

# **INVENTORY AND ANALYSIS OF THE FLORA OF MEADOWBROOK PARK**

**Report to the Urbana Park District**

**By John White  
Ecological Services**

# **Inventory and Analysis of the Flora of Meadowbrook Park**

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**NOTE:**

Common names of plant species are capitalized, but generic names are not: for instance *Showy Tick Trefoil*, but *tick trefoils*.

Only common names are employed in the main body of the report. A quick way to find out the scientific name of a plant is to use the index beginning on page 121.

The index lists only species that were observed in the study area in 2011. Several other plants are mentioned in the text; in those instances, the scientific name is in parentheses with the common name.

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## SUMMARY

- A botanical survey of Meadowbrook Park in 2011 identified 608 plant species growing without cultivation. The great variety of plants in the park provides exceptional opportunities for visitors to enjoy and learn about the flora.
- A total of 371 of the plant species in Meadowbrook Park are native to east-central Illinois. About half of the species were planted, and half appear to have spread into the park naturally.
- Seven parts of Meadowbrook Park have an especially high diversity of plants and concentrations of species that live nowhere else in the park: (1) the prairie restoration beside the Prairie Path along the east side of the park, (2) the prairie restoration bordering the Savanna Peninsula and extending west from its tip, (3) the Hickman Wildflower Walk, (4) the wooded corridor along McCullough Creek, (5) the Savanna Peninsula, (6) the wetland in Walker Grove, and (7) the beaver pond on McCullough Creek.
- Many species that were planted in Meadowbrook Prairie are thriving, but others occur in very low numbers, and some have failed to become established. A long-term monitoring program would be needed to accurately assess the success of prairie restoration efforts.
- Meadowbrook Park has 59 invasive plant species. The worst infestations are by Amur Honeysuckle, Japanese Crab, Reed Canary Grass, and Tall Goldenrod. Several other severely invasive plants have been kept under control or have not yet shown their full invasive potential; they include Garlic Mustard, Fig Buttercup, White Sweet Clover, Callery Pear, Amur Cork Tree, Common Buckthorn, and Autumn Olive.
- Browsing by deer may be preventing oaks from reproducing in any significant numbers at Meadowbrook Park. Deer may also be reducing the numbers and vigor of other favored forage plants.
- Beavers have dammed McCullough Creek in several places, slightly expanding the creek's aquatic and wetland habitats. Beavers are in the process of girdling and cutting down many streamside trees and shrubs.
- The Park District would benefit from a set of three maps that show the following in detail: Meadowbrook Park's original natural vegetation, the current land cover, and the intended goal of ecological restoration efforts. The maps would help guide land management activities and would serve as an interpretive resource for the public.

# INTRODUCTION

## Purpose

The purpose of this project is to identify and discuss the flowering plants and ferns growing without cultivation at Meadowbrook Park in Urbana, Illinois.

## Scope

All of Meadowbrook Park was inventoried except for two parts: the PrairiePlay playground and vicinity along Windsor Road, and the gardens and their surroundings near Race Street. The study area, outlined in Figure 1, includes 120 of the park's 130 acres.

The vascular plants or "higher plants" of the park were surveyed; these include flowering plants and ferns. In other words, all of the trees, shrubs, vines, wildflowers, weeds, grasses, sedges, and their relatives were inventoried – but mosses, liverworts, and other "lower plants" were not included. Both native and non-native species were surveyed. In addition to naturally established plants, the inventory includes planted species such as reintroduced prairie plants and woody landscape plantings that are growing without cultivation in unmowed parts of the park.

## Procedure

I surveyed the park's flora by carefully examining all of its habitats often enough to ensure that species were not overlooked when they were in prime condition for identification, usually while they were flowering or fruiting. I searched for plants on 98 days in 2011: April (9 days), May (17 days), June (11 days), July (17 days), August (7 days), September (13 days), October (15 days), November (6 days), and December (3 days). I used a GPS device to keep track of where I went while searching for plants (Figure 2).

I identified species on sight and by referring to botanical manuals and the World Wide Web.\* I collected samples of plants as needed to compare with specimens preserved at the herbaria of the Illinois Natural History Survey, University of Illinois, and Morton Arboretum. I examined living specimens at the Morton Arboretum to help confirm identifications of lindens, crabs, and honeysuckles. I also benefitted from help by people who are knowledgeable about Meadowbrook's flora.

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\* I relied principally on the following identification manuals: Mohlenbrock's *Vascular Flora of Illinois*, Mohlenbrock's 14-volume *Illustrated Flora of Illinois*, Mohlenbrock's four-volume *Aquatic and Standing Water Plants of the Central Midwest*, the completed volumes of *Flora of North America*, Gleason's three-volume *New Britton and Brown Illustrated Flora*, Steyermark's *Flora of Missouri*, Yatskievych's revisions of *Flora of Missouri*, Swink and Wilhelm's *Plants of the Chicago Region*, Yatskievych's *Field Guide to Indiana Wildflowers*, Rehder's *Manual of Cultivated Trees and Shrubs*, and Dirr's *Manual of Woody Landscape Plants*.



**Figure 1. Meadowbrook Park study area.** The black line bounds the study area, which includes all of the park except the gardens, parking lots, PrairiePlay playground, and buildings.

# INVENTORY OF THE FLORA

## Annotated List of Plants

Table 1 is a list of every plant species that I saw growing without cultivation in the study area in 2011. A separate section at the end of the table lists additional plants that have been reported from the park. Table 1 provides the following information for each species:

**Scientific name** (COLUMN 1).—Species are listed in alphabetical order by their Latin names. Nomenclature follows Mohlenbrock’s *Vascular Flora of Illinois* (2002) if possible. Alternative names are given in parentheses for some species; most of these other names are from Mohlenbrock’s *Guide to the Vascular Flora of Illinois* (1986). In the scientific names, the abbreviation “var.” stands for *variety*, and “ssp.” is short for *subspecies*.

**Common name** (COLUMN 2).—One or two common names are listed for each species.

**Previous listing** (COLUMN 3, with the heading UPD).—A plant is marked with an X in this column if it is on one of the Park District’s earlier lists of the park’s flora, including planting lists for restoring prairie vegetation in the park.

**Nativity** (COLUMN 4, with the heading Nat).—Three coded terms in the fourth column indicate whether a species is indigenous to the area:

- |    |                                 |                                     |
|----|---------------------------------|-------------------------------------|
| N  | Native to east-central Illinois | These terms are defined on page 51. |
| NI | Native elsewhere in Illinois    |                                     |
| E  | Exotic                          |                                     |

**Origin** (COLUMN 5, with the heading Ogn).—Each species is annotated with one or more of the following terms to indicate how the plant came to occur in the park:

- |    |                        |                                     |
|----|------------------------|-------------------------------------|
| A  | Adventive              | These terms are defined on page 51. |
| P  | Planted                |                                     |
| PP | Planted and persisting |                                     |
| PS | Planted and spreading  |                                     |

**Abundance** (COLUMN 6, with the heading Abn).—A five-level abundance scale estimates how common each species is in its optimal habitat at Meadowbrook Park:

- |   |             |                                     |
|---|-------------|-------------------------------------|
| 1 | Rare        | These terms are defined on page 52. |
| 2 | Occasional  |                                     |
| 3 | Common      |                                     |
| 4 | Very common |                                     |
| 5 | Abundant    |                                     |

Some of the annotations of abundance are modified with an L for *locally*: for instance L5 means *locally abundant*.



