | SPICEBUSH                     | -3 |
| 9 | <i>Liriodendron tulipifera</i>                        | TULIP TREE                    | 3  |
| 4 | <i>Lobelia siphilitica</i>                            | GREAT BLUE LOBELIA            | -3 |
| 5 | <i>Lonicera dioica</i>                                | RED HONEYSUCKLE               | 3  |
| * | LONICERA MORROWII                                     | MORROW HONEYSUCKLE            | 3  |
| 4 | <i>Lysimachia ciliata</i>                             | FRINGED LOOSESTRIFE           | -3 |
| * | LYSIMACHIA NUMMULARIA                                 | MONEYWORT                     | -3 |
| 5 | <i>Maianthemum racemosum</i> ( <i>Smilacina r.</i> )  | FALSE SPIKENARD               | 3  |
| 5 | <i>Maianthemum stellatum</i> ( <i>Smilacina s.</i> )  | STARRY FALSE SOLOMON-SEAL     | 0  |
| 5 | <i>Menispermum canadense</i>                          | MOONSEED                      | 0  |
| 4 | <i>Osmorhiza claytonii</i>                            | HAIRY SWEET-CICELY            | 3  |
| 6 | <i>Osmunda claytoniana</i>                            | INTERRUPTED FERN              | 0  |
| 0 | <i>Oxalis stricta</i> ( <i>O. fontana</i> )           | YELLOW WOOD-SORREL            | 3  |
| 5 | <i>Packera aurea</i> ( <i>Senecio a.</i> )            | GOLDEN RAGWORT                | -3 |
| 5 | <i>Parthenocissus quinquefolia</i>                    | VIRGINIA CREEPER              | 3  |
| 4 | <i>Persicaria virginiana</i> ( <i>Polygonum v.</i> )  | JUMPSEED                      | 0  |
| 4 | <i>Phryma leptostachya</i>                            | LOPSEED                       | 3  |

|   |   |                             |    |   |
|---|---|-----------------------------|----|---|
| 4 | <i>Physocarpus opulifolius</i>                  | NINEBARK                    | -3 |   |
| 2 | <i>Phytolacca americana</i>                     | POKEWEED                    | 3  |   |
| 5 | <i>Pilea fontana</i>                            | BOG CLEARWEED               | -3 |   |
| 5 | <i>Pilea pumila</i>                             | CLEARWEED                   | -3 |   |
| 3 | <i>Podophyllum peltatum</i>                     | MAY-APPLE                   | 3  |   |
| 4 | <i>Polygonatum biflorum</i>                     | SOLOMON-SEAL                | 3  |   |
| 1 | <i>Populus tremuloides</i>                      | QUAKING ASPEN               | 0  |   |
| * | POTENTILLA INCLINATA                            | ASHY CINQUEFOIL             | 5  |   |
| * | POTENTILLA INDICA (DUCHESNEA I.)                | INDIAN-STRAWBERRY           | 3  |   |
| 2 | <i>Potentilla simplex</i>                       | OLD-FIELD CINQUEFOIL        | 3  |   |
| 2 | <i>Prunus serotina</i>                          | WILD BLACK CHERRY           | 3  |   |
| 5 | <i>Quercus macrocarpa</i>                       | BUR OAK                     | 3  |   |
| 5 | <i>Quercus rubra</i>                            | RED OAK                     | 3  |   |
| 6 | <i>Quercus velutina</i>                         | BLACK OAK                   | 5  |   |
| 0 | <i>Ranunculus abortivus</i>                     | SMALL-FLOWERED BUTTERCUP    | 0  |   |
| 5 | <i>Ranunculus hispidus</i>                      | SWAMP BUTTERCUP             | 0  |   |
| 5 | <i>Ranunculus recurvatus</i>                    | HOOKEED CROWFOOT            | -3 |   |
| 2 | <i>Rhus typhina</i>                             | STAGHORN SUMAC              | 3  |   |
| 6 | <i>Ribes americanum</i>                         | WILD BLACK CURRANT          | -3 |   |
| * | ROBINIA PSEUDOACACIA                            | BLACK LOCUST                | 3  |   |
| * | ROSA MULTIFLORA                                 | MULTIFLORA ROSE             | 3  |   |
| 1 | <i>Rubus allegheniensis</i>                     | COMMON BLACKBERRY           | 3  |   |
| 1 | <i>Rubus occidentalis</i>                       | BLACK RASPBERRY             | 5  |   |
| 6 | <i>Rubus parviflorus</i>                        | THIMBLEBERRY                | 3  |   |
| * | RUMEX OBTUSIFOLIUS                              | BITTER DOCK                 | 0  |   |
| * | SALIX ALBA                                      | WHITE WILLOW                | -3 |   |
| 3 | <i>Sambucus canadensis</i>                      | ELDERBERRY                  | -3 |   |
| 5 | <i>Sanguinaria canadensis</i>                   | BLOODROOT                   | 3  |   |
| 2 | <i>Sanicula odorata</i> (S. gregaria)           | BLACK SNAKEROOT             | 0  |   |
| 3 | <i>Scirpus atrovirens</i>                       | BULRUSH                     | -5 |   |
| 5 | <i>Scrophularia marilandica</i>                 | LATE FIGWORT                | 3  |   |
| 5 | <i>Smilax hispida</i> (S. tamnoides)            | BRISTLY GREENBRIER          | 0  |   |
| 5 | <i>Smilax lasioneura</i>                        | CARRION-FLOWER              | 5  |   |
| * | SOLANUM DULCAMARA                               | BITTERSWEET NIGHTSHADE      | 0  |   |
| 6 | <i>Solidago caesia</i>                          | BLUESTEM GOLDENROD          | 3  |   |
| 1 | <i>Solidago canadensis</i>                      | CANADA GOLDENROD            | 3  |   |
| 6 | <i>Solidago flexicaulis</i>                     | ZIGZAG GOLDENROD            | 3  |   |
| 6 | <i>Solidago patula</i>                          | SWAMP GOLDENROD             | -5 |   |
| 9 | <i>Staphylea trifolia</i>                       | BLADDERNUT                  | 0  |   |
| 2 | <i>Symphotrichum lateriflorum</i> (Aster l.)    | CALICO ASTER                | 0  |   |
| 1 | <i>Symphotrichum pilosum</i> (Aster p.)         | HAIRY ASTER                 | 3  |   |
| 6 | <i>Symplocarpus foetidus</i>                    | SKUNK-CABBAGE               | -5 |   |
| * | TARAXACUM OFFICINALE                            | COMMON DANDELION            | 3  |   |
| 8 | <i>Thalictrum thalictroides</i> (Anemonella t.) | RUE-ANEMONE                 | 3  |   |
| 5 | <i>Tilia americana</i>                          | BASSWOOD                    | 3  |   |
| * | TORILIS JAPONICA                                | HEDGE-PARSLEY               | 3  |   |
| 2 | <i>Toxicodendron radicans</i>                   | POISON-IVY                  | 0  |   |
| 7 | <i>Trillium flexipes</i>                        | DROOPING TRILLIUM           | 0  |   |
| 5 | <i>Trillium grandiflorum</i>                    | COMMON TRILLIUM             | 3  |   |
| 8 | <i>Trillium recurvatum</i>                      | PRAIRIE TRILLIUM            | 3  | T |
| 1 | <i>Ulmus americana</i>                          | AMERICAN ELM                | -3 |   |
| 4 | <i>Verbena urticifolia</i>                      | WHITE VERVAIN               | 0  |   |
| 4 | <i>Viburnum lentago</i>                         | NANNYBERRY                  | 0  |   |
| * | VIBURNUM OPULUS                                 | EUROPEAN HIGHBUSH-CRANBERRY | -3 |   |
| * | VINCA MINOR                                     | PERIWINKLE                  | 5  |   |
| 5 | <i>Viola cucullata</i>                          | MARSH VIOLET                | -5 |   |
| 1 | <i>Viola sororia</i>                            | COMMON BLUE VIOLET          | 0  |   |
| 3 | <i>Vitis riparia</i>                            | RIVER-BANK GRAPE            | 0  |   |
| 6 | <i>Zizia aurea</i>                              | GOLDEN ALEXANDERS           | 0  |   |

Also: *Malus* sp., Cultivars of *Cornus*, *Viburnum* and *Betula*

# Nichols Arboretum

## Heathdale

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Southern Forest

Open oak forest in a sheltered east-facing ravine SE of Peony Garden, implemented as a backdrop landscape for ornamental plantings, with a more open knoll to the S

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 153   | Total Species        | 4.27 | NATIVE MEAN C |
| 121   | Total Native Species | 3.38 | W/Adventives  |
| 79.1  | % Native Species     | 1.7  | NATIVE MEAN W |
| 47.00 | NATIVE FQI           | 2.0  | W/Adventives  |
| 41.80 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME  | COMMON NAME              | W | LISTED |
|---|--|--------------------------|---|--------|
| 0 | <i>Acer negundo</i>                                      | BOX-ELDER                | 0 |        |
| 5 | <i>Acer saccharum</i>                                    | SUGAR MAPLE              | 3 |        |
| 7 | <i>Actaea pachypoda</i>                                  | DOLL'S-EYES              | 5 |        |
| 7 | <i>Actaea rubra</i>                                      | RED BANE BERRY           | 3 |        |
| 6 | <i>Adiantum pedatum</i>                                  | MAIDENHAIR FERN          | 3 |        |
| 5 | <i>Aesculus glabra</i>                                   | OHIO BUCKEYE             | 0 |        |
| 4 | <i>Ageratina altissima</i> ( <i>Eupatorium rugosum</i> ) | WHITE SNAKEROOT          | 3 |        |
| 2 | <i>Agrimonia gryposepala</i>                             | TALL AGRIMONY            | 3 |        |
| 5 | <i>Agrimonia pubescens</i>                               | SOFT AGRIMONY            | 5 |        |
| * | <i>AILANTHUS ALTISSIMA</i>                               | TREE-OF-HEAVEN           | 5 |        |
| * | <i>ALLIARIA PETIOLATA</i>                                | GARLIC MUSTARD           | 3 |        |
| 7 | <i>Allium burdickii</i> ( <i>A. tricoccum</i> )          | WILD LEEK                | 3 |        |
| 0 | <i>Ambrosia artemisiifolia</i>                           | COMMON RAGWEED           | 3 |        |
| * | <i>AMPELOPSIS BREVIPEDUNCULATA</i>                       | PORCELAIN VINE           | 5 |        |
| 5 | <i>Amphicarpaea bracteata</i>                            | HOG-PEANUT               | 0 |        |
| 5 | <i>Anemone quinquefolia</i>                              | WOOD ANEMONE             | 3 |        |
| 8 | <i>Aralia racemosa</i>                                   | SPIKENARD                | 3 |        |
| * | <i>ARCTIUM MINUS</i>                                     | COMMON BURDOCK           | 3 |        |
| 5 | <i>Arisaema triphyllum</i>                               | JACK-IN-THE-PULPIT       | 0 |        |
| 5 | <i>Asarum canadense</i>                                  | WILD-GINGER              | 5 |        |
| 4 | <i>Athyrium filix-femina</i>                             | LADY FERN                | 0 |        |
| 5 | <i>Boechera laevigata</i> ( <i>Arabis l.</i> )           | SMOOTH BANK CRESS        | 5 |        |
| 5 | <i>Cardamine diphylla</i> ( <i>Dentaria d.</i> )         | TWO-LEAVED TOOTHWORT     | 3 |        |
| * | <i>CARDAMINE IMPATIENS</i>                               | BITTER CRESS             | 3 |        |
| 3 | <i>Carex cephalophora</i>                                | SEDGE                    | 3 |        |
| 4 | <i>Carex pensylvanica</i>                                | SEDGE                    | 5 |        |
| 1 | <i>Carex retroflexa</i>                                  | SEDGE                    | 5 |        |
| 5 | <i>Carya cordiformis</i>                                 | BITTERNUT HICKORY        | 0 |        |
| 5 | <i>Carya glabra</i>                                      | PIGNUT HICKORY           | 3 |        |
| 9 | <i>Castanea dentata</i>                                  | AMERICAN CHESTNUT        | 5 | E      |
| * | <i>CELASTRUS ORBICULATUS</i>                             | ORIENTAL BITTERSWEET     | 5 |        |
| 5 | <i>Celtis occidentalis</i>                               | HACKBERRY                | 0 |        |
| 8 | <i>Cercis canadensis</i>                                 | REDBUD                   | 3 |        |
| * | <i>CHELIDONIUM MAJUS</i>                                 | CELANDINE                | 5 |        |
| 2 | <i>Circaea canadensis</i> ( <i>C. lutetiana</i> )        | ENCHANTER'S-NIGHTSHADE   | 3 |        |
| 4 | <i>Claytonia virginica</i>                               | SPRING-BEAUTY            | 3 |        |
| 8 | <i>Collinsonia canadensis</i>                            | RICHWEED                 | 0 |        |
| * | <i>CONVALLARIA MAJALIS</i>                               | LILY-OF-THE-VALLEY       | 5 |        |
| 5 | <i>Cornus alternifolia</i>                               | ALTERNATE-LEAVED DOGWOOD | 3 |        |
| 8 | <i>Cornus florida</i>                                    | FLOWERING DOGWOOD        | 3 |        |
| 2 | <i>Cryptotaenia canadensis</i>                           | HONEWORT                 | 0 |        |
| * | <i>DACTYLIS GLOMERATA</i>                                | ORCHARD GRASS            | 3 |        |
| 4 | <i>Dioscorea villosa</i> ( <i>Dioscorea villosa</i> )    | WILD YAM                 | 0 |        |

|   |   |                               |    |
|---|---|-------------------------------|----|
| 5 | <i>Doellingeria umbellata</i> (Aster u.)            | FLAT-TOPPED WHITE ASTER       | -3 |
| 5 | <i>Dryopteris carthusiana</i>                       | SPINULOSE WOODFERN            | -3 |
| 5 | <i>Dryopteris intermedia</i>                        | EVERGREEN WOODFERN            | 0  |
| 2 | <i>Echinocystis lobata</i>                          | WILD-CUCUMBER                 | -3 |
| * | ELAEAGNUS UMBELLATA                                 | AUTUMN-OLIVE                  | 3  |
| 5 | <i>Elymus hystrix</i> ( <i>Hystrix patula</i> )     | BOTTLEBRUSH GRASS             | 3  |
| 8 | <i>Elymus riparius</i>                              | RIVERBANK WILD-RYE            | -3 |
| 5 | <i>Elymus villosus</i>                              | SILKY WILD-RYE                | 3  |
| 4 | <i>Elymus virginicus</i>                            | VIRGINIA WILD-RYE             | -3 |
| 2 | <i>Erechtites hieraciifolius</i>                    | FIREWEED                      | 3  |
| 5 | <i>Erythronium americanum</i>                       | YELLOW TROUT LILY             | 5  |
| * | EUONYMUS FORTUNEI                                   | WINTERCREEPER                 | 5  |
| 5 | <i>Eutrochium purpureum</i> ( <i>Eupatorium</i> p.) | GREEN-STEMMED JOE-PYE-WEED    | 0  |
| 5 | <i>Fraxinus americana</i>                           | WHITE ASH                     | 3  |
| 6 | <i>Fraxinus nigra</i>                               | BLACK ASH                     | -3 |
| 0 | <i>Galium aparine</i>                               | ANNUAL BEDSTRAW               | 3  |
| 4 | <i>Galium triflorum</i>                             | FRAGRANT BEDSTRAW             | 3  |
| 4 | <i>Geranium maculatum</i>                           | WILD GERANIUM                 | 3  |
| 1 | <i>Geum canadense</i>                               | WHITE AVENS                   | 0  |
| * | GEUM URBANUM  | AVENS                         | 5  |
| 4 | <i>Glyceria striata</i>                             | FOWL MANNA GRASS              | -5 |
| 1 | <i>Hackelia virginiana</i>                          | BEGGAR'S LICE                 | 3  |
| 5 | <i>Hamamelis virginiana</i>                         | WITCH-HAZEL                   | 3  |
| 3 | <i>Heracleum maximum</i>                            | COW-PARSNIP                   | -3 |
| * | HESPERIS MATRONALIS                                 | DAME'S ROCKET                 | 3  |
| 5 | <i>Hylodesmum glutinosum</i> ( <i>Desmodium</i> g.) | CLUSTERED-LEAVED TICK-TREFOIL | 5  |
| 5 | <i>Hypericum prolificum</i>                         | SHRUBBY ST. JOHN'S-WORT       | 3  |
| 6 | <i>Impatiens pallida</i>                            | PALE TOUCH-ME-NOT             | -3 |
| 5 | <i>Juglans nigra</i>                                | BLACK WALNUT                  | 3  |
| * | KALOPANAX SEPTEMLOBUS                               | CASTOR ARALIA                 | 5  |
| * | LAPSANA COMMUNIS                                    | NIPPLEWORT                    | 3  |
| * | LEONURUS CARDIACA                                   | MOTHERWORT                    | 5  |
| * | LIGUSTRUM VULGARE                                   | COMMON PRIVET                 | 3  |
| 7 | <i>Lindera benzoin</i>                              | SPICEBUSH                     | -3 |
| 9 | <i>Liriodendron tulipifera</i>                      | TULIP TREE                    | 3  |
| 5 | <i>Lonicera dioica</i>                              | RED HONEYSUCKLE               | 3  |
| * | LONICERA MORROWII                                   | MORROW HONEYSUCKLE            | 3  |
| 4 | <i>Maianthemum canadense</i>                        | CANADA MAYFLOWER              | 3  |
| 5 | <i>Maianthemum racemosum</i> ( <i>Smilacina</i> r.) | FALSE SPIKENARD               | 3  |
| 9 | <i>Monarda didyma</i>                               | OSWEGO-TEA                    | 3  |
| 2 | <i>Monarda fistulosa</i>                            | WILD-BERGAMOT                 | 3  |
| * | MORUS ALBA  | WHITE MULBERRY                | 3  |
| 0 | <i>Muhlenbergia schreberi</i>                       | NIMBLEWILL                    | 0  |
| 4 | <i>Osmorhiza claytonii</i>                          | HAIRY SWEET-CICELY            | 3  |
| 6 | <i>Osmunda claytoniana</i>                          | INTERRUPTED FERN              | 0  |
| 5 | <i>Osmunda regalis</i>                              | ROYAL FERN                    | -5 |
| 0 | <i>Oxalis stricta</i> ( <i>O. fontana</i> )         | YELLOW WOOD-SORREL            | 3  |
| * | PACHYSANDRA TERMINALIS                              | JAPANESE SPURGE               | 0  |
| 5 | <i>Parthenocissus quinquefolia</i>                  | VIRGINIA CREEPER              | 3  |
| 4 | <i>Persicaria virginiana</i> ( <i>Polygonum</i> v.) | JUMPSEED                      | 0  |
| 4 | <i>Phryma leptostachya</i>                          | LOPSEED                       | 3  |
| 2 | <i>Phytolacca americana</i>                         | POKEWEED                      | 3  |
| 5 | <i>Pilea pumila</i>                                 | CLEARWEED                     | -3 |
| 3 | <i>Pinus strobus</i>                                | WHITE PINE                    | 3  |
| 7 | <i>Platanus occidentalis</i>                        | SYCAMORE                      | -3 |
| 3 | <i>Podophyllum peltatum</i>                         | MAY-APPLE                     | 3  |
| 6 | <i>Polystichum acrostichoides</i>                   | CHRISTMAS FERN                | 3  |
| 1 | <i>Populus deltoides</i>                            | COTTONWOOD                    | 0  |
| * | POTENTILLA INDICA ( <i>DUCHESNEA</i> l.)            | INDIAN-STRAWBERRY             | 3  |
| 2 | <i>Potentilla simplex</i>                           | OLD-FIELD CINQUEFOIL          | 3  |

|   |   |                             |    |
|---|---|-----------------------------|----|
| 5 | <i>Prenanthes altissima</i>                           | TALL WHITE LETTUCE          | 3  |
| 0 | <i>Prunella vulgaris</i>                              | SELF-HEAL                   | 0  |
| 2 | <i>Prunus serotina</i>                                | WILD BLACK CHERRY           | 3  |
| 5 | <i>Quercus alba</i>                                   | WHITE OAK                   | 3  |
| 5 | <i>Quercus rubra</i>                                  | RED OAK                     | 3  |
| 6 | <i>Quercus velutina</i>                               | BLACK OAK                   | 5  |
| 0 | <i>Ranunculus abortivus</i>                           | SMALL-FLOWERED BUTTERCUP    | 0  |
| * | RHAMNUS CATHARTICA                                    | COMMON BUCKTHORN            | 0  |
| 2 | <i>Rhus glabra</i>                                    | SMOOTH SUMAC                | 5  |
| * | ROBINIA PSEUDOACACIA                                  | BLACK LOCUST                | 3  |
| 4 | <i>Rosa carolina</i>                                  | PASTURE ROSE                | 3  |
| 1 | <i>Rubus allegheniensis</i>                           | COMMON BLACKBERRY           | 3  |
| 1 | <i>Rubus occidentalis</i>                             | BLACK RASPBERRY             | 5  |
| 6 | <i>Rubus parviflorus</i>                              | THIMBLEBERRY                | 3  |
| 5 | <i>Rudbeckia triloba</i>                              | THREE-LOBED CONEFLOWER      | 3  |
| * | RUMEX CRISPUS   | CURLY DOCK                  | 0  |
| * | RUMEX OBTUSIFOLIUS                                    | BITTER DOCK                 | 0  |
| 3 | <i>Sambucus canadensis</i>                            | ELDERBERRY                  | -3 |
| 5 | <i>Sanguinaria canadensis</i>                         | BLOODROOT                   | 3  |
| 5 | <i>Sassafras albidum</i>                              | SASSAFRAS                   | 3  |
| 5 | <i>Scrophularia marilandica</i>                       | LATE FIGWORT                | 3  |
| 5 | <i>Smilax hispida</i> (S. tamnoides)                  | BRISTLY GREENBRIER          | 0  |
| 6 | <i>Solidago caesia</i>                                | BLUESTEM GOLDENROD          | 3  |
| 1 | <i>Solidago canadensis</i>                            | CANADA GOLDENROD            | 3  |
| 6 | <i>Solidago flexicaulis</i>                           | ZIGZAG GOLDENROD            | 3  |
| * | STELLARIA MEDIA                                       | COMMON CHICKWEED            | 3  |
| 4 | <i>Symphotrichum cordifolium</i> (Aster c.)           | HEART-LEAVED ASTER          | 5  |
| 5 | <i>Symphotrichum laeve</i> (Aster l.)                 | SMOOTH ASTER                | 3  |
| 2 | <i>Symphotrichum lanceolatum</i> (Aster l.)           | PANICLED ASTER              | -3 |
| 2 | <i>Symphotrichum lateriflorum</i> (Aster l.)          | CALICO ASTER                | 0  |
| 2 | <i>Symphotrichum urophyllum</i> (Aster sagittifolius) | ARROW-LEAVED ASTER          | 5  |
| 6 | <i>Symplocarpus foetidus</i>                          | SKUNK-CABBAGE               | -5 |
| * | TARAXACUM OFFICINALE                                  | COMMON DANDELION            | 3  |
| 3 | <i>Thalictrum dasycarpum</i>                          | PURPLE MEADOW-RUE           | -3 |
| 6 | <i>Thalictrum dioicum</i>                             | EARLY MEADOW-RUE            | 3  |
| 5 | <i>Tilia americana</i>                                | BASSWOOD                    | 3  |
| * | TORILIS JAPONICA                                      | HEDGE-PARSLEY               | 3  |
| 2 | <i>Toxicodendron radicans</i>                         | POISON-IVY                  | 0  |
| * | TRIFOLIUM AUREUM                                      | HOP CLOVER                  | 5  |
| 5 | <i>Trillium grandiflorum</i>                          | COMMON TRILLIUM             | 3  |
| 5 | <i>Triosteum aurantiacum</i>                          | HORSE-GENTIAN               | 5  |
| 5 | <i>Tsuga canadensis</i>                               | HEMLOCK                     | 3  |
| 2 | <i>Ulmus rubra</i>                                    | SLIPPERY ELM                | 0  |
| 8 | <i>Veronicastrum virginicum</i>                       | CULVER'S-ROOT               | 0  |
| 6 | <i>Viburnum acerifolium</i>                           | MAPLE-LEAVED VIBURNUM       | 5  |
| * | VIBURNUM LANTANA                                      | WAYFARING TREE              | 5  |
| * | VIBURNUM OPULUS                                       | EUROPEAN Highbush-Cranberry | -3 |
| 2 | <i>Viola affinis</i>                                  | LE CONTE'S VIOLET           | -3 |
| * | VIOLA ODORATA   | ENGLISH or SWEET VIOLET     | 5  |
| 3 | <i>Vitis riparia</i>                                  | RIVER-BANK GRAPE            | 0  |

Also: *Prenanthes* sp., *Hydrangea* sp. & *Hydrangea quercifolia*, *Magnolia macrophylla*, *Rhododendron*, *Taxus*, *Leucothoe*, *Cladrastris kentuckya*, *Narcissus* etc.