**Habitat** (COLUMNS 7 TO 15).—The range of environments in the park is encompassed by nine habitats:

Mesic Wooded Land (MW)

Wet-mesic Wooded Land (WmW)

Mesic Prairie (MP)

Wet-mesic Prairie (WmP)

Wet Prairie (WP)

Mesic Meadow (MM)

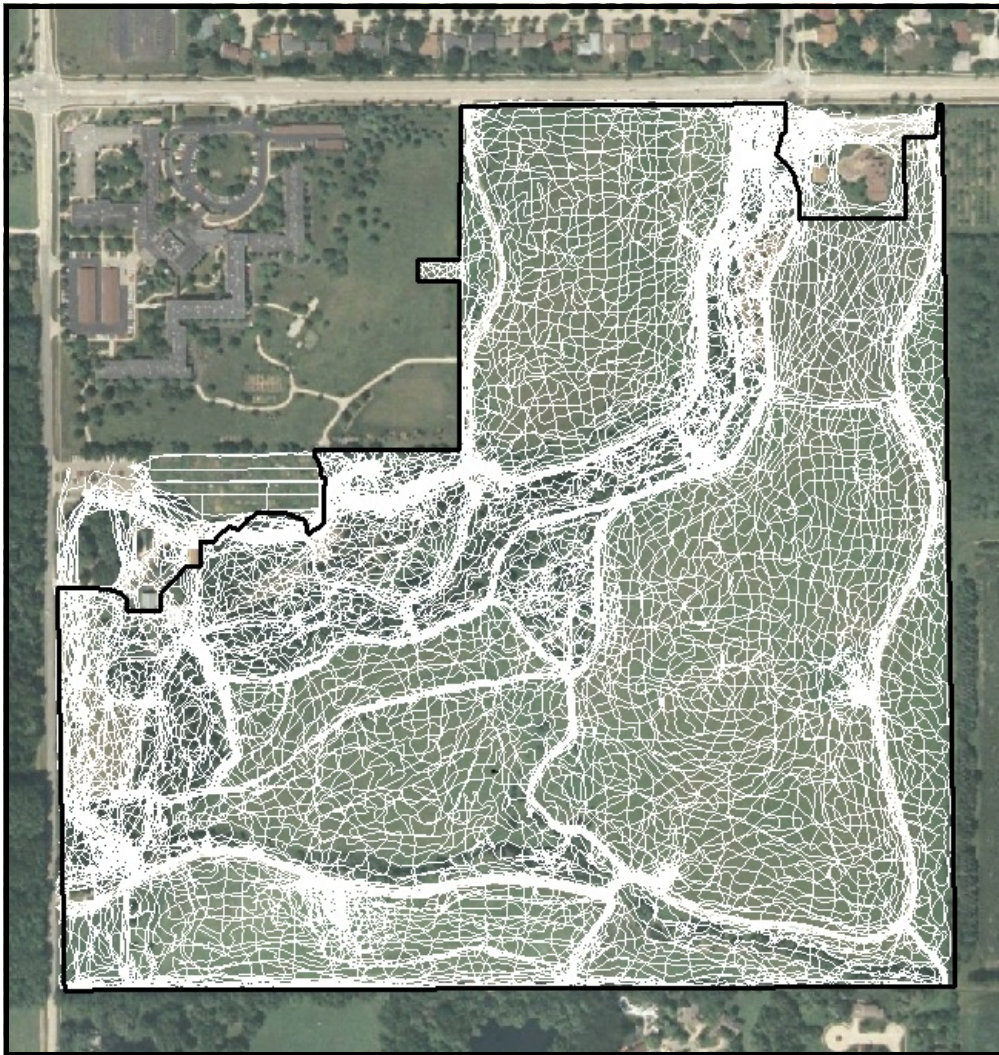
Wet-mesic Meadow (WmM)

Developed Land (DL)

Creek (Crk)

The habitats are defined on page 53.

**Notes** (COLUMN 16).—If a plant is actually or potentially a seriously invasive species in Meadowbrook Park, it is marked with a letter I (for Invasive) in this column. Rare native species (*i.e.* with one or two individuals or small colonies known in the park) are indicated with an R. For some plants, additional information about the identification, abundance, etc. of the species is provided in numbered notes that are in Appendix 4.



**Figure 2. Survey tracks in Meadowbrook Park.** White lines are routes taken while inventorying the flora (217.7 miles).

**Table 1. Annotated list of the flora of Meadowbrook Park.**

See pages 4 and 5 for a description of the headings and for the meanings of the annotation codes.

The notes that are listed in the far right column are presented in Appendix 4 beginning on page 86. With the Adobe PDF version of this report, one can click on a numbered note in the far right column to go to the note in Appendix 4. When using Adobe Reader or Adobe Acrobat, the Page Navigation toolbar can be set so that it has a Previous View button. After clicking a note number in Table 1 to go to Appendix 4, it is possible to go directly back to Table 1 by clicking the Previous View button.