# Nichols Arboretum

## Magnolia Glade

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Savanna

Small open magnolia planting in center of property between lawns and East Oak Woodlands, serving as a refuge for an diverse mix of savanna species

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 82    | Total Species        | 4.05 | NATIVE MEAN C |
| 65    | Total Native Species | 3.21 | W/Adventives  |
| 79.3  | % Native Species     | 2.8  | NATIVE MEAN W |
| 32.62 | NATIVE FQI           | 3.0  | W/Adventives  |
| 29.04 | W/Adventives         |      |               |

| C  | SCIENTIFIC NAME  | COMMON NAME                   | W  | LISTED |
|----|--|-------------------------------|----|--------|
| 1  | <i>Achillea millefolium</i>                                | YARROW                        | 3  |        |
| 4  | <i>Ageratina altissima</i> ( <i>Eupatorium rugosum</i> )   | WHITE SNAKEROOT               | 3  |        |
| 5  | <i>Amphicarpaea bracteata</i>                              | HOG-PEANUT                    | 0  |        |
| 5  | <i>Anemone quinquefolia</i>                                | WOOD ANEMONE                  | 3  |        |
| 3  | <i>Antennaria neglecta</i>                                 | CAT'S FOOT                    | 5  |        |
| 2  | <i>Antennaria parlinii</i>                                 | SMOOTH PUSSYTOES              | 5  |        |
| 1  | <i>Asclepias syriaca</i>                                   | COMMON MILKWEED               | 5  |        |
| 8  | <i>Carex laxiculmis</i>                                    | SEDGE                         | 3  |        |
| 4  | <i>Carex pensylvanica</i>                                  | SEDGE                         | 5  |        |
| 1  | <i>Carex retroflexa</i>                                    | SEDGE                         | 5  |        |
| 2  | <i>Carex rosea</i> ( <i>C. convoluta</i> )                 | CURLY-STYLED WOOD SEDGE       | 5  |        |
| 5  | <i>Carya glabra</i>  | PIGNET HICKORY                | 3  |        |
| 5  | <i>Carya ovata</i>   | SHAGBARK HICKORY              | 3  |        |
| *  | CELASTRUS ORBICULATUS                                      | ORIENTAL BITTERSWEET          | 5  |        |
| 2  | <i>Circaea canadensis</i> ( <i>C. lutetiana</i> )          | ENCHANTER'S-NIGHTSHADE        | 3  |        |
| *  | CONVALLARIA MAJALIS  | LILY-OF-THE-VALLEY            | 5  |        |
| *  | DACTYLIS GLOMERATA   | ORCHARD GRASS                 | 3  |        |
| 4  | <i>Danthonia spicata</i>                                   | POVERTY GRASS; OATGRASS       | 5  |        |
| *  | DAUCUS CAROTA  | QUEEN-ANNE'S-LACE             | 5  |        |
| *  | DIANTHUS ARMERIA   | DEPTFORD PINK                 | 5  |        |
| 3  | <i>Dichanthelium implicatum</i> ( <i>Panicum i.</i> )      | PANIC GRASS                   | 0  |        |
| 0  | <i>Erigeron annuus</i>                                     | DAISY FLEABANE                | 3  |        |
| 5  | <i>Erigeron pulchellus</i>                                 | ROBIN'S-PLANTAIN              | 3  |        |
| 2  | <i>Fragaria virginiana</i>                                 | WILD STRAWBERRY               | 3  |        |
| 5  | <i>Fraxinus americana</i>                                  | WHITE ASH                     | 3  |        |
| 4  | <i>Galium circaezans</i>                                   | WHITE WILD LICORICE           | 3  |        |
| 6  | <i>Galium pilosum</i>                                      | HAIRY BEDSTRAW                | 5  |        |
| 4  | <i>Geranium maculatum</i>                                  | WILD GERANIUM                 | 3  |        |
| 1  | <i>Geum canadense</i>                                      | WHITE AVENS                   | 0  |        |
| 8  | <i>Heuchera americana</i>                                  | ALUM ROOT                     | 3  |        |
| 5  | <i>Hylodesmum glutinosum</i> ( <i>Desmodium g.</i> )       | CLUSTERED-LEAVED TICK-TREFOIL | 5  |        |
| 4  | <i>Hypericum punctatum</i>                                 | SPOTTED ST. JOHN'S-WORT       | 0  |        |
| 10 | <i>Hypoxis hirsuta</i>                                     | STAR-GRASS                    | 0  |        |
| 1  | <i>Juncus dudleyi</i>                                      | DUDLEY'S RUSH                 | -3 |        |
| 5  | <i>Lechea mucronata</i> ( <i>L. villosa</i> )              | HAIRY PINWEED                 | 5  |        |
| 5  | <i>Lespedeza capitata</i>                                  | ROUND-HEADED BUSH-CLOVER      | 3  |        |
| 7  | <i>Lespedeza hirta</i>                                     | HAIRY BUSH-CLOVER             | 5  |        |
| *  | LEUCANTHEMUM VULGARE ( <i>CHRYSANTHEMUM LEUCANTHEMUM</i> ) | OX-EYE DAISY                  | 5  |        |
| *  | LIGUSTRUM OBTUSIFOLIUM                                     | BORDER PRIVET                 | 3  |        |
| *  | LIGUSTRUM VULGARE  | COMMON PRIVET                 | 3  |        |
| 9  | <i>Liriodendron tulipifera</i>                             | TULIP TREE                    | 3  |        |
| 4  | <i>Lobelia spicata</i>                                     | PALE SPIKED LOBELIA           | 0  |        |

|    |   |                            |    |
|----|---|----------------------------|----|
| 5  | <i>Luzula multiflora</i>                                | COMMON WOOD RUSH           | 3  |
| 5  | <i>Maianthemum racemosum</i> ( <i>Smilacina</i> r.)     | FALSE SPIKENARD            | 3  |
| 0  | <i>Oxalis stricta</i> ( <i>O. fontana</i> )             | YELLOW WOOD-SORREL         | 3  |
| 5  | <i>Parthenocissus quinquefolia</i>                      | VIRGINIA CREEPER           | 3  |
| *  | PHLEUM PRATENSE   | TIMOTHY                    | 3  |
| 4  | <i>Phryma leptostachya</i>                              | LOPSEED                    | 3  |
| *  | PLANTAGO LANCEOLATA                                     | ENGLISH PLANTAIN           | 3  |
| *  | PLANTAGO MAJOR  | COMMON PLANTAIN            | 3  |
| *  | POA COMPRESSA   | CANADA BLUEGRASS           | 3  |
| *  | POA PRATENSIS   | KENTUCKY BLUEGRASS         | 3  |
| 5  | <i>Polygala verticillata</i>                            | WHORLED MILKWORT           | 5  |
| 2  | <i>Potentilla simplex</i>                               | OLD-FIELD CINQUEFOIL       | 3  |
| 5  | <i>Quercus alba</i>                                     | WHITE OAK                  | 3  |
| 6  | <i>Quercus velutina</i>                                 | BLACK OAK                  | 5  |
| 10 | <i>Ranunculus fascicularis</i>                          | EARLY BUTTERCUP            | 3  |
| *  | ROSA MULTIFLORA   | MULTIFLORA ROSE            | 3  |
| 1  | <i>Rubus allegheniensis</i>                             | COMMON BLACKBERRY          | 3  |
| 1  | <i>Rudbeckia hirta</i>                                  | BLACK-EYED SUSAN           | 3  |
| 5  | <i>Sanguinaria canadensis</i>                           | BLOODROOT                  | 3  |
| 2  | <i>Sanicula odorata</i> ( <i>S. gregaria</i> )          | BLACK SNAKEROOT            | 0  |
| 5  | <i>Schizachyrium scoparium</i> ( <i>Andropogon</i> s.)  | LITTLE BLUESTEM            | 3  |
| 7  | <i>Sisyrinchium albidum</i> ( <i>S. hastile</i> )       | COMMON BLUE-EYED-GRASS     | 3  |
| 1  | <i>Solidago altissima</i>                               | TALL GOLDENROD             | 3  |
| 6  | <i>Solidago caesia</i>                                  | BLUESTEM GOLDENROD         | 3  |
| 1  | <i>Solidago canadensis</i>                              | CANADA GOLDENROD           | 3  |
| 2  | <i>Solidago nemoralis</i>                               | OLD-FIELD GOLDENROD        | 5  |
| 5  | <i>Solidago speciosa</i>                                | SHOWY GOLDENROD            | 5  |
| 6  | <i>Sorghastrum nutans</i>                               | INDIAN GRASS               | 3  |
| 5  | <i>Symphyotrichum laeve</i> ( <i>Aster</i> l.)          | SMOOTH ASTER               | 3  |
| 2  | <i>Symphyotrichum lateriflorum</i> ( <i>Aster</i> l.)   | CALICO ASTER               | 0  |
| 3  | <i>Symphyotrichum novae-angliae</i> ( <i>Aster</i> n.)  | NEW ENGLAND ASTER          | -3 |
| 4  | <i>Symphyotrichum oolentangiense</i> ( <i>Aster</i> o.) | PRAIRIE HEART-LEAVED ASTER | 5  |
| 1  | <i>Symphyotrichum pilosum</i> ( <i>Aster</i> p.)        | HAIRY ASTER                | 3  |
| *  | TARAXACUM OFFICINALE                                    | COMMON DANDELION           | 3  |
| *  | THLASPI ARVENSE   | PENNY CRESS                | 5  |
| 2  | <i>Toxicodendron radicans</i>                           | POISON-IVY                 | 0  |
| *  | VIOLA ODORATA   | ENGLISH or SWEET VIOLET    | 5  |
| 5  | <i>Viola palmata</i>                                    | WOOD VIOLET                | 3  |
| 6  | <i>Vitis aestivalis</i>                                 | SUMMER GRAPE               | 3  |
| 6  | <i>Zizia aurea</i>                                      | GOLDEN ALEXANDERS          | 0  |

Also: Magnolia, Cotoneaster

# Nichols Arboretum

## Maple Glen

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Southern Forest

Disturbed closed canopy forest dominated by *Acer saccharum* with a few native woodland species persisting; some plantings near the caretaker's cottage

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 37    | Total Species        | 4.24 | NATIVE MEAN C |
| 29    | Total Native Species | 3.32 | W/Adventives  |
| 78.4  | % Native Species     | 2.6  | NATIVE MEAN W |
| 22.84 | NATIVE FQI           | 2.8  | W/Adventives  |
| 20.22 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                                       | COMMON NAME                | W | LISTED |
|---|---|----------------------------|---|--------|
| * | ACER PLATANOIDES                                      | NORWAY MAPLE               | 5 |        |
| 5 | <i>Acer saccharum</i>                                 | SUGAR MAPLE                | 3 |        |
| 7 | <i>Actaea pachypoda</i>                               | DOLL'S-EYES                | 5 |        |
| 5 | <i>Aesculus glabra</i>                                | OHIO BUCKEYE               | 0 |        |
| 5 | <i>Aralia nudicaulis</i>                              | WILD SARSAPARILLA          | 3 |        |
| * | CARDAMINE IMPATIENS                                   | BITTER CRESS               | 3 |        |
| 4 | <i>Carex pensylvanica</i>                             | SEDGE                      | 5 |        |
| 5 | <i>Carya glabra</i>                                   | PIGNOT HICKORY             | 3 |        |
| * | CELASTRUS ORBICULATUS                                 | ORIENTAL BITTERSWEET       | 5 |        |
| * | CHELIDONIUM MAJUS                                     | CELANDINE                  | 5 |        |
| 2 | <i>Circaea canadensis</i> (C. lutetiana)              | ENCHANTER'S-NIGHTSHADE     | 3 |        |
| 8 | <i>Collinsonia canadensis</i>                         | RICHWEED                   | 0 |        |
| 2 | <i>Cryptotaenia canadensis</i>                        | HONEWORT                   | 0 |        |
| 4 | <i>Dioscorea villosa</i> ( <i>Dioscorea villosa</i> ) | WILD YAM                   | 0 |        |
| * | EUONYMUS ALATA  | WINGED EUONYMUS            | 5 |        |
| 5 | <i>Fraxinus americana</i>                             | WHITE ASH                  | 3 |        |
| 1 | <i>Geum canadense</i>                                 | WHITE AVENS                | 0 |        |
| 1 | <i>Hackelia virginiana</i>                            | BEGGAR'S LICE              | 3 |        |
| 5 | <i>Hamamelis virginiana</i>                           | WITCH-HAZEL                | 3 |        |
| * | HESPERIS MATRONALIS                                   | DAME'S ROCKET              | 3 |        |
| 5 | <i>Juglans nigra</i>                                  | BLACK WALNUT               | 3 |        |
| 3 | <i>Pinus strobus</i>                                  | WHITE PINE                 | 3 |        |
| * | PINUS SYLVESTRIS                                      | SCOTCH PINE                | 3 |        |
| 3 | <i>Podophyllum peltatum</i>                           | MAY-APPLE                  | 3 |        |
| 2 | <i>Prunus serotina</i>                                | WILD BLACK CHERRY          | 3 |        |
| 4 | <i>Ptelea trifoliata</i>                              | HOP-TREE                   | 3 |        |
| 5 | <i>Quercus alba</i>                                   | WHITE OAK                  | 3 |        |
| 4 | <i>Quercus ellipsoidalis</i> (Q. coccinea)            | HILL'S OAK                 | 5 |        |
| 5 | <i>Quercus rubra</i>                                  | RED OAK                    | 3 |        |
| 6 | <i>Quercus velutina</i>                               | BLACK OAK                  | 5 |        |
| * | RHAMNUS CATHARTICA                                    | COMMON BUCKTHORN           | 0 |        |
| 4 | <i>Ribes cynosbati</i>                                | PRICKLY or WILD GOOSEBERRY | 3 |        |
| 5 | <i>Smilax lasioneura</i>                              | CARRION-FLOWER             | 5 |        |
| 6 | <i>Solidago caesia</i>                                | BLUESTEM GOLDENROD         | 3 |        |
| 5 | <i>Tilia americana</i>                                | BASSWOOD                   | 3 |        |
| 4 | <i>Verbena urticifolia</i>                            | WHITE VERVAIN              | 0 |        |
| 3 | <i>Vitis riparia</i>                                  | RIVER-BANK GRAPE           | 0 |        |

Also: *Leucothoe*, *Lonicera* spp., *Taxus* trees



# Nichols Arboretum

## North Floodplain Prairie Remnant

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Prairie

North of Huron River, openings of prairie grasses and forbs surrounded by invasive shrubs

#### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 58    | Total Species        | 3.16 | NATIVE MEAN C |
| 37    | Total Native Species | 2.02 | W/Adventives  |
| 63.8  | % Native Species     | 2.5  | NATIVE MEAN W |
| 19.23 | NATIVE FQI           | 2.9  | W/Adventives  |
| 15.36 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                                      | COMMON NAME              | W  | LISTED |
|---|--|--------------------------|----|--------|
| 0 | <i>Acer negundo</i>                                  | BOX-ELDER                | 0  |        |
| 1 | <i>Achillea millefolium</i>                          | YARROW                   | 3  |        |
| * | <i>AILANTHUS ALTISSIMA</i>                           | TREE-OF-HEAVEN           | 5  |        |
| 5 | <i>Andropogon gerardii</i>                           | BIG BLUESTEM             | 0  |        |
| 3 | <i>Anemone virginiana</i>                            | THIMBLEWEED              | 3  |        |
| 2 | <i>Antennaria parlinii</i>                           | SMOOTH PUSSYTOES         | 5  |        |
| 5 | <i>Arisaema triphyllum</i>                           | JACK-IN-THE-PULPIT       | 0  |        |
| 2 | <i>Asplenium platyneuron</i>                         | EBONY SPLEENWORT         | 3  |        |
| * | <i>BARBAREA VULGARIS</i>                             | YELLOW ROCKET            | 0  |        |
| 1 | <i>Carex blanda</i>                                  | SEDGE                    | 0  |        |
| 3 | <i>Carex cephalophora</i>                            | SEDGE                    | 3  |        |
| 5 | <i>Carya ovata</i>                                   | SHAGBARK HICKORY         | 3  |        |
| * | <i>CELASTRUS ORBICULATUS</i>                         | ORIENTAL BITTERSWEET     | 5  |        |
| * | <i>CENTAUREA STOEBE (C. MACULOSA)</i>                | SPOTTED KNAPWEED         | 5  |        |
| 2 | <i>Circaea canadensis (C. lutetiana)</i>             | ENCHANTER'S-NIGHTSHADE   | 3  |        |
| 0 | <i>Conyza canadensis</i>                             | HORSEWEED                | 3  |        |
| * | <i>DAUCUS CAROTA</i>                                 | QUEEN-ANNE'S-LACE        | 5  |        |
| * | <i>DIANTHUS ARMERIA</i>                              | DEPTFORD PINK            | 5  |        |
| 8 | <i>Dichanthelium praecocius (Panicum p.)</i>         | PANIC GRASS              | 5  |        |
| * | <i>ELAEAGNUS UMBELLATA</i>                           | AUTUMN-OLIVE             | 3  |        |
| 0 | <i>Erigeron annuus</i>                               | DAISY FLEABANE           | 3  |        |
| 4 | <i>Euphorbia corollata</i>                           | FLOWERING SPURGE         | 5  |        |
| 5 | <i>Fraxinus americana</i>                            | WHITE ASH                | 3  |        |
| 1 | <i>Geum canadense</i>                                | WHITE AVENS              | 0  |        |
| * | <i>HESPERIS MATRONALIS</i>                           | DAME'S ROCKET            | 3  |        |
| 5 | <i>Juglans nigra</i>                                 | BLACK WALNUT             | 3  |        |
| 1 | <i>Juncus dudleyi</i>                                | DUDLEY'S RUSH            | -3 |        |
| 3 | <i>Juniperus virginiana</i>                          | RED-CEDAR                | 3  |        |
| * | <i>LINARIA VULGARIS</i>                              | BUTTER-AND-EGGS          | 5  |        |
| * | <i>LONICERA xBELLA</i>                               | HYBRID HONEYSUCKLE       | 3  |        |
| * | <i>LONICERA MAACKII</i>                              | AMUR HONEYSUCKLE         | 5  |        |
| * | <i>MEDICAGO LUPULINA</i>                             | BLACK MEDICK             | 3  |        |
| * | <i>MELILOTUS ALBUS</i>                               | WHITE SWEET-CLOVER       | 3  |        |
| 2 | <i>Monarda fistulosa</i>                             | WILD-BERGAMOT            | 3  |        |
| 5 | <i>Parthenocissus quinquefolia</i>                   | VIRGINIA CREEPER         | 3  |        |
| 4 | <i>Phryma leptostachya</i>                           | LOPSEED                  | 3  |        |
| * | <i>PINUS SYLVESTRIS</i>                              | SCOTCH PINE              | 3  |        |
| * | <i>POA PRATENSIS</i>                                 | KENTUCKY BLUEGRASS       | 3  |        |
| * | <i>POTENTILLA RECTA</i>                              | ROUGH-FRUITED CINQUEFOIL | 5  |        |
| 2 | <i>Prunus serotina</i>                               | WILD BLACK CHERRY        | 3  |        |
| 2 | <i>Pseudognaphalium obtusifolium (Gnaphalium o.)</i> | OLD-FIELD BALSAM         | 5  |        |
| 4 | <i>Ptelea trifoliata</i>                             | HOP-TREE                 | 3  |        |
| 8 | <i>Quercus bicolor</i>                               | SWAMP WHITE OAK          | -3 |        |
| 5 | <i>Quercus rubra</i>                                 | RED OAK                  | 3  |        |

|   |   |                  |   |
|---|---|------------------|---|
| * | RHAMNUS CATHARTICA                      | COMMON BUCKTHORN | 0 |
| 2 | Rhus glabra                             | SMOOTH SUMAC     | 5 |
| 1 | Rubus occidentalis                      | BLACK RASPBERRY  | 5 |
| * | RUMEX CRISPUS                           | CURLY DOCK       | 0 |
| 5 | Schizachyrium scoparium (Andropogon s.) | LITTLE BLUESTEM  | 3 |
| 5 | Solidago rigida                         | STIFF GOLDENROD  | 3 |
| 5 | Solidago speciosa                       | SHOWY GOLDENROD  | 5 |
| 1 | Symphotrichum pilosum (Aster p.)        | HAIRY ASTER      | 3 |
| 2 | Toxicodendron radicans                  | POISON-IVY       | 0 |
| * | TRAGOPOGON DUBIUS                       | GOAT'S BEARD     | 5 |
| 5 | Triosteum aurantiacum                   | HORSE-GENTIAN    | 5 |
| * | VERBASCUM THAPSUS                       | COMMON MULLEIN   | 5 |
| 3 | Vitis riparia                           | RIVER-BANK GRAPE | 0 |
| * | YUCCA FLACCIDA (Y. FILAMENTOSA)         | YUCCA            | 5 |

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Also: Prunus sp.

# Nichols Arboretum

## North Floodplain Swale

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Southern Wet Meadow

North of the Huron River, an inundated old river channel running parallel to Huron River forms a narrow wet meadow with a variety of native species locally dominant; adjacent floodplain with many invasive species.

### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 110   | Total Species        | 3.66 | NATIVE MEAN C |
| 91    | Total Native Species | 3.03 | W/Adventives  |
| 82.7  | % Native Species     | -3.1 | NATIVE MEAN W |
| 34.91 | NATIVE FQI           | -2.5 | W/Adventives  |
| 31.75 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                                  | COMMON NAME             | W  | LISTED |
|---|--|-------------------------|----|--------|
| 0 | <i>Acer negundo</i>                              | BOX-ELDER               | 0  |        |
| 2 | <i>Acer saccharinum</i>                          | SILVER MAPLE            | -3 |        |
| 1 | <i>Alisma subcordatum</i> (A. plantago-aquatica) | SOUTHERN WATER-PLANTAIN | -5 |        |
| 1 | <i>Alisma triviale</i> (A. plantago-aquatica)    | NORTHERN WATER-PLANTAIN | -5 |        |
| 3 | <i>Apios americana</i>                           | GROUNDNUT               | -3 |        |
| 8 | <i>Arisaema dracontium</i>                       | GREEN DRAGON            | -3 |        |
| 6 | <i>Asclepias incarnata</i>                       | SWAMP MILKWEED          | -5 |        |
| * | BARBAREA VULGARIS                                | YELLOW ROCKET           | 0  |        |
| 1 | <i>Bidens frondosa</i>                           | COMMON BEGGAR-TICKS     | -3 |        |
| 5 | <i>Boehmeria cylindrica</i>                      | FALSE NETTLE            | -5 |        |
| 3 | <i>Calamagrostis canadensis</i>                  | BLUE-JOINT              | -5 |        |
| 6 | <i>Caltha palustris</i>                          | MARSH-MARIGOLD          | -5 |        |
| 2 | <i>Calystegia sepium</i>                         | HEDGE BINDWEED          | 0  |        |
| * | CARDAMINE IMPATIENS                              | BITTER CRESS            | 3  |        |
| 4 | <i>Carex bebbii</i>                              | SEDGE                   | -5 |        |
| 2 | <i>Carex granularis</i>                          | SEDGE                   | -3 |        |
| 6 | <i>Carex lacustris</i>                           | SEDGE                   | -5 |        |
| 4 | <i>Carex lupulina</i>                            | SEDGE                   | -5 |        |
| 5 | <i>Carex normalis</i>                            | SEDGE                   | -3 |        |
| 2 | <i>Carex pellita</i> (C. lanuginosa)             | SEDGE                   | -5 |        |
| 1 | <i>Carex stipata</i>                             | SEDGE                   | -5 |        |
| 4 | <i>Carex stricta</i>                             | SEDGE                   | -5 |        |
| 1 | <i>Carex vulpinoidea</i>                         | SEDGE                   | -5 |        |
| * | CATALPA SPECIOSA                                 | NORTHERN CATALPA        | 3  |        |
| 7 | <i>Cephalanthus occidentalis</i>                 | BUTTONBUSH              | -5 |        |
| 7 | <i>Chelone glabra</i>                            | TURTLEHEAD              | -5 |        |
| 4 | <i>Cicuta maculata</i>                           | WATER HEMLOCK           | -5 |        |
| 7 | <i>Cinna arundinacea</i>                         | WOOD REEDGRASS          | -3 |        |
| 4 | <i>Clematis virginiana</i>                       | VIRGIN'S BOWER          | 0  |        |
| 2 | <i>Cornus amomum</i>                             | SILKY DOGWOOD           | -3 |        |
| 3 | <i>Cyperus odoratus</i>                          | UMBRELLA SEDGE          | -5 |        |
| * | ECHINOCHLOA CRUSGALLI                            | BARNYARD GRASS          | 0  |        |
| 3 | <i>Epilobium coloratum</i>                       | CINNAMON WILLOW-HERB    | -5 |        |
| 0 | <i>Equisetum arvense</i>                         | COMMON HORSETAIL        | 0  |        |
| 4 | <i>Eupatorium perfoliatum</i>                    | BONESET                 | -3 |        |
| 4 | <i>Eutrochium maculatum</i> (Eupatorium m.)      | JOE-PYE-WEED            | -5 |        |
| * | FRANGULA ALNUS (RHAMNUS FRANGULA)                | GLOSSY BUCKTHORN        | 0  |        |
| 5 | <i>Fraxinus americana</i>                        | WHITE ASH               | 3  |        |
| 6 | <i>Fraxinus nigra</i>                            | BLACK ASH               | -3 |        |
| 2 | <i>Fraxinus pennsylvanica</i>                    | RED ASH                 | -3 |        |
| 5 | <i>Galium asprellum</i>                          | ROUGH BEDSTRAW          | -5 |        |
| 5 | <i>Galium obtusum</i>                            | WILD MADDER             | -3 |        |
| 3 | <i>Geum aleppicum</i>                            | YELLOW AVENS            | 0  |        |

|   |  |                           |    |
|---|--|---------------------------|----|
| 1 | <i>Geum canadense</i>  | WHITE AVENS               | 0  |
| * | GLECHOMA HEDERACEA   | GROUND-IVY                | 3  |
| 4 | <i>Glyceria striata</i>  | FOWL MANNA GRASS          | -5 |
| 2 | <i>Impatiens capensis</i>  | SPOTTED TOUCH-ME-NOT      | -3 |
| 5 | <i>Iris virginica</i>  | SOUTHERN BLUE FLAG        | -5 |
| 1 | <i>Juncus dudleyi</i>  | DUDLEY'S RUSH             | -3 |
| 3 | <i>Juncus effusus</i>  | SOFT-STEMMED RUSH         | -5 |
| 3 | <i>Leersia oryzoides</i>   | CUT GRASS                 | -5 |
| 5 | <i>Leersia virginica</i>   | WHITE GRASS               | -3 |
| * | LIGUSTRUM OBTUSIFOLIUM   | BORDER PRIVET             | 3  |
| * | LIGUSTRUM VULGARE  | COMMON PRIVET             | 3  |
| 4 | <i>Ludwigia palustris</i>  | WATER-PURSLANE            | -5 |
| 2 | <i>Lycopus americanus</i>  | COMMON WATER HOREHOUND    | -5 |
| 2 | <i>Lycopus uniflorus</i>   | NORTHERN BUGLE WEED       | -5 |
| 4 | <i>Lysimachia ciliata</i>  | FRINGED LOOSESTRIFE       | -3 |
| * | LYSIMACHIA NUMMULARIA  | MONEYWORT                 | -3 |
| * | LYTHRUM SALICARIA  | PURPLE LOOSESTRIFE        | -5 |
| 5 | <i>Maianthemum stellatum</i> ( <i>Smilacina</i> s.)              | STARRY FALSE SOLOMON-SEAL | 0  |
| 3 | <i>Mentha canadensis</i> ( <i>M. arvensis</i> )                  | WILD MINT                 | -3 |
| * | MYOSOTIS SCORPIOIDES   | FORGET-ME-NOT             | -5 |
| 2 | <i>Onoclea sensibilis</i>  | SENSITIVE FERN            | -3 |
| 5 | <i>Parthenocissus quinquefolia</i>                               | VIRGINIA CREEPER          | 3  |
| 6 | <i>Peltandra virginica</i>                                       | ARROW-ARUM                | -5 |
| 6 | <i>Persicaria amphibia</i> ( <i>Polygonum</i> a.)                | WATER SMARTWEED           | -5 |
| 5 | <i>Persicaria hydropiperoides</i> ( <i>Polygonum</i> h.)         | MILD WATER-PEPPER         | -5 |
| * | PERSICARIA MACULOSA ( <i>POLYGONUM</i> PERSICARIA)               | LADY'S-THUMB              | 0  |
| 0 | <i>Persicaria pennsylvanica</i> ( <i>Polygonum</i> p.)           | BIGSEED SMARTWEED         | -3 |
| 0 | <i>Phalaris arundinacea</i>                                      | REED CANARY GRASS         | -3 |
| 5 | <i>Pilea fontana</i>   | BOG CLEARWEED             | -3 |
| 7 | <i>Platanus occidentalis</i>                                     | SYCAMORE                  | -3 |
| * | POA PRATENSIS  | KENTUCKY BLUEGRASS        | 3  |
| 1 | <i>Populus deltoides</i>   | COTTONWOOD                | 0  |
| 4 | <i>Populus grandidentata</i>                                     | BIG-TOOTH ASPEN           | 3  |
| 5 | <i>Pycnanthemum virginianum</i>                                  | COMMON MOUNTAIN MINT      | -3 |
| 5 | <i>Quercus macrocarpa</i>  | BUR OAK                   | 3  |
| 5 | <i>Ranunculus hispidus</i>                                       | SWAMP BUTTERCUP           | 0  |
| 1 | <i>Ranunculus sceleratus</i>                                     | CURSED CROWFOOT           | -5 |
| * | RHAMNUS CATHARTICA   | COMMON BUCKTHORN          | 0  |
| 6 | <i>Ribes americanum</i>  | WILD BLACK CURRANT        | -3 |
| * | ROSA MULTIFLORA  | MULTIFLORA ROSE           | 3  |
| * | RUMEX OBTUSIFOLIUS   | BITTER DOCK               | 0  |
| 9 | <i>Rumex orbiculatus</i>   | GREAT WATER DOCK          | -5 |
| * | SALIX ALBA   | WHITE WILLOW              | -3 |
| 3 | <i>Salix amygdaloides</i>  | PEACH-LEAVED WILLOW       | -3 |
| 3 | <i>Sambucus canadensis</i>                                       | ELDERBERRY                | -3 |
| 4 | <i>Schoenoplectus tabernaemontani</i> ( <i>Scirpus validus</i> ) | SOFTSTEM BULRUSH          | -5 |
| 3 | <i>Scirpus atrovirens</i>  | BULRUSH                   | -5 |
| 5 | <i>Scutellaria lateriflora</i>                                   | MAD-DOG SKULLCAP          | -5 |
| * | SOLANUM DULCAMARA  | BITTERSWEET NIGHTSHADE    | 0  |
| 3 | <i>Solidago gigantea</i>   | LATE GOLDENROD            | -3 |
| 5 | <i>Sparganium eurycarpum</i>                                     | COMMON BUR-REED           | -5 |
| 5 | <i>Spartina pectinata</i>  | CORDGRASS                 | -3 |
| 5 | <i>Stachys hispida</i> ( <i>S. tenuifolia</i> )                  | HEDGE-NETTLE              | -3 |
| 4 | <i>Symphotrichum firmum</i> ( <i>Aster puniceus</i> )            | SMOOTH SWAMP ASTER        | -3 |
| 2 | <i>Symphotrichum lanceolatum</i> ( <i>Aster</i> l.)              | PANICLED ASTER            | -3 |
| 6 | <i>Symphotrichum ontarioensis</i> ( <i>Aster</i> o.)             | LAKE ONTARIO ASTER        | 0  |
| 6 | <i>Symplocarpus foetidus</i>                                     | SKUNK-CABBAGE             | -5 |
| 2 | <i>Thelypteris palustris</i>                                     | MARSH FERN                | -3 |
| 2 | <i>Toxicodendron radicans</i>                                    | POISON-IVY                | 0  |

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|   |                     |                             |    |
|---|---------------------|-----------------------------|----|
| 1 | Typha latifolia     | BROAD-LEAVED CAT-TAIL       | -5 |
| 1 | Ulmus americana     | AMERICAN ELM                | -3 |
| 4 | Verbena hastata     | BLUE VERVAIN                | -3 |
| 4 | Verbena urticifolia | WHITE VERVAIN               | 0  |
| 4 | Vernonia missurica  | MISSOURI IRONWEED           | 0  |
| 4 | Viburnum lentago    | NANNYBERRY                  | 0  |
| * | VIBURNUM OPULUS     | EUROPEAN HIGHBUSH-CRANBERRY | -3 |
| 3 | Vitis riparia       | RIVER-BANK GRAPE            | 0  |

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Also: Cirsium sp.

# Nichols Arboretum

## South Floodplain Woods

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Floodplain Forest

Floodplain forest just S of the Huron River and W of railroad tracks, with canopy openings and a wet meadow area in the E end

#### FLORISTIC QUALITY DATA

|       |                      |      |               |
|-------|----------------------|------|---------------|
| 160   | Total Species        | 3.97 | NATIVE MEAN C |
| 134   | Total Native Species | 3.33 | W/Adventives  |
| 83.8  | % Native Species     | 0.0  | NATIVE MEAN W |
| 45.96 | NATIVE FQI           | 0.4  | W/Adventives  |
| 42.06 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                           | COMMON NAME            | W  | LISTED |
|---|---|------------------------|----|--------|
| 0 | <i>Acer negundo</i>                       | BOX-ELDER              | 0  |        |
| 5 | <i>Acer saccharum</i>                     | SUGAR MAPLE            | 3  |        |
| 5 | <i>Agrimonia pubescens</i>                | SOFT AGRIMONY          | 5  |        |
| * | <i>AILANTHUS ALTISSIMA</i>                | TREE-OF-HEAVEN         | 5  |        |
| * | <i>ALLIARIA PETIOLATA</i>                 | GARLIC MUSTARD         | 3  |        |
| 5 | <i>Allium cernuum</i>                     | NODDING WILD ONION     | 3  |        |
| * | <i>ALNUS GLUTINOSA</i>                    | BLACK ALDER            | -3 |        |
| 0 | <i>Ambrosia trifida</i>                   | GIANT RAGWEED          | 0  |        |
| 5 | <i>Amphicarpaea bracteata</i>             | HOG-PEANUT             | 0  |        |
| 4 | <i>Anemone canadensis</i>                 | CANADA ANEMONE         | -3 |        |
| 5 | <i>Anemone quinquefolia</i>               | WOOD ANEMONE           | 3  |        |
| 3 | <i>Anemone virginiana</i>                 | THIMBLEWEED            | 3  |        |
| 6 | <i>Angelica atropurpurea</i>              | PURPLESTEM ANGELICA    | -5 |        |
| 3 | <i>Apios americana</i>                    | GROUNDNUT              | -3 |        |
| 3 | <i>Apocynum cannabinum</i> (A. sibiricum) | INDIAN-HEMP            | 0  |        |
| * | <i>ARCTIUM MINUS</i>                      | COMMON BURDOCK         | 3  |        |
| 5 | <i>Arisaema triphyllum</i>                | JACK-IN-THE-PULPIT     | 0  |        |
| 4 | <i>Athyrium filix-femina</i>              | LADY FERN              | 0  |        |
| * | <i>BERBERIS THUNBERGII</i>                | JAPANESE BARBERRY      | 3  |        |
| 1 | <i>Bidens frondosa</i>                    | COMMON BEGGAR-TICKS    | -3 |        |
| 5 | <i>Bromus pubescens</i>                   | CANADA BROME           | 3  |        |
| 6 | <i>Caltha palustris</i>                   | MARSH-MARIGOLD         | -5 |        |
| 5 | <i>Cardamine diphylla</i> (Dentaria d.)   | TWO-LEAVED TOOTHWORT   | 3  |        |
| * | <i>CARDAMINE IMPATIENS</i>                | BITTER CRESS           | 3  |        |
| 4 | <i>Carex bebbii</i>                       | SEDGE                  | -5 |        |
| 2 | <i>Carex granularis</i>                   | SEDGE                  | -3 |        |
| 4 | <i>Carex pensylvanica</i>                 | SEDGE                  | 5  |        |
| 1 | <i>Carex stipata</i>                      | SEDGE                  | -5 |        |
| 4 | <i>Carex stricta</i>                      | SEDGE                  | -5 |        |
| 1 | <i>Carex vulpinoidea</i>                  | SEDGE                  | -5 |        |
| 6 | <i>Carpinus caroliniana</i>               | BLUE-BEECH             | 0  |        |
| 5 | <i>Carya cordiformis</i>                  | BITTERNUT HICKORY      | 0  |        |
| 5 | <i>Carya glabra</i>                       | PIGNOT HICKORY         | 3  |        |
| 5 | <i>Carya ovata</i>                        | SHAGBARK HICKORY       | 3  |        |
| * | <i>CATALPA SPECIOSA</i>                   | NORTHERN CATALPA       | 3  |        |
| * | <i>CELASTRUS ORBICULATUS</i>              | ORIENTAL BITTERSWEET   | 5  |        |
| 5 | <i>Celtis occidentalis</i>                | HACKBERRY              | 0  |        |
| 8 | <i>Cercis canadensis</i>                  | REDBUD                 | 3  |        |
| * | <i>CHELIDONIUM MAJUS</i>                  | CELANDINE              | 5  |        |
| 7 | <i>Chelone glabra</i>                     | TURTLEHEAD             | -5 |        |
| 7 | <i>Cinna arundinacea</i>                  | WOOD REEDGRASS         | -3 |        |
| 2 | <i>Circaea canadensis</i> (C. lutetiana)  | ENCHANTER'S-NIGHTSHADE | 3  |        |
| * | <i>CIRSIUM ARVENSE</i>                    | CANADA THISTLE         | 3  |        |
| 4 | <i>Clematis virginiana</i>                | VIRGIN'S BOWER         | 0  |        |

|   |                                       |                               |    |
|---|---------------------------------------|-------------------------------|----|
| * | CONVALLARIA MAJALIS                   | LILY-OF-THE-VALLEY            | 5  |
| 2 | Cornus sericea (C. stolonifera)       | RED-OSIER                     | -3 |
| 5 | Corylus americana                     | HAZELNUT                      | 3  |
| 2 | Cryptotaenia canadensis               | HONEWORT                      | 0  |
| * | DACTYLIS GLOMERATA                    | ORCHARD GRASS                 | 3  |
| 4 | Dioscorea villosa (Dioscorea villosa) | WILD YAM                      | 0  |
| 5 | Elymus hystrix (Hystrix patula)       | BOTTLEBRUSH GRASS             | 3  |
| 8 | Elymus riparius                       | RIVERBANK WILD-RYE            | -3 |
| 0 | Equisetum arvense                     | COMMON HORSETAIL              | 0  |
| 2 | Equisetum hyemale                     | SCOURING RUSH                 | 0  |
| 0 | Erigeron annuus                       | DAISY FLEABANE                | 3  |
| 5 | Erythronium americanum                | YELLOW TROUT LILY             | 5  |
| 5 | Euonymus obovata                      | RUNNING STRAWBERRY-BUSH       | 3  |
| 4 | Eupatorium perfoliatum                | BONESET                       | -3 |
| 4 | Eutrochium maculatum (Eupatorium m.)  | JOE-PYE-WEED                  | -5 |
| 5 | Eutrochium purpureum (Eupatorium p.)  | GREEN-STEMMED JOE-PYE-WEED    | 0  |
| 2 | Fragaria virginiana                   | WILD STRAWBERRY               | 3  |
| * | FRANGULA ALNUS (RHAMNUS FRANGULA)     | GLOSSY BUCKTHORN              | 0  |
| 5 | Fraxinus americana                    | WHITE ASH                     | 3  |
| 2 | Fraxinus pennsylvanica                | RED ASH                       | -3 |
| 5 | Galium concinnum                      | SHINING BEDSTRAW              | 3  |
| 4 | Galium triflorum                      | FRAGRANT BEDSTRAW             | 3  |
| 1 | Geum canadense                        | WHITE AVENS                   | 0  |
| * | GLECHOMA HEDERACEA                    | GROUND-IVY                    | 3  |
| 4 | Glyceria striata                      | FOWL MANNA GRASS              | -5 |
| 5 | Helianthus giganteus                  | TALL SUNFLOWER                | -3 |
| 5 | Heliopsis helianthoides               | FALSE SUNFLOWER               | 3  |
| * | HEMEROCALLIS FULVA                    | ORANGE DAY-LILY               | 5  |
| 3 | Heracleum maximum                     | COW-PARSNIP                   | -3 |
| * | HESPERIS MATRONALIS                   | DAME'S ROCKET                 | 3  |
| 9 | Hierochloë hirta (H. odorata)         | SWEET GRASS                   | -3 |
| 5 | Hylodesmum glutinosum (Desmodium g.)  | CLUSTERED-LEAVED TICK-TREFOIL | 5  |
| 2 | Impatiens capensis                    | SPOTTED TOUCH-ME-NOT          | -3 |
| 5 | Iris virginica                        | SOUTHERN BLUE FLAG            | -5 |
| 5 | Juglans nigra                         | BLACK WALNUT                  | 3  |
| 1 | Juncus dudleyi                        | DUDLEY'S RUSH                 | -3 |
| 1 | Juncus tenuis                         | PATH RUSH                     | 0  |
| 2 | Lactuca canadensis                    | TALL LETTUCE                  | 3  |
| 4 | Laportea canadensis                   | WOOD NETTLE                   | -3 |
| 3 | Leersia oryzoides                     | CUT GRASS                     | -5 |
| 5 | Leersia virginica                     | WHITE GRASS                   | -3 |
| * | LEONURUS CARDIACA                     | MOTHERWORT                    | 5  |
| * | LIGUSTRUM OBTUSIFOLIUM                | BORDER PRIVET                 | 3  |
| * | LIGUSTRUM VULGARE                     | COMMON PRIVET                 | 3  |
| 5 | Lilium michiganense                   | MICHIGAN LILY                 | -3 |
| 4 | Lobelia siphilitica                   | GREAT BLUE LOBELIA            | -3 |
| * | LONICERA MAACKII                      | AMUR HONEYSUCKLE              | 5  |
| * | LONICERA MORROWII                     | MORROW HONEYSUCKLE            | 3  |
| 4 | Lysimachia ciliata                    | FRINGED LOOSESTRIFE           | -3 |
| * | LYTHRUM SALICARIA                     | PURPLE LOOSESTRIFE            | -5 |
| 5 | Maianthemum racemosum (Smilacina r.)  | FALSE SPIKENARD               | 3  |
| 5 | Maianthemum stellatum (Smilacina s.)  | STARRY FALSE SOLOMON-SEAL     | 0  |
| 5 | Menispermum canadense                 | MOONSEED                      | 0  |
| * | MYOSOTIS SCORPIOIDES                  | FORGET-ME-NOT                 | -5 |
| 2 | Onoclea sensibilis                    | SENSITIVE FERN                | -3 |
| 4 | Osmorhiza claytonii                   | HAIRY SWEET-CICELY            | 3  |
| 6 | Oxypolis rigidior                     | COWBANE                       | -5 |
| 5 | Packera aurea (Senecio a.)            | GOLDEN RAGWORT                | -3 |
| 8 | Pedicularis lanceolata                | SWAMP-BETONY                  | -3 |
| 4 | Persicaria virginiana (Polygonum v.)  | JUMPSEED                      | 0  |