| Scientific name  | Common name                               | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes    |
|--|---|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|----------|
| <i>Abutilon theophrastii</i>   | Velvet-leaf<br>Butter-print               |             | E           | A           | 2<br>L3     | X      |             | X      | X           |        | X      |             | X      |             |          |
| <i>Acalypha rhomboidea</i>   | Common Three-seeded<br>Mercury            |             | N           | A           | 3           | X      | X           | X      |             |        | X      | X           | X      | X           |          |
| <i>Acer campestre</i>  | Hedge Maple<br>English Field Maple        | X           | E           | PS          | 1           |        |             |        |             |        |        |             | X      |             | Note 1   |
| <i>Acer ginnala</i><br>( <i>Acer tataricum</i> ssp. <i>ginnala</i> ) | Amur Maple                                | X           | E           | PS          | 2           | X      | X           | X      |             |        | X      |             | X      |             | I Note 2 |
| <i>Acer negundo</i>  | Box Elder                                 |             | N           | A           | 3<br>L4     | X      | X           | X      | X           |        | X      | X           | X      |             |          |
| <i>Acer platanoides</i>  | Norway Maple                              |             | E           | PP          | 1           | X      |             |        |             |        |        |             |        |             | I Note 3 |
| <i>Acer rubrum</i>   | Red Maple                                 |             | NI          | PS          | 2<br>L3     | X      |             | X      |             |        | X      | X           |        |             | Note 4   |
| <i>Acer saccharinum</i>  | Silver Maple                              |             | N           | A           | 3<br>L4     | X      | X           | X      | X           | X      | X      | X           | X      |             |          |
| <i>Acer saccharum</i>  | Sugar Maple                               |             | N           | PS          | 2           | X      |             | X      |             |        |        |             | X      |             | Note 5   |
| <i>Achillea millefolium</i>  | Yarrow<br>Milfoil                         |             | E           | A           | 2           | X      |             | X      |             |        | X      |             | X      |             |          |
| <i>Acorus calamus</i>  | One-veined Sweet Flag<br>Calamus          |             | E           | PS          | 1           |        |             |        |             | X      |        |             | X      |             | Note 6   |
| <i>Aesculus glabra</i>   | Ohio Buckeye                              |             | N           | PS          | 2           | X      | X           |        |             |        |        |             |        |             | Note 7   |
| <i>Agastache nepetoides</i>  | Yellow Giant Hyssop                       |             | N           | A?<br>PS?   | 1           | X      |             |        |             |        |        |             |        |             | R        |
| <i>Agastache scrophulariaefolia</i>                                  | Purple Giant Hyssop                       |             | N           | PS?<br>A?   | 2           | X      |             |        |             |        |        |             | X      |             |          |
| <i>Ageratina altissima</i><br>( <i>Eupatorium rugosum</i> )          | White Snakeroot                           |             | N           | A           | 3<br>L4     | X      | X           | X      |             |        | X      | X           | X      |             |          |
| <i>Agrimonia parviflora</i>  | Small-flowered Agrimony<br>Swamp Agrimony |             | N           | A           | 1           |        |             | X      |             |        |        |             |        |             | R        |
| <i>Agropyron repens</i>  | Quack Grass                               |             | E           | A           | 2<br>L4     | X      |             | X      |             |        | X      |             | X      |             | I        |
| <i>Agrostis gigantea</i><br>( <i>Agrostis alba</i> )                 | Redtop                                    |             | E           | A           | 2<br>L4     | X      | X           | X      | X           |        | X      | X           | X      |             | Note 8   |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name   | Common name                               | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes                     |
|---|---|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|---------------------------|
| <i>Agrostis hyemalis</i>  | Tickle Grass                              |             | N           | A           | 1<br>L3     |        |             | X      |             |        |        |             |        |             | R <a href="#">Note 9</a>  |
| <i>Agrostis perennans</i>   | Upland Bent Grass                         |             | N           | A           | 2           | X      |             |        |             |        |        |             | X      |             |                           |
| <i>Agrostis stolonifera</i><br>( <i>Agrostis alba</i> var. <i>palustris</i> )                     | Creeping Bent Grass                       |             | N           | A           | 2           |        | X           | X      |             | X      | X      |             |        |             |                           |
| <i>Ailanthus altissima</i>  | Tree of Heaven                            |             | E           | A           | 1           | X      |             |        |             |        |        |             |        |             | I                         |
| <i>Ajuga reptans</i>  | Carpet Bugle Weed                         |             | E           | A           | 2<br>L4     | X      | X           |        |             |        |        |             |        |             | I                         |
| <i>Alcea rosea</i><br>( <i>Althea rosea</i> )   | Hollyhock                                 |             | E           | PS          | 1           |        |             |        |             |        |        |             | X      |             |                           |
| <i>Alisma subcordatum</i>   | Small-flowered<br>Water Plantain          |             | N           | P?<br>A?    | 1           |        |             |        | X           |        |        |             |        |             | R <a href="#">Note 10</a> |
| <i>Alliaria petiolata</i>   | Garlic Mustard                            |             | E           | A           | 3<br>L4     | X      | X           | X      | X           |        | X      | X           | X      |             | I <a href="#">Note 11</a> |
| <i>Allium canadense</i>   | Wild Onion<br>Wild Garlic                 |             | N           | A           | 1           | X      | X           |        |             |        |        |             |        |             | R                         |
| <i>Allium sativum</i>   | Garlic                                    |             | E           | PS?<br>A?   | 2           | X      |             | X      |             |        | X      |             |        |             | <a href="#">Note 12</a>   |
| <i>Allium vineale</i>   | Field Garlic                              |             | E           | A           | 2           | X      |             |        |             |        | X      | X           |        |             |                           |
| <i>Alnus glutinosa</i>  | Black Alder<br>European Alder             |             | E           | PS          | 2<br>L4     | X      | X           | X      |             |        | X      | X           |        | X           | I                         |
| <i>Alopecurus carolinianus</i>  | Carolina Foxtail<br>Tufted Meadow Foxtail |             | N           | A           | 2           |        |             |        |             |        |        | X           | X      |             |                           |
| <i>Amaranthus albus</i>   | White Amaranth<br>Tumbleweed              |             | N           | A           | 2           |        |             |        |             |        |        |             | X      |             |                           |
| <i>Amaranthus blitoides</i><br>( <i>Amaranthus graecizans</i> ,<br>misapplied)                    | Prostrate Pigweed                         |             | E           | A           | 1           |        |             |        |             |        |        |             |        | X           |                           |
| <i>Amaranthus hybridus</i>  | Green Pigweed                             |             | E           | A           | 2           | X      |             | X      | X           |        | X      | X           | X      | X           |                           |
| <i>Amaranthus spinosus</i>  | Spiny Pigweed                             |             | E           | A           | 1           |        |             |        |             |        |        |             | X      |             | <a href="#">Note 13</a>   |
| <i>Amaranthus tuberculatus</i><br>( <i>Acnida altissima</i> )<br>( <i>Amaranthus altissimus</i> ) | Water Hemp                                |             | E           | A           | 2<br>L3     | X      | X           | X      | X           |        | X      | X           | X      |             |                           |
| <i>Ambrosia artemisiifolia</i>  | Common Ragweed                            | X           | N           | A           | 3           | X      | X           | X      | X           |        | X      | X           | X      |             |                           |
| <i>Ambrosia trifida</i>   | Giant Ragweed                             | X           | N           | A           | 3<br>L4     | X      | X           | X      | X           |        | X      | X           | X      |             |                           |
| <i>Amelanchier arborea</i>  | Shadbush                                  |             | N           | PP          | 2<br>L4     | X      |             |        |             |        |        |             |        |             | <a href="#">Note 14</a>   |
| <i>Amelanchier x grandiflora</i>  | Hybrid Serviceberry                       | X           | E           | PS          | 2<br>L4     | X      | X           |        |             |        | X      | X           |        |             |                           |
| <i>Amorpha canescens</i>  | Leadplant                                 | X           | N           | PP          | 1           |        |             | X      |             |        |        |             |        |             | R <a href="#">Note 15</a> |
| <i>Amorpha fruticosa</i>  | False Indigo                              | X           | N           | PS          | 1           |        |             |        |             |        | X      | X           | X      |             | R <a href="#">Note 16</a> |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name  | Common name                                | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes   |
|--|--|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|---------|
| <i>Ampelamus albidus</i><br>( <i>Cynanchum laeve</i> )   | Bluevine                                   |             | N           | A           | 3           | X      | X           | X      | X           |        | X      | X           | X      |             |         |
| <i>Anagallis arvensis</i>  | Scarlet Pimpernel                          |             | E           | A           | 1           |        |             |        |             |        |        |             | X      |             | Note 17 |
| <i>Andropogon gerardii</i>   | Big Bluestem                               | X           | N           | PS          | 4<br>L5     | X      | X           | X      | X           |        | X      | X           | X      |             |         |
| <i>Anemone hupehensis</i>  | Japanese Windflower<br>Chinese Anemone     |             | E           | P           | 1           | X      |             |        |             |        |        |             |        |             | Note 18 |
| <i>Anemone virginiana</i>  | Tall Anemone                               |             | N           | PS          | 2           |        |             | X      |             |        |        |             |        |             | Note 19 |
| <i>Anethum graveolens</i>  | Dill                                       |             | E           | PS          | 1<br>L3     | X      |             |        |             |        |        |             | X      |             |         |
| <i>Antennaria parlinii</i><br>( <i>Antennaria plantaginifolia</i> )                              | Parlin's Pussytoes                         |             | N           | PS          | 1           |        |             |        |             |        |        |             | X      | R           | Note 20 |
| <i>Antenoron virginianum</i><br>( <i>Polygonum virginianum</i> )<br>( <i>Tovara virginiana</i> ) | Virginia Knotweed<br>Jumpseed              |             | N           | A           | 3<br>L4     | X      | X           | X      |             |        | X      | X           | X      |             |         |
| <i>Anthemis cotula</i>   | Mayweed<br>Dog Fennel                      |             | E           | A           | 2<br>L3     |        |             |        |             |        |        |             | X      |             |         |
| <i>Apocynum cannabinum</i>   | Common Dogbane<br>Indian Hemp              |             | N           | A           | 3           | X      | X           | X      | X           | X      | X      | X           | X      |             |         |
| <i>Apocynum sibiricum</i>  | Prairie Indian Hemp                        |             | N           | A           | 1           |        |             | X      |             |        |        |             |        | R           | Note 21 |
| <i>Aquilegia canadensis</i>  | Wild Columbine                             | X           | N           | PS          | 2<br>L3     | X      |             |        |             |        |        |             |        |             | Note 22 |
| <i>Arctium minus</i>   | Burdock                                    |             | E           | A           | 2           | X      | X           | X      |             |        | X      | X           | X      | I           | Note 23 |
| <i>Arenaria serpyllifolia</i>  | Thyme-leaved Sandwort                      |             | E           | A           | 2<br>L4     | X      | X           |        |             |        |        |             | X      |             | Note 24 |
| <i>Arisaema triphyllum</i><br>( <i>Arisaema atorubens</i> )                                      | Jack in the Pulpit                         | X           | N           | PS          | 2<br>L3     | X      |             |        |             |        |        |             |        |             |         |
| <i>Armoracia rusticana</i>   | Horseradish                                |             | E           | PS          | 1           |        |             |        |             |        | X      |             | X      |             |         |
| <i>Artemisia annua</i>   | Annual Wormwood<br>Sweet Wormwood          |             | E           | A           | 1           | X      |             |        |             |        |        |             | X      |             |         |
| <i>Artemisia vulgaris</i>  | Common Mugwort                             |             | E           | A           | 2<br>L5     | X      | X           | X      | X           |        | X      | X           | X      | I           |         |
| <i>Asarum canadense</i>  | Wild Ginger                                |             | N           | PS          | 2           | X      |             |        |             |        |        |             |        |             |         |
| <i>Asclepias incarnata</i>   | Swamp Milkweed                             | X           | N           | PS          | 2           |        | X           | X      | X           | X      |        | X           |        |             |         |
| <i>Asclepias syriaca</i>   | Common Milkweed                            | X           | N           | A           | 3           | X      |             | X      |             |        | X      |             | X      |             |         |
| <i>Asclepias tuberosa</i>  | Butterfly Weed                             | X           | N           | P           | 2           |        |             | X      |             |        |        |             |        |             |         |
| <i>Asclepias verticillata</i>  | Whorled Milkweed                           |             | N           | A           | 1           |        |             | X      |             |        |        |             |        | R           | Note 25 |
| <i>Asimina triloba</i>   | Pawpaw                                     |             | N           | PP          | 1           | X      |             |        |             |        |        |             |        | R           |         |
| <i>Asparagus officinalis</i>   | Asparagus                                  |             | E           | A           | 2           | X      |             |        |             |        | X      |             |        |             |         |