|   |   |                             |    |
|---|---|-----------------------------|----|
| 4 | <i>Phryma leptostachya</i>                    | LOPSEED                     | 3  |
| 4 | <i>Physocarpus opulifolius</i>                | NINEBARK                    | -3 |
| 0 | <i>Plantago rugelii</i>                       | RED-STALKED PLANTAIN        | 0  |
| 3 | <i>Podophyllum peltatum</i>                   | MAY-APPLE                   | 3  |
| 1 | <i>Populus deltoides</i>                      | COTTONWOOD                  | 0  |
| 5 | <i>Prenanthes alba</i>                        | WHITE LETTUCE               | 3  |
| 5 | <i>Prenanthes altissima</i>                   | TALL WHITE LETTUCE          | 3  |
| 2 | <i>Prunus serotina</i>                        | WILD BLACK CHERRY           | 3  |
| 4 | <i>Ptelea trifoliata</i>                      | HOP-TREE                    | -3 |
| 0 | <i>Pteridium aquilinum</i>                    | BRACKEN FERN                | 3  |
| 5 | <i>Quercus alba</i>                           | WHITE OAK                   | 3  |
| 5 | <i>Quercus macrocarpa</i>                     | BUR OAK                     | 3  |
| 5 | <i>Quercus rubra</i>                          | RED OAK                     | 3  |
| 5 | <i>Ranunculus hispidus</i>                    | SWAMP BUTTERCUP             | 0  |
| 5 | <i>Rosa setigera</i>                          | PRAIRIE ROSE                | 3  |
| 1 | <i>Rubus occidentalis</i>                     | BLACK RASPBERRY             | 5  |
| 6 | <i>Rudbeckia laciniata</i>                    | CUT-LEAF CONEFLOWER         | -3 |
| * | RUMEX OBTUSIFOLIUS                            | BITTER DOCK                 | 0  |
| 3 | <i>Sambucus canadensis</i>                    | ELDERBERRY                  | -3 |
| 5 | <i>Sanguinaria canadensis</i>                 | BLOODROOT                   | 3  |
| 2 | <i>Sanicula odorata</i> (S. gregaria)         | BLACK SNAKEROOT             | 0  |
| 3 | <i>Scirpus atrovirens</i>                     | BULRUSH                     | -5 |
| 5 | <i>Scrophularia marilandica</i>               | LATE FIGWORT                | 3  |
| 5 | <i>Smilax lasioneura</i>                      | CARRION-FLOWER              | 5  |
| 1 | <i>Solidago altissima</i>                     | TALL GOLDENROD              | 3  |
| 6 | <i>Solidago caesia</i>                        | BLUESTEM GOLDENROD          | 3  |
| 1 | <i>Solidago canadensis</i>                    | CANADA GOLDENROD            | 3  |
| 6 | <i>Solidago flexicaulis</i>                   | ZIGZAG GOLDENROD            | 3  |
| 6 | <i>Solidago patula</i>                        | SWAMP GOLDENROD             | -5 |
| 5 | <i>Solidago speciosa</i>                      | SHOWY GOLDENROD             | 5  |
| 5 | <i>Stachys hispida</i> (S. tenuifolia)        | HEDGE-NETTLE                | -3 |
| 9 | <i>Staphylea trifolia</i>                     | BLADDERNUT                  | 0  |
| 4 | <i>Symphotrichum cordifolium</i> (Aster c.)   | HEART-LEAVED ASTER          | 5  |
| 4 | <i>Symphotrichum firmum</i> (Aster puniceus)  | SMOOTH SWAMP ASTER          | -3 |
| 5 | <i>Symphotrichum laeve</i> (Aster l.)         | SMOOTH ASTER                | 3  |
| 2 | <i>Symphotrichum lanceolatum</i> (Aster l.)   | PANICLED ASTER              | -3 |
| 2 | <i>Symphotrichum lateriflorum</i> (Aster l.)  | CALICO ASTER                | 0  |
| 3 | <i>Symphotrichum novae-angliae</i> (Aster n.) | NEW ENGLAND ASTER           | -3 |
| * | TARAXACUM OFFICINALE                          | COMMON DANDELION            | 3  |
| 3 | <i>Thalictrum dasycarpum</i>                  | PURPLE MEADOW-RUE           | -3 |
| 6 | <i>Thalictrum dioicum</i>                     | EARLY MEADOW-RUE            | 3  |
| 2 | <i>Thelypteris palustris</i>                  | MARSH FERN                  | -3 |
| 5 | <i>Tilia americana</i>                        | BASSWOOD                    | 3  |
| 2 | <i>Toxicodendron radicans</i>                 | POISON-IVY                  | 0  |
| 5 | <i>Trillium grandiflorum</i>                  | COMMON TRILLIUM             | 3  |
| 4 | <i>Verbena urticifolia</i>                    | WHITE VERVAIN               | 0  |
| 4 | <i>Vernonia missurica</i>                     | MISSOURI IRONWEED           | 0  |
| 8 | <i>Veronicastrum virginicum</i>               | CULVER'S-ROOT               | 0  |
| 4 | <i>Viburnum lentago</i>                       | NANNYBERRY                  | 0  |
| * | VIBURNUM OPULUS                               | EUROPEAN Highbush-CRANBERRY | -3 |
| 2 | <i>Viola affinis</i>                          | LE CONTE'S VIOLET           | -3 |
| 5 | <i>Viola cucullata</i>                        | MARSH VIOLET                | -5 |
| 4 | <i>Viola pubescens</i>                        | YELLOW VIOLET               | 3  |
| 1 | <i>Viola sororia</i>                          | COMMON BLUE VIOLET          | 0  |
| 3 | <i>Vitis riparia</i>                          | RIVER-BANK GRAPE            | 0  |
| 6 | <i>Zizia aurea</i>                            | GOLDEN ALEXANDERS           | 0  |

Also: *Salix* sp., *Typha* sp., *Phellodendron amurense*, *Pachysandra* sp.



# Nichols Arboretum

## West Oak Woodlands

Compiled by Bev Walters, 2011-2012

### Michigan Natural Plant Community: Dry-mesic Southern Forest

Oak forest at W end of property just S of the Huron River, on a morainal ridge with steep N-facing slope and seeps at the base; a deep ravine (School Girls Glen) is situated at the W end