| <i>Aster cordifolius</i>   | Blue Heart-leaved Aster<br>Blue Wood Aster |             | N           | PS          | 2           | X      |             |        |             |        |        |             |        |             | Note 26 |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name   | Common name                                    | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes     |
|---|--|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|-----------|
| <i>Aster ericoides</i>  | Heath Aster                                    | X           | N           | PS          | 2           |        |             | X      |             |        |        |             |        |             | Note 27   |
| <i>Aster laevis</i>   | Smooth Blue Aster                              | X           | N           | PP          | 1           |        |             | X      |             |        |        |             |        |             | R         |
| <i>Aster lanceolatus</i><br>( <i>Aster simplex</i> )                                | Panicled Aster<br>Eastern Lined Aster          |             | N           | A           | 3<br>L4     | X      | X           | X      | X           | X      | X      | X           | X      |             | Note 28   |
| <i>Aster lateriflorus</i>   | Side-flowered Aster<br>Calico Aster            |             | N           | A           | 1           |        |             | X      |             |        |        |             |        |             | R Note 29 |
| <i>Aster novae-angliae</i>  | New England Aster                              | X           | N           | PS          | 3           | X      | X           | X      |             |        | X      | X           |        |             |           |
| <i>Aster oblongifolius</i>  | Aromatic Aster                                 |             | N           | P           | 1           | X      |             |        |             |        |        |             |        |             | R         |
| <i>Aster ontarionis</i>   | Ontario Aster                                  |             | N           | A           | 1           | X      |             |        |             | X      |        |             |        |             | R         |
| <i>Aster oolentangiensis</i><br>( <i>Aster azureus</i> )                            | Sky-blue Aster                                 | X           | N           | PS          | 1           | X      |             |        |             |        |        |             |        |             | R         |
| <i>Aster pilosus</i>  | Frost Aster<br>Hairy Aster                     | X           | N           | A           | 3           | X      |             | X      |             |        | X      |             | X      |             |           |
| <i>Aster praealtus</i>  | Willow Aster                                   |             | N           | A?<br>PS?   | 1           |        |             | X      |             |        |        |             |        |             | R Note 30 |
| <i>Aster urophyllus</i>   | White Heart-leaved Aster                       |             | N           | P           | 1           | X      |             |        |             |        |        |             |        |             | R Note 31 |
| <i>Astragalus canadensis</i>  | Canada Milk Vetch                              |             | N           | P           | 1           |        |             | X      |             |        |        |             |        |             | R Note 32 |
| <i>Atriplex patula</i>  | Common Orach<br>Spear Scale                    |             | E           | A           | 2           | X      |             |        |             |        |        |             | X      |             |           |
| <i>Avena sativa</i><br>( <i>Avena fatua</i> var. <i>sativa</i> )                    | Oats   |             | E           | P           | 1<br>L3     | X      |             |        |             |        |        |             |        |             | Note 33   |
| <i>Baptisia alba</i><br>( <i>Baptisia lactea</i> )<br>( <i>Baptisia leucantha</i> ) | White Wild Indigo                              | X           | N           | PS          | 3<br>L4     | X      |             | X      |             |        | X      |             |        |             |           |
| <i>Barbarea vulgaris</i>  | Yellow Rocket<br>Bitter Winter Cress           |             | E           | A           | 3<br>L4     | X      | X           | X      | X           | X      | X      | X           | X      |             |           |
| <i>Belamcanda chinensis</i>   | Blackberry Lily                                |             | E           | PS?<br>A?   | 1           |        |             |        |             |        | X      |             |        |             | I Note 34 |
| <i>Betula nigra</i>   | River Birch                                    |             | N           | PS          | 2<br>L4     | X      | X           | X      |             |        | X      |             |        |             | Note 35   |
| <i>Bidens aristosa</i>  | Bearded Beggar-ticks                           |             | N           | A           | 1           |        |             |        |             |        |        |             |        | X           | R Note 36 |
| <i>Bidens cernua</i>  | Nodding Bur Marigold<br>Nodding Swamp Marigold |             | N           | A           | 2           |        |             |        |             |        |        |             |        | X           | Note 37   |
| <i>Bidens connata</i>   | Purple-stemmed Tickseed                        |             | N           | A           | 1           | X      | X           |        |             |        |        |             |        | X           | R         |
| <i>Bidens frondosa</i>  | Common Beggar-ticks                            |             | N           | A           | 3<br>L4     | X      | X           | X      | X           | X      | X      | X           |        |             |           |
| <i>Bidens polylepis</i>   | Swamp Marigold<br>Tickseed Sunflower           |             | N           | A           | 3<br>L5     | X      | X           | X      | X           | X      | X      | X           |        |             | Note 38   |
| <i>Blephilia hirsuta</i>  | Hairy Wood Mint<br>Pagoda Plant                |             | N           | P           | 1           | X      |             |        |             |        |        |             |        |             | R         |
| <i>Boehmeria cylindrica</i>   | False Nettle                                   |             | N           | A           | 2           | X      | X           |        |             |        |        |             |        | X           | Note 39   |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name  | Common name                              | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes                     |
|--|--|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|---------------------------|
| <i>Boltonia asteroides</i>   | False Aster                              |             | N           | A?<br>P?    | 1           |        |             |        |             | X      |        |             |        |             | R <a href="#">Note 40</a> |
| <i>Borago officinalis</i>  | Borage                                   |             | E           | PS          | 1           |        |             |        |             |        |        |             | X      |             |                           |
| <i>Bothriochloa ischaemum</i>                                      | Turkestan Bluestem<br>Yellow Bluestem    |             | E           | A           | 1           | X      |             |        |             |        |        |             |        |             | <a href="#">Note 41</a>   |
| <i>Botrychium dissectum</i><br>( <i>Botrychium obliquum</i> )      | Bronze Fern<br>Coarse-lobed Grape Fern   |             | N           | A?<br>P?    | 1           | X      |             |        |             |        |        |             |        |             | R <a href="#">Note 42</a> |
| <i>Bouteloua curtipendula</i>                                      | Side-oats Grama                          | X           | N           | PS          | 2<br>L3     | X      | X           |        |             | X      | X      |             |        |             | <a href="#">Note 43</a>   |
| <i>Brachyelytrum erectum</i>                                       | False Brome                              |             | N           | P?<br>A?    | 1           | X      |             |        |             |        |        |             |        |             | R                         |
| <i>Brassica juncea</i>   | Mustard Greens<br>Chinese Mustard        |             | E           | PS          | 1<br>L2     |        |             |        |             |        |        |             | X      |             |                           |
| <i>Brassica nigra</i>  | Black Mustard                            |             | E           | A           | 1           |        |             |        |             |        |        |             | X      |             |                           |
| <i>Brassica rapa</i><br>( <i>Brassica napus</i> , misapplied)      | Field Mustard                            |             | E           | PS          | 1           |        |             |        |             |        |        |             | X      |             |                           |
| <i>Brickellia eupatorioides</i><br>( <i>Kuhnia eupatorioides</i> ) | False Boneset                            | X           | N           | PS          | 2<br>L3     | X      | X           |        |             | X      |        |             |        |             |                           |
| <i>Bromus commutatus</i>   | Hairy Chess                              |             | E           | A           | 2           | X      |             |        |             |        |        |             | X      |             |                           |
| <i>Bromus inermis</i>  | Smooth Brome                             |             | E           | A?<br>PS?   | 3<br>L4     | X      | X           |        |             | X      | X      |             |        |             | I <a href="#">Note 44</a> |
| <i>Bromus secalinus</i>  | Cheat<br>Chess                           |             | E           | A           | 2<br>L3     |        |             |        |             |        |        |             | X      |             |                           |
| <i>Bromus tectorum</i>   | Downy Chess                              |             | E           | A           | 3<br>L5     | X      | X           | X      | X           |        | X      | X           | X      |             |                           |
| <i>Buchloë dactyloides</i>   | Buffalo Grass                            |             | NI          | PS          | 2<br>L5     |        |             |        |             | X      | X      |             |        |             |                           |
| <i>Calamagrostis canadensis</i>                                    | Blue-joint Grass                         |             | N           | PS          | 2<br>L3     |        |             | X      | X           | X      |        |             |        |             |                           |
| <i>Callicarpa dichotoma</i>  | Purple Beautyberry<br>Korean Beautyberry |             | E           | A           | 1           | X      |             |        |             |        |        |             |        |             | <a href="#">Note 45</a>   |
| <i>Callirhoë digitata</i>  | Fringed Poppy Mallow<br>Winecups         |             | E           | P           | 1           |        |             | X      |             |        |        |             |        |             | <a href="#">Note 46</a>   |
| <i>Caltha palustris</i>  | Marsh Marigold<br>Cowslip                |             | N           | PS          | 1<br>L3     |        |             |        | X           |        |        |             |        |             | R <a href="#">Note 47</a> |
| <i>Calystegia sepium</i><br>( <i>Convolvulus sepium</i> )          | Hedge Bindweed                           |             | N           | A           | 3           | X      | X           | X      |             | X      | X      |             |        |             |                           |
| <i>Camassia scilloides</i>   | Wild Hyacinth                            | X           | N           | P           | 1           | X      | X           |        |             |        |        |             |        |             | R <a href="#">Note 48</a> |
| <i>Campanulastrum americanum</i><br>( <i>Campanula americana</i> ) | American Bellflower                      |             | N           | PS?<br>A?   | 2           | X      |             |        |             |        |        |             |        |             |                           |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name  | Common name  | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes     |
|--|--|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|-----------|
| <i>Campsis radicans</i>                                  | Trumpet Creeper                                    |             | N           | A           | 2<br>L5     | X      |             |        |             |        | X      |             |        |             |           |
| <i>Capsella bursa-pastoris</i>                           | Shepherd's Purse                                   |             | E           | A           | 3           | X      | X           | X      | X           |        | X      | X           | X      |             |           |
| <i>Cardamine hirsuta</i>                                 | Hairy Bitter Cress                                 |             | E           | A           | 1<br>L3     |        |             |        |             |        |        |             | X      | X           |           |
| <i>Cardamine pensylvanica</i>                            | Pennsylvania Bitter Cress                          |             | N           | A           | 2           |        | X           |        |             |        |        |             |        | X           |           |
| <i>Carex blanda</i>                                      | Common Wood Sedge                                  |             | N           | A           | 3           | X      | X           | X      | X           |        | X      | X           | X      |             | Note 49   |
| <i>Carex cephalophora</i>                                | Capitate Sedge                                     |             | N           | A?<br>P?    | 2           | X      | X           | X      | X           |        | X      | X           | X      |             |           |
| <i>Carex cristatella</i>                                 | Crested Oval Sedge                                 |             | N           | A?<br>PS?   | 2           |        | X           |        | X           | X      |        |             |        |             |           |
| <i>Carex davisii</i>                                     | Davis's Sedge                                      |             | N           | A           | 1           |        |             | X      |             |        |        |             |        |             | R Note 50 |
| <i>Carex frankii</i>                                     | Bristly Cat-tail Sedge<br>Frank's Sedge            |             | N           | A<br>PS     | 2<br>L3     | X      | X           |        |             |        | X      | X           | X      | X           |           |
| <i>Carex granularis</i>                                  | Pale Sedge<br>Meadow Sedge                         |             | N           | A           | 2           | X      |             |        |             |        | X      |             | X      |             |           |
| <i>Carex gravida</i>                                     | Long-awned<br>Bracted Sedge<br>Heavy Sedge         |             | N           | A?<br>P?    | 1           |        |             | X      |             |        |        |             |        |             | R Note 51 |
| <i>Carex grisea</i>                                      | Wood Gray Sedge<br>Inflated Narrow-leaved<br>Sedge |             | N           | A           | 3           | X      | X           | X      | X           |        | X      | X           | X      |             | Note 52   |
| <i>Carex hystericina</i>                                 | Porcupine Sedge                                    |             | N           | PS          | 1<br>L3     |        |             |        |             | X      |        |             |        |             | R Note 53 |
| <i>Carex jamesii</i>                                     | James's Sedge<br>Grass Sedge                       |             | N           | A           | 2<br>L3     | X      |             |        |             |        | X      |             | X      |             | Note 54   |
| <i>Carex laeviconica</i>                                 | Long-toothed Lake Sedge<br>Plains Slough Sedge     |             | N           | PS          | 1<br>L5     |        |             |        |             | X      |        |             |        |             | R Note 55 |
| <i>Carex normalis</i>                                    | Spreading Oval Sedge                               |             | N           | A<br>PS?    | 2           | X      |             | X      |             | X      | X      |             |        |             |           |