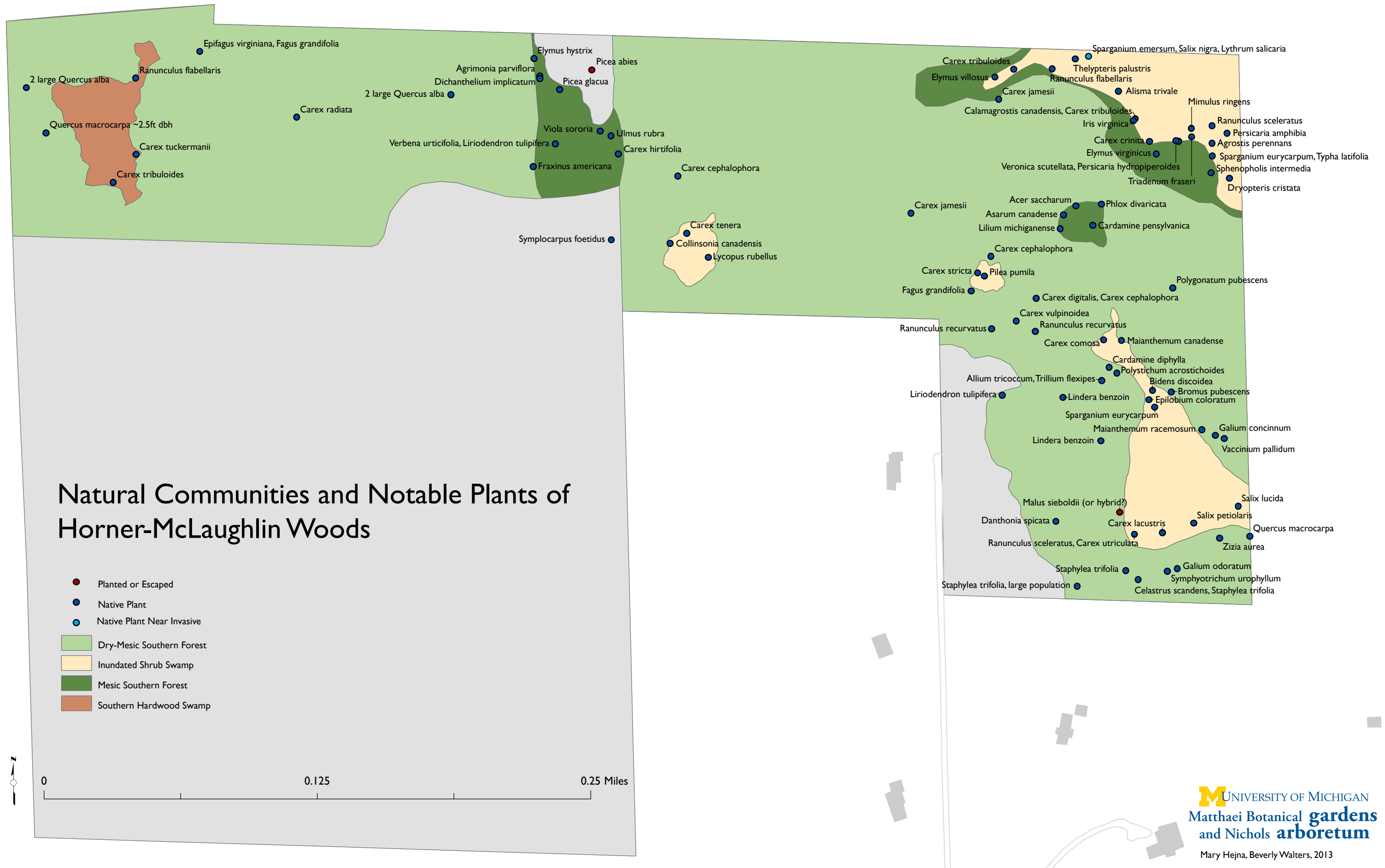
### FLORISTIC QUALITY DATA

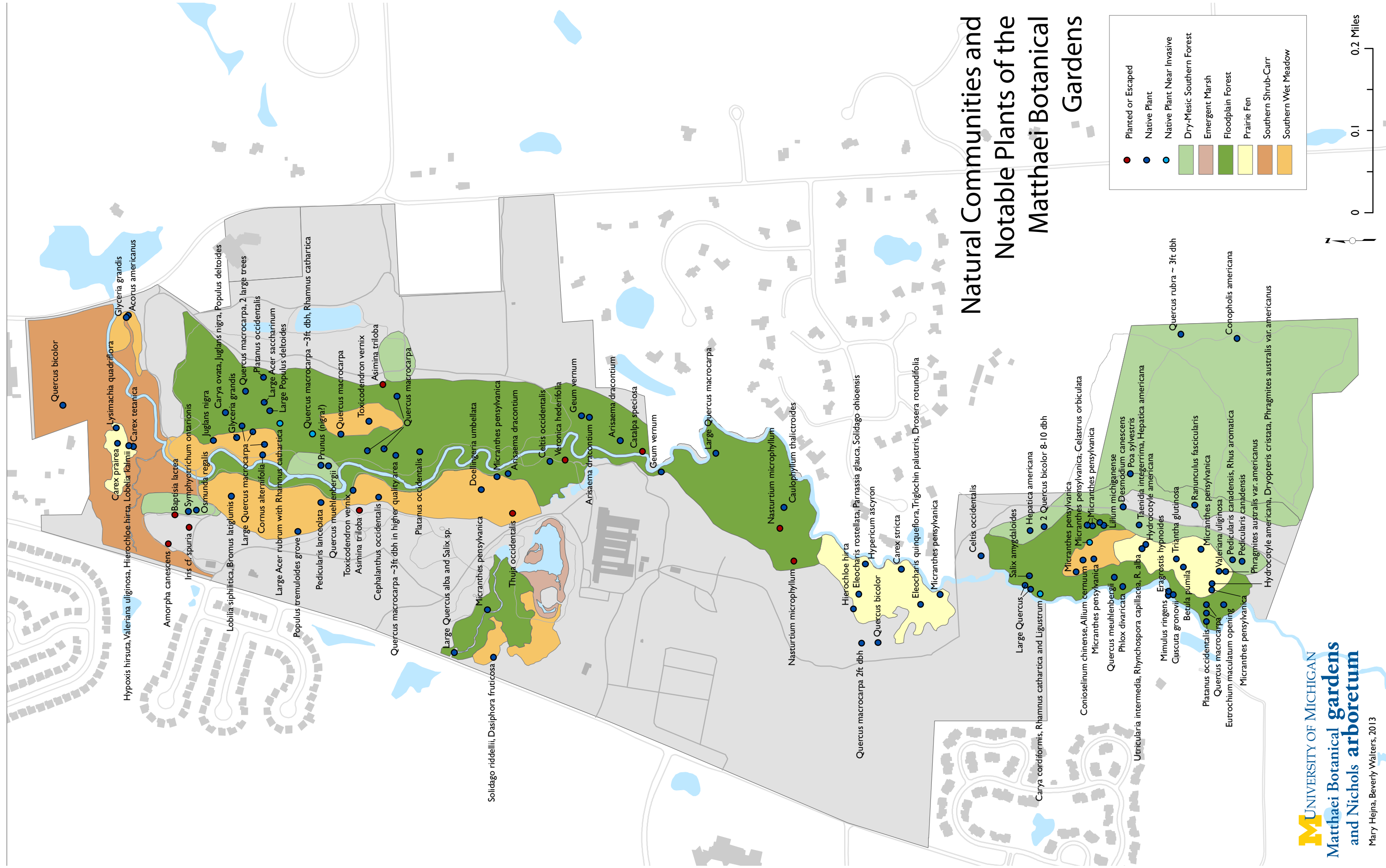
|       |                      |      |               |
|-------|----------------------|------|---------------|
| 155   | Total Species        | 4.31 | NATIVE MEAN C |
| 124   | Total Native Species | 3.45 | W/Adventives  |
| 80.0  | % Native Species     | 1.3  | NATIVE MEAN W |
| 47.95 | NATIVE FQI           | 1.6  | W/Adventives  |
| 42.89 | W/Adventives         |      |               |

| C | SCIENTIFIC NAME                                      | COMMON NAME              | W  | LISTED |
|---|--|--------------------------|----|--------|
| 0 | <i>Acer negundo</i>                                  | BOX-ELDER                | 0  |        |
| 6 | <i>Adiantum pedatum</i>                              | MAIDENHAIR FERN          | 3  |        |
| * | <i>AILANTHUS ALTISSIMA</i>                           | TREE-OF-HEAVEN           | 5  |        |
| * | <i>ALLIARIA PETIOLATA</i>                            | GARLIC MUSTARD           | 3  |        |
| 5 | <i>Allium cernuum</i>                                | NODDING WILD ONION       | 3  |        |
| 5 | <i>Amphicarpaea bracteata</i>                        | HOG-PEANUT               | 0  |        |
| 5 | <i>Anemone quinquefolia</i>                          | WOOD ANEMONE             | 3  |        |
| 3 | <i>Anemone virginiana</i>                            | THIMBLEWEED              | 3  |        |
| 5 | <i>Aralia nudicaulis</i>                             | WILD SARSAPARILLA        | 3  |        |
| 8 | <i>Aralia racemosa</i>                               | SPIKENARD                | 3  |        |
| * | <i>ARCTIUM MINUS</i>                                 | COMMON BURDOCK           | 3  |        |
| 5 | <i>Asarum canadense</i>                              | WILD-GINGER              | 5  |        |
| 4 | <i>Athyrium filix-femina</i>                         | LADY FERN                | 0  |        |
| * | <i>BERBERIS THUNBERGII</i>                           | JAPANESE BARBERRY        | 3  |        |
| 5 | <i>Boechera laevigata</i> ( <i>Arabis</i> l.)        | SMOOTH BANK CRESS        | 5  |        |
| 5 | <i>Bromus pubescens</i>                              | CANADA BROME             | 3  |        |
| 5 | <i>Cardamine diphylla</i> ( <i>Dentaria</i> d.)      | TWO-LEAVED TOOTHWORT     | 3  |        |
| * | <i>CARDAMINE IMPATIENS</i>                           | BITTER CRESS             | 3  |        |
| 1 | <i>Carex blanda</i>                                  | SEDGE                    | 0  |        |
| 5 | <i>Carex gracilescens</i>                            | SEDGE                    | 3  |        |
| 4 | <i>Carex gracillima</i>                              | SEDGE                    | 3  |        |
| 6 | <i>Carex grayi</i>                                   | SEDGE                    | -3 |        |
| 4 | <i>Carex pensylvanica</i>                            | SEDGE                    | 5  |        |
| 2 | <i>Carex rosea</i> ( <i>C. convoluta</i> )           | CURLY-STYLED WOOD SEDGE  | 5  |        |
| 6 | <i>Carpinus caroliniana</i>                          | BLUE-BEECH               | 0  |        |
| 5 | <i>Carya glabra</i>                                  | PIGNOCK HICKORY          | 3  |        |
| 5 | <i>Carya ovata</i>                                   | SHAGBARK HICKORY         | 3  |        |
| * | <i>CATALPA SPECIOSA</i>                              | NORTHERN CATALPA         | 3  |        |
| * | <i>CELASTRUS ORBICULATUS</i>                         | ORIENTAL BITTERSWEET     | 5  |        |
| 7 | <i>Cephalanthus occidentalis</i>                     | BUTTONBUSH               | -5 |        |
| 8 | <i>Cercis canadensis</i>                             | REDBUD                   | 3  |        |
| * | <i>CHELIDONIUM MAJUS</i>                             | CELANDINE                | 5  |        |
| 2 | <i>Circaea canadensis</i> ( <i>C. lutetiana</i> )    | ENCHANTER'S-NIGHTSHADE   | 3  |        |
| * | <i>CIRSIUM ARVENSE</i>                               | CANADA THISTLE           | 3  |        |
| 4 | <i>Claytonia virginica</i>                           | SPRING-BEAUTY            | 3  |        |
| 4 | <i>Clematis virginiana</i>                           | VIRGIN'S BOWER           | 0  |        |
| 8 | <i>Collinsonia canadensis</i>                        | RICHWEED                 | 0  |        |
| * | <i>CONVALLARIA MAJALIS</i>                           | LILY-OF-THE-VALLEY       | 5  |        |
| 5 | <i>Cornus alternifolia</i>                           | ALTERNATE-LEAVED DOGWOOD | 3  |        |
| 8 | <i>Cornus florida</i>                                | FLOWERING DOGWOOD        | 3  |        |
| 2 | <i>Cryptotaenia canadensis</i>                       | HONEWORT                 | 0  |        |
| 4 | <i>Cystopteris fragilis</i>                          | FRAGILE FERN             | 3  |        |
| 3 | <i>Dichanthelium implicatum</i> ( <i>Panicum</i> i.) | PANIC GRASS              | 0  |        |

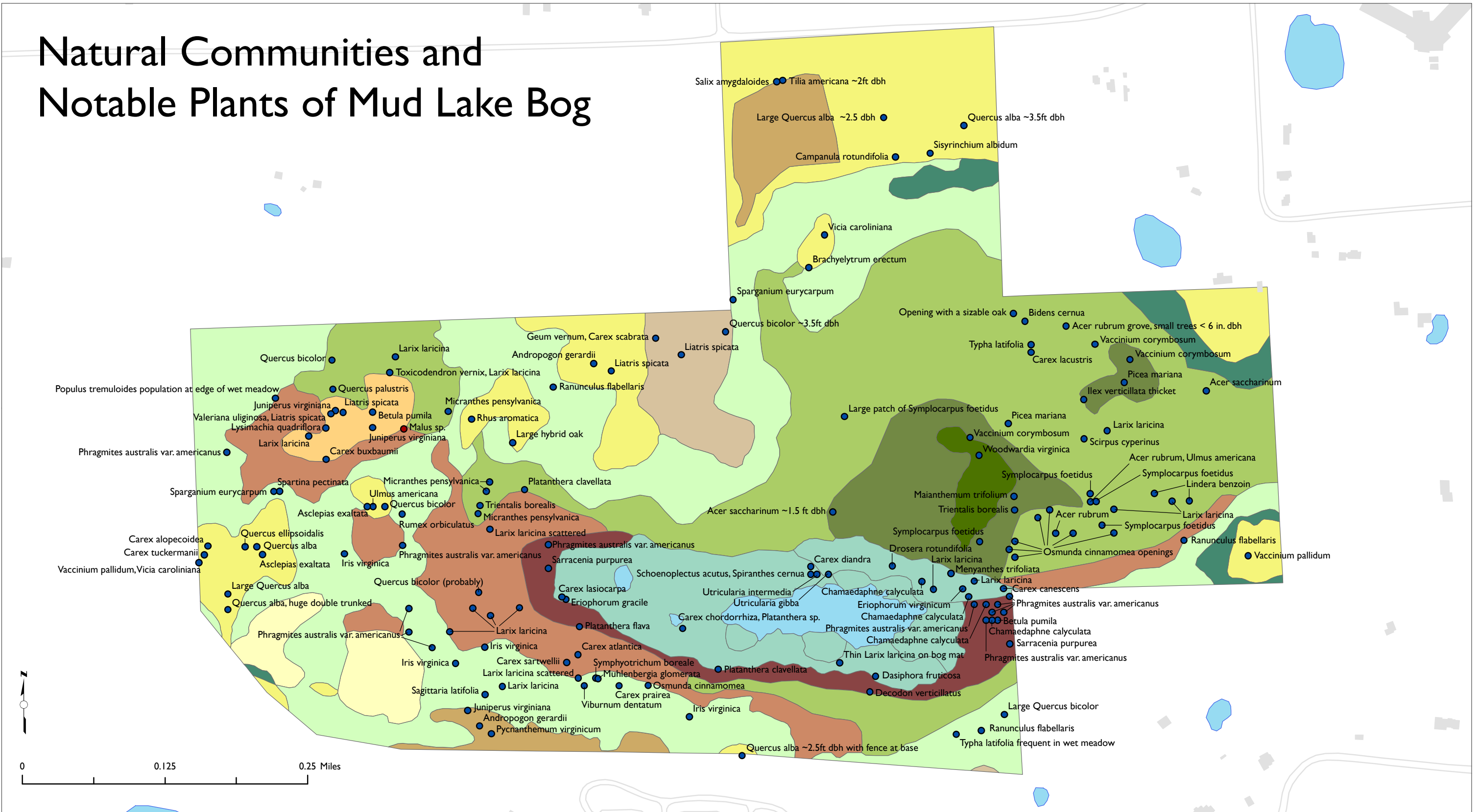
|   |   |                               |    |
|---|---|-------------------------------|----|
| 4 | <i>Dioscorea villosa</i> ( <i>Dioscorea villosa</i> ) | WILD YAM                      | 0  |
| 5 | <i>Dryopteris carthusiana</i>                         | SPINULOSE WOODFERN            | -3 |
| 5 | <i>Elymus hystrix</i> ( <i>Hystrix patula</i> )       | BOTTLEBRUSH GRASS             | 3  |
| 3 | <i>Epilobium coloratum</i>                            | CINNAMON WILLOW-HERB          | -5 |
| 0 | <i>Equisetum arvense</i>                              | COMMON HORSETAIL              | 0  |
| 2 | <i>Erechtites hieraciifolius</i>                      | FIREWEED                      | 3  |
| 0 | <i>Erigeron annuus</i>                                | DAISY FLEABANE                | 3  |
| 2 | <i>Erigeron philadelphicus</i>                        | PHILADELPHIA FLEABANE         | 0  |
| 5 | <i>Erythronium americanum</i>                         | YELLOW TROUT LILY             | 5  |
| * | EUONYMUS ALATA  | WINGED EUONYMUS               | 5  |
| 4 | <i>Eurybia macrophylla</i> ( <i>Aster m.</i> )        | BIG-LEAVED ASTER              | 5  |
| 5 | <i>Eutrochium purpureum</i> ( <i>Eupatorium p.</i> )  | GREEN-STEMMED JOE-PYE-WEED    | 0  |
| 5 | <i>Festuca subverticillata</i> ( <i>F. obtusa</i> )   | NODDING FESCUE                | 3  |
| * | FRANGULA ALNUS (RHAMNUS FRANGULA)                     | GLOSSY BUCKTHORN              | 0  |
| 5 | <i>Fraxinus americana</i>                             | WHITE ASH                     | 3  |
| 2 | <i>Fraxinus pennsylvanica</i>                         | RED ASH                       | -3 |
| 5 | <i>Galium concinnum</i>                               | SHINING BEDSTRAW              | 3  |
| * | GALIUM ODORATUM                                       | SWEET WOODRUFF                | 5  |
| 1 | <i>Geum canadense</i>                                 | WHITE AVENS                   | 0  |
| * | GLECHOMA HEDERACEA                                    | GROUND-IVY                    | 3  |
| 4 | <i>Glyceria striata</i>                               | FOWL MANNA GRASS              | -5 |
| 5 | <i>Hamamelis virginiana</i>                           | WITCH-HAZEL                   | 3  |
| 4 | <i>Helianthus strumosus</i>                           | PALE-LEAVED SUNFLOWER         | 5  |
| 6 | <i>Helianthus tuberosus</i>                           | JERUSALEM-ARTICHOKE           | 0  |
| * | HEMEROCALLIS FULVA                                    | ORANGE DAY-LILY               | 5  |
| 6 | <i>Hepatica americana</i>                             | ROUND-LOBED HEPATICA          | 5  |
| 3 | <i>Heracleum maximum</i>                              | COW-PARSNIP                   | -3 |
| * | HESPERIS MATRONALIS                                   | DAME'S ROCKET                 | 3  |
| 5 | <i>Hylodesmum glutinosum</i> ( <i>Desmodium g.</i> )  | CLUSTERED-LEAVED TICK-TREFOIL | 5  |
| 2 | <i>Impatiens capensis</i>                             | SPOTTED TOUCH-ME-NOT          | -3 |
| 3 | <i>Leersia oryzoides</i>                              | CUT GRASS                     | -5 |
| 5 | <i>Leersia virginica</i>                              | WHITE GRASS                   | -3 |
| * | LIGUSTRUM VULGARE                                     | COMMON PRIVET                 | 3  |
| 4 | <i>Lobelia siphilitica</i>                            | GREAT BLUE LOBELIA            | -3 |
| * | LONICERA xBELLA                                       | HYBRID HONEYSUCKLE            | 3  |
| 5 | <i>Lonicera dioica</i>                                | RED HONEYSUCKLE               | 3  |
| * | LONICERA MAACKII                                      | AMUR HONEYSUCKLE              | 5  |
| * | LONICERA MORROWII                                     | MORROW HONEYSUCKLE            | 3  |
| 4 | <i>Lysimachia ciliata</i>                             | FRINGED LOOSESTRIFE           | -3 |
| 5 | <i>Menispermum canadense</i>                          | MOONSEED                      | 0  |
| 8 | <i>Mitella diphylla</i>                               | BISHOP'S-CAP                  | 3  |
| * | MORUS ALBA  | WHITE MULBERRY                | 3  |
| 0 | <i>Muhlenbergia schreberi</i>                         | NIMBLEWILL                    | 0  |
| 2 | <i>Onoclea sensibilis</i>                             | SENSITIVE FERN                | -3 |
| 4 | <i>Osmorhiza claytonii</i>                            | HAIRY SWEET-CICELY            | 3  |
| 6 | <i>Osmunda claytoniana</i>                            | INTERRUPTED FERN              | 0  |
| 5 | <i>Ostrya virginiana</i>                              | IRONWOOD; HOP-HORNBEAM        | 3  |
| 5 | <i>Packera aurea</i> ( <i>Senecio a.</i> )            | GOLDEN RAGWORT                | -3 |
| 5 | <i>Parthenocissus quinquefolia</i>                    | VIRGINIA CREEPER              | 3  |
| 4 | <i>Phryma leptostachya</i>                            | LOPSEED                       | 3  |
| 5 | <i>Pilea pumila</i>                                   | CLEARWEED                     | -3 |
| 3 | <i>Podophyllum peltatum</i>                           | MAY-APPLE                     | 3  |
| 5 | <i>Polygonatum pubescens</i>                          | DOWNY SOLOMON SEAL            | 5  |
| 5 | <i>Prenanthes altissima</i>                           | TALL WHITE LETTUCE            | 3  |
| 0 | <i>Prunella vulgaris</i>                              | SELF-HEAL                     | 0  |
| * | PRUNUS AVIUM  | SWEET CHERRY                  | 5  |
| 2 | <i>Prunus serotina</i>                                | WILD BLACK CHERRY             | 3  |
| 5 | <i>Quercus alba</i>                                   | WHITE OAK                     | 3  |
| 8 | <i>Quercus bicolor</i>                                | SWAMP WHITE OAK               | -3 |
| 4 | <i>Quercus ellipsoidalis</i> ( <i>Q. coccinea</i> )   | HILL'S OAK                    | 5  |