| <i>Carex pellita</i><br>( <i>Carex lanuginosa</i> )      | Broad-leaved<br>Woolly Sedge                       |             | N           | PS          | 1<br>L5     |        |             |        |             | X      |        |             |        |             | R Note 56 |
| <i>Carex stipata</i>                                     | Common Fox Sedge                                   |             | N           | A           | 2           | X      | X           | X      |             | X      | X      | X           | X      |             |           |
| <i>Carex tribuloides</i>                                 | Awl-fruited Oval Sedge                             |             | N           | A           | 2           | X      |             |        |             | X      | X      |             |        |             |           |
| <i>Carex vulpinoidea</i>                                 | Brown Fox Sedge<br>Foxtail Sedge                   |             | N           | PS          | 2           |        |             |        | X           | X      |        |             |        |             |           |
| <i>Carpinus caroliniana</i>                              | Musclewood<br>Blue Beech                           | X           | N           | PP          | 2           | X      |             |        |             |        |        |             |        |             | Note 57   |
| <i>Carya illinoensis</i><br>( <i>Carya illinoensis</i> ) | Pecan  |             | NI          | A           | 1           |        |             | X      |             |        |        |             |        |             | R Note 58 |
| <i>Carya ovalis</i>                                      | Sweet Pignut Hickory<br>Red Hickory                |             | N           | PP          | 1           | X      |             |        |             |        |        |             |        |             | R Note 59 |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name   | Common name   | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes                     |
|---|---|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|---------------------------|
| <i>Carya ovata</i>  | Shagbark Hickory                                      |             | N           | PS          | 1           | X      |             |        |             |        |        |             |        |             | R <a href="#">Note 60</a> |
| <i>Catalpa speciosa</i>   | Northern Catalpa                                      |             | NI          | PS?<br>A?   | 2<br>L3     | X      | X           | X      | X           |        | X      | X           |        |             | I                         |
| <i>Celastrus orbiculatus</i>  | Round-leaved Bittersweet<br>Oriental Bittersweet      |             | E           | A           | 2           | X      |             |        |             |        |        |             |        |             | I <a href="#">Note 61</a> |
| <i>Celtis laevigata</i>   | Sugarberry  |             | NI          | PP          | 1           |        |             | X      |             |        |        |             |        |             | R                         |
| <i>Celtis occidentalis</i>  | Hackberry   |             | N           | A<br>PS     | 3<br>L4     | X      | X           | X      |             |        | X      | X           |        |             |                           |
| <i>Cerastium diffusum</i>   | Four-stamen Chickweed                                 |             | E           | A           | 1           |        |             |        |             |        |        |             | X      |             |                           |
| <i>Cerastium fontanum</i><br>( <i>Cerastium vulgatum</i> )                                  | Common Mouse-eared<br>Chickweed                       |             | E           | A           | 3           | X      |             |        |             |        | X      | X           |        |             |                           |
| <i>Cerastium glomeratum</i><br>( <i>Cerastium viscosum</i> )                                | Clammy Mouse-eared<br>Chickweed                       |             | E           | A           | 2           |        |             |        |             |        |        |             | X      |             |                           |
| <i>Cercis canadensis</i>  | Redbud  | X           | N           | PS          | 2           | X      |             | X      |             |        | X      |             |        |             | <a href="#">Note 62</a>   |
| <i>Chamaecrista fasciculata</i><br>( <i>Cassia fasciculata</i> )                            | Partridge Pea   | X           | N           | PS          | 2<br>L4     |        |             | X      | X           |        |        |             | X      |             |                           |
| <i>Chamaesyce maculata</i><br>( <i>Chamaesyce supina</i> )<br>( <i>Euphorbia supina</i> )   | Spotted Spurge  |             | N           | A           | 2<br>L3     |        |             |        |             |        |        |             | X      |             |                           |
| <i>Chamaesyce nutans</i><br>( <i>Chamaesyce maculata</i> )<br>( <i>Euphorbia maculata</i> ) | Nodding Spurge  |             | N           | A           | 2           |        |             |        |             |        |        |             | X      |             |                           |
| <i>Chamaesyce prostrata</i><br>( <i>Euphorbia chamaesyce</i> )                              | Green Creeping Spurge                                 |             | E           | A           | 2           |        |             |        |             |        |        |             | X      |             | <a href="#">Note 63</a>   |
| <i>Chasmanthium latifolium</i><br>( <i>Uniola latifolia</i> )                               | Sea Oats<br>Inland Oats                               |             | N           | PS          | 2<br>L5     | X      |             |        |             |        |        |             |        |             |                           |
| <i>Chelone glabra</i>   | White Turtlehead                                      |             | N           | P           | 1           |        |             |        |             | X      |        |             |        |             | R                         |
| <i>Chenopodium album</i>  | Lamb's Quarters                                       | X           | E           | A           | 3           | X      | X           | X      |             |        | X      | X           | X      |             |                           |
| <i>Chloris verticillata</i>   | Windmill Grass  |             | E           | A           | 1           |        |             |        |             |        |        |             | X      |             |                           |
| <i>Cichorium intybus</i>  | Chicory   | X           | E           | A           | 2           | X      |             | X      |             |        | X      | X           |        |             |                           |
| <i>Cinna arundinacea</i>  | Stout Wood Reed                                       |             | N           | A?<br>PS?   | 2           | X      | X           |        |             |        |        |             |        |             |                           |
| <i>Circaea lutetiana</i><br>( <i>Circaea quadrisulcata</i> )                                | Enchanter's Nightshade                                |             | N           | A           | 2<br>L4     | X      |             |        |             |        | X      |             |        |             |                           |
| <i>Cirsium arvense</i>  | Canada Thistle  | X           | E           | A           | 3           | X      | X           | X      | X           |        | X      | X           | X      |             | I <a href="#">Note 64</a> |
| <i>Cirsium discolor</i>   | Field Thistle<br>Pasture Thistle                      |             | N           | A           | 3           | X      |             | X      |             |        | X      | X           |        |             |                           |
| <i>Claytonia virginica</i>  | Spring Beauty   |             | N           | PS          | 2           | X      | X           |        |             |        | X      |             |        |             |                           |
| <i>Clematis terniflora</i><br>( <i>Clematis dioscoreifolia</i> )                            | Yam-leaved Clematis<br>Sweet Autumn<br>Virgin's Bower |             | E           | A           | 2           | X      |             |        |             |        | X      |             |        |             | I                         |



**Table 1. Annotated list of the flora *continued*.**

| Scientific name   | Common name                               | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes     |
|---|---|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|-----------|
| <i>Cleome hassleriana</i>   | Spider Flower                             |             | E           | PS<br>A     | 1           |        |             |        |             |        |        |             | X      | X           | Note 65   |
| <i>Commelina communis</i>   | Common Day-flower                         |             | E           | A           | 1           | X      |             |        |             |        |        |             | X      |             |           |
| <i>Conium maculatum</i>   | Poison Hemlock                            |             | E           | A           | 3           | X      | X           | X      | X           |        | X      | X           | X      |             | I Note 66 |
| <i>Conoclinium coelestinum</i><br>( <i>Eupatorium coelestinum</i> )                     | Blue Mist-flower<br>Ageratum              |             | N           | P<br>A?     | 2           | X      |             |        |             |        | X      |             |        |             |           |
| <i>Consolida ajacis</i><br>( <i>Consolida ambigua</i> )<br>( <i>Delphinium ajacis</i> ) | Rocket Larkspur<br>Doubtful Knight's Spur |             | E           | PS          | 1           |        |             |        |             |        |        |             | X      |             |           |
| <i>Convallaria majalis</i>  | Lily of the Valley                        |             | E           | A           | 1           |        |             |        |             |        |        |             | X      |             | I Note 67 |
| <i>Convolvulus arvensis</i>   | Field Bindweed                            |             | E           | A           | 2<br>L3     | X      |             | X      |             |        | X      |             | X      |             |           |
| <i>Conyza canadensis</i><br>( <i>Erigeron canadensis</i> )                              | Mare's Tail<br>Horseweed                  | X           | N           | A           | 3           | X      | X           | X      | X           |        | X      | X           | X      |             |           |
| <i>Coreopsis grandiflora</i>  | Large-flowered Coreopsis                  |             | E           | PS          | 2<br>L4     |        |             | X      |             |        |        |             |        |             |           |
| <i>Coreopsis palmata</i>  | Prairie Coreopsis                         | X           | N           | PS          | 2<br>L4     |        |             | X      |             |        |        |             |        |             |           |
| <i>Coreopsis tinctoria</i>  | Golden Coreopsis                          |             | E           | P           | 1           |        |             |        |             |        |        |             | X      |             | Note 68   |
| <i>Coreopsis tripteris</i>  | Tall Coreopsis<br>Tall Tickseed           | X           | N           | PS          | 3<br>L4     | X      |             | X      | X           |        | X      |             |        |             |           |
| <i>Coriandrum sativum</i>   | Coriander<br>Cilantro                     |             | E           | PS          | 1           |        |             |        |             |        |        |             | X      |             |           |
| <i>Cornus alternifolia</i>  | Alternate-leaved Dogwood                  |             | N           | P           | 1           | X      |             |        |             |        |        |             |        |             | R Note 69 |
| <i>Cornus amomum</i>  | Swamp Dogwood                             |             | NI          | PS          | 2<br>L3     | X      | X           |        |             |        |        |             |        | X           | Note 70   |
| <i>Cornus drummondii</i>  | Rough-leaved Dogwood                      |             | N           | PS          | 3<br>L4     | X      |             | X      |             |        | X      |             |        |             | Note 71   |
| <i>Cornus florida</i>   | Flowering Dogwood                         | X           | N           | PS          | 2           |        |             |        |             |        |        |             | X      |             | Note 72   |
| <i>Cornus sericea</i><br>( <i>Cornus stolonifera</i> )                                  | Red-osier Dogwood                         |             | N           | PS          | 3           | X      | X           | X      | X           | X      | X      | X           |        | X           |           |
| <i>Corylus americana</i>  | American Hazel                            |             | N           | P           | 2           | X      |             | X      |             |        | X      |             |        |             |           |
| <i>Cosmos bipinnatus</i>  | Common Cosmos                             |             | E           | PS          | 1           |        |             |        |             |        |        |             | X      |             |           |
| <i>Cotinus coggygria</i>  | European Smoke Tree                       | X           | E           | PS          | 1           |        |             |        |             |        |        |             | X      |             | Note 73   |
| <i>Crataegus crus-galli</i>   | Cock's Spur Thorn                         | X           | N           | PS          | 1           | X      |             |        |             |        |        | X           | X      |             | R Note 74 |
| <i>Crataegus mollis</i>   | Downy Hawthorn<br>Red Haw                 |             | N           | PS          | 1           | X      |             |        |             |        |        |             |        |             | R Note 75 |
| <i>Crataegus phaenopyrum</i>  | Washington Thorn                          |             | NI          | PS          | 2           | X      | X           | X      |             |        |        |             |        |             |           |
| <i>Crataegus succulenta</i>   | Long-spined Hawthorn<br>Fleshy Hawthorn   |             | N           | PS          | 1           | X      |             |        |             |        |        |             |        |             | R Note 76 |
| <i>Crocus vernus</i>  | Spring Crocus                             |             | E           | P           | 1           | X      |             |        |             |        |        |             |        |             |           |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name   | Common name  | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes     |
|---|--|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|-----------|
| <i>Cryptotaenia canadensis</i>                                | Honewort   |             | N           | A           | 2<br>L3     | X      | X           |        |             |        |        |             |        |             |           |
| <i>Cucurbita pepo</i>   | Field Pumpkin<br>Jack-o-Lantern Pumpkin            |             | E           | A           | 1           |        |             |        |             |        |        |             | X      | X           | Note 77   |
| <i>Cyperus esculentus</i>                                     | Yellow Nut-sedge<br>Chufa                          |             | N           | A           | 2<br>L4     | X      | X           | X      | X           | X      | X      | X           | X      |             |           |
| <i>Cyperus ferruginescens</i><br>( <i>Cyperus odoratus</i> )  | Rusty Flat-sedge<br>Fragrant Flat-sedge            |             | N           | A           | 1           |        |             |        |             |        |        |             |        | X           | R         |
| <i>Cyperus strigosus</i>                                      | Straw-colored Flat-sedge                           |             | N           | A           | 2           |        |             |        | X           |        | X      | X           | X      |             |           |
| <i>Cypripedium pubescens</i>                                  | Yellow Lady's Slipper                              |             | N           | P           | 1           | X      |             |        |             |        |        |             |        |             | R         |
| <i>Dactylis glomerata</i>                                     | Orchard Grass                                      |             | E           | A           | 3           | X      | X           |        |             | X      |        | X           |        |             |           |
| <i>Dalea candida</i><br>( <i>Petalostemum candidum</i> )      | White Prairie Clover                               | X           | N           | P           | 1           |        | X           |        |             |        |        |             |        |             | R Note 78 |
| <i>Dalea purpurea</i><br>( <i>Petalostemum purpureum</i> )    | Purple Prairie Clover                              | X           | N           | PS          | 2           |        | X           |        |             |        |        |             |        |             | Note 79   |
| <i>Datura stramonium</i>                                      | Jimson Weed  |             | E           | A           | 2           | X      |             |        |             |        |        | X           | X      |             |           |
| <i>Daucus carota</i>  | Wild Carrot<br>Queen Anne's Lace                   | X           | E           | A           | 3<br>L4     | X      | X           |        |             | X      | X      | X           |        |             | I Note 80 |
| <i>Dentaria laciniata</i><br>( <i>Cardamine concatenata</i> ) | Toothwort  |             | N           | PS          | 2<br>L3     | X      |             |        |             |        |        |             |        |             |           |
| <i>Descurainia pinnata</i>                                    | Tansy Mustard                                      |             | NI          | A           | 2           |        |             |        |             | X      |        | X           |        |             |           |
| <i>Desmanthus illinoensis</i>                                 | Illinois Bundle-flower<br>Illinois Sensitive Plant |             | N           | PS          | 1<br>L3     |        | X           |        |             |        |        |             |        |             | R         |
| <i>Desmodium canadense</i>                                    | Showy Tick Trefoil                                 | X           | N           | PS          | 2<br>L3     |        | X           |        |             |        |        |             |        |             |           |
| <i>Desmodium illinoense</i>                                   | Illinois Tick Trefoil                              | X           | N           | PS          | 3           | X      | X           |        |             | X      |        |             |        |             |           |
| <i>Dianthus armeria</i>                                       | Deptford Pink                                      |             | E           | A           | 1           | X      |             |        |             |        |        |             |        |             |           |
| <i>Diarrhena americana</i>                                    | Beak Grass   |             | N           | PS          | 2<br>L4     | X      |             |        |             |        |        |             |        |             |           |
| <i>Digitalis lanata</i>                                       | Grecian Foxglove<br>Woolly Foxglove                |             | E           | A           | 1           |        |             |        |             | X      |        |             |        |             | Note 81   |
| <i>Digitaria ischaemum</i>                                    | Smooth Crabgrass                                   |             | E           | A           | 3           |        |             |        |             |        |        | X           |        |             |           |
| <i>Digitaria sanguinalis</i>                                  | Common Crabgrass<br>Hairy Crabgrass                |             | E           | A           | 3           | X      |             |        |             | X      |        | X           |        |             | Note 82   |
| <i>Diospyros virginiana</i>                                   | Persimmon  |             | N           | PS          | 2           | X      |             |        |             | X      |        |             |        |             | Note 83   |
| <i>Dodecatheon meadia</i>                                     | Shooting Star                                      | X           | N           | PS          | 2<br>L3     |        | X           |        |             |        |        |             |        |             |           |
| <i>Duchesnea indica</i>                                       | Indian Strawberry<br>Mock Strawberry               |             | E           | A           | 2<br>L4     | X      | X           |        |             | X      | X      | X           |        |             | I         |
| <i>Echinacea pallida</i>                                      | Pale Purple Coneflower                             | X           | N           | PS          | 2<br>L4     |        | X           |        |             |        |        |             |        |             |           |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name   | Common name                              | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes                     |
|---|--|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|---------------------------|
| <i>Echinacea purpurea</i>                                     | Broad-leaved<br>Purple Coneflower        | X           | N           | PS          | 3<br>L4     | X      |             | X      |             |        | X      |             |        |             |                           |
| <i>Echinochloa muricata</i><br>( <i>Echinochloa pungens</i> ) | Wild Millet                              |             | N           | A           | 2<br>L3     | X