|    |   |                             |    |
|----|---|-----------------------------|----|
| 5  | <i>Quercus rubra</i>                                  | RED OAK                     | 3  |
| 6  | <i>Quercus velutina</i>                               | BLACK OAK                   | 5  |
| 0  | <i>Ranunculus abortivus</i>                           | SMALL-FLOWERED BUTTERCUP    | 0  |
| 10 | <i>Ranunculus fascicularis</i>                        | EARLY BUTTERCUP             | 3  |
| 5  | <i>Ranunculus hispidus</i>                            | SWAMP BUTTERCUP             | 0  |
| *  | RHAMNUS CATHARTICA                                    | COMMON BUCKTHORN            | 0  |
| *  | RHODOTYPOS SCANDENS                                   | JETBEAD                     | 5  |
| 6  | <i>Ribes americanum</i>                               | WILD BLACK CURRANT          | -3 |
| 4  | <i>Rosa carolina</i>                                  | PASTURE ROSE                | 3  |
| *  | ROSA MULTIFLORA                                       | MULTIFLORA ROSE             | 3  |
| 1  | <i>Rubus allegheniensis</i>                           | COMMON BLACKBERRY           | 3  |
| 1  | <i>Rubus occidentalis</i>                             | BLACK RASPBERRY             | 5  |
| 6  | <i>Rubus parviflorus</i>                              | THIMBLEBERRY                | 3  |
| 6  | <i>Rudbeckia laciniata</i>                            | CUT-LEAF CONEFLOWER         | -3 |
| *  | RUMEX CRISPUS   | CURLY DOCK                  | 0  |
| *  | RUMEX OBTUSIFOLIUS                                    | BITTER DOCK                 | 0  |
| 3  | <i>Sambucus canadensis</i>                            | ELDERBERRY                  | -3 |
| 3  | <i>Sambucus racemosa</i>                              | RED-BERRIED ELDER           | 3  |
| 5  | <i>Sanguinaria canadensis</i>                         | BLOODROOT                   | 3  |
| 2  | <i>Sanicula odorata</i> (S. gregaria)                 | BLACK SNAKEROOT             | 0  |
| 6  | <i>Smilax ecirrata</i>                                | UPRIGHT CARRION-FLOWER      | 5  |
| 5  | <i>Smilax hispida</i> (S. tamnoides)                  | BRISTLY GREENBRIER          | 0  |
| 5  | <i>Smilax lasioneura</i>                              | CARRION-FLOWER              | 5  |
| *  | SOLANUM DULCAMARA                                     | BITTERSWEET NIGHTSHADE      | 0  |
| 6  | <i>Solidago caesia</i>                                | BLUESTEM GOLDENROD          | 3  |
| 6  | <i>Solidago flexicaulis</i>                           | ZIGZAG GOLDENROD            | 3  |
| 3  | <i>Solidago gigantea</i>                              | LATE GOLDENROD              | -3 |
| 6  | <i>Solidago patula</i>                                | SWAMP GOLDENROD             | -5 |
| 4  | <i>Symphotrichum cordifolium</i> (Aster c.)           | HEART-LEAVED ASTER          | 5  |
| 5  | <i>Symphotrichum laeve</i> (Aster l.)                 | SMOOTH ASTER                | 3  |
| 2  | <i>Symphotrichum lanceolatum</i> (Aster l.)           | PANICLED ASTER              | -3 |
| 2  | <i>Symphotrichum lateriflorum</i> (Aster l.)          | CALICO ASTER                | 0  |
| 3  | <i>Symphotrichum novae-angliae</i> (Aster n.)         | NEW ENGLAND ASTER           | -3 |
| 2  | <i>Symphotrichum urophyllum</i> (Aster sagittifolius) | ARROW-LEAVED ASTER          | 5  |
| 6  | <i>Symplocarpus foetidus</i>                          | SKUNK-CABBAGE               | -5 |
| 8  | <i>Taenidia integerrima</i>                           | YELLOW-PIMPERNEL            | 5  |
| *  | TARAXACUM OFFICINALE                                  | COMMON DANDELION            | 3  |
| 6  | <i>Thalictrum dioicum</i>                             | EARLY MEADOW-RUE            | 3  |
| 5  | <i>Tilia americana</i>                                | BASSWOOD                    | 3  |
| *  | TORILIS JAPONICA                                      | HEDGE-PARSLEY               | 3  |
| 2  | <i>Toxicodendron radicans</i>                         | POISON-IVY                  | 0  |
| 5  | <i>Trillium grandiflorum</i>                          | COMMON TRILLIUM             | 3  |
| 4  | <i>Vernonia missurica</i>                             | MISSOURI IRONWEED           | 0  |
| 6  | <i>Viburnum acerifolium</i>                           | MAPLE-LEAVED VIBURNUM       | 5  |
| *  | VIBURNUM OPULUS                                       | EUROPEAN Highbush-Cranberry | -3 |
| 5  | <i>Viburnum rafinesquianum</i>                        | Downy Arrow-wood            | 5  |
| 5  | <i>Viola cucullata</i>                                | MARSH VIOLET                | -5 |
| 4  | <i>Viola pubescens</i>                                | YELLOW VIOLET               | 3  |
| 1  | <i>Viola sororia</i>                                  | COMMON BLUE VIOLET          | 0  |
| 6  | <i>Vitis aestivalis</i>                               | SUMMER GRAPE                | 3  |
| 3  | <i>Vitis riparia</i>                                  | RIVER-BANK GRAPE            | 0  |
| 6  | <i>Zizia aurea</i>                                    | GOLDEN ALEXANDERS           | 0  |





# Natural Communities and Notable Plants of Mud Lake Bog

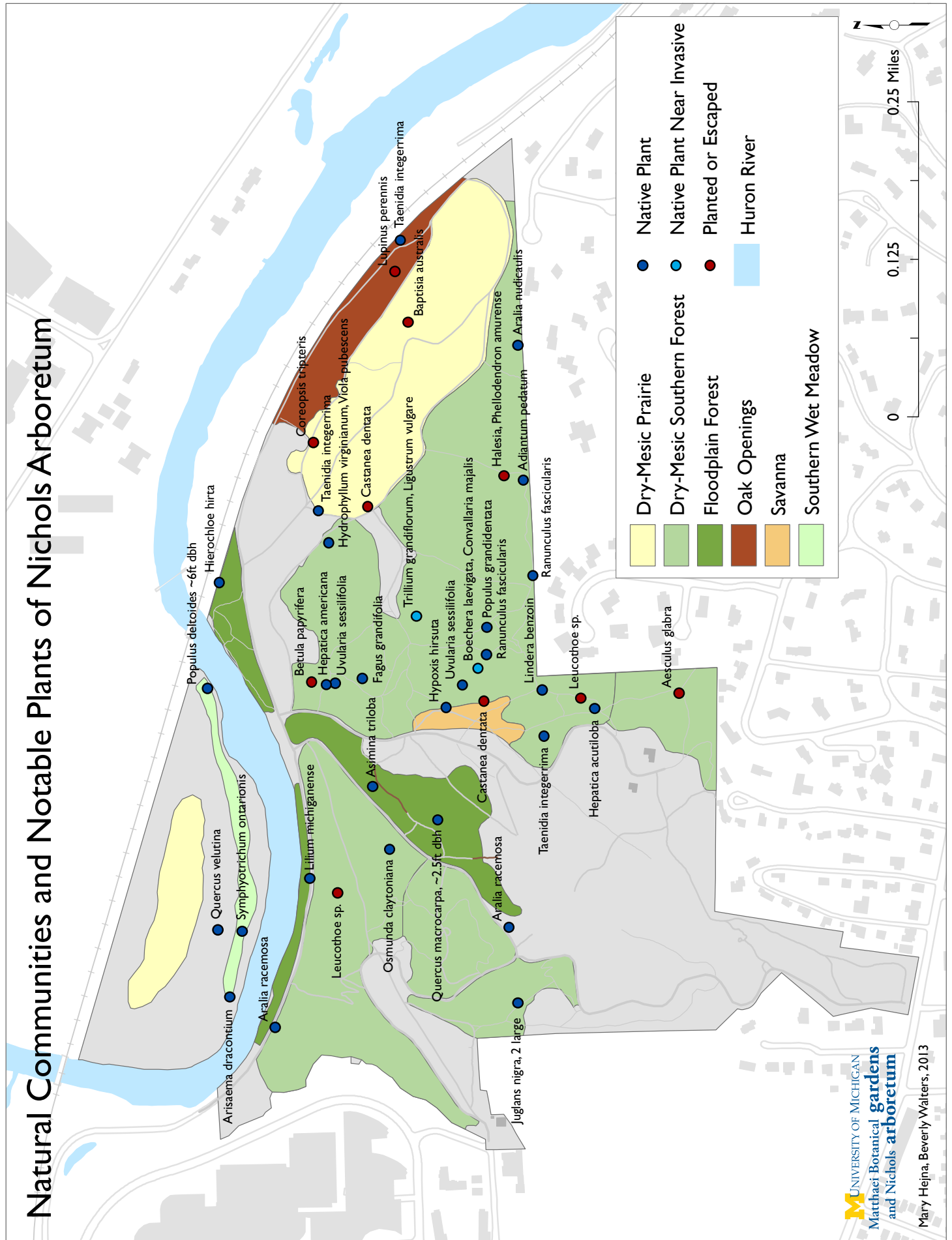


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|---------------------------|------------------------|----------------------------|-------------------------|--------------------------|-----------------|
| Bog                       | Hardwood-Conifer Swamp | Old Field, Late Succession | Rich Tamarack Swamp     | Southern Wet Meadow      | Adventive Plant |
| Dry-Mesic Southern Forest | Inundated Shrub Swamp  | Poor Conifer Swamp         | Southern Hardwood Swamp | Submergent Marsh / Water | Native Plant    |
| Emergent Marsh            | Mesic Southern Forest  | Prairie Fen                | Southern Shrub-Carr     |                          |                 |

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# Natural Communities and Notable Plants of Nichols Arboretum



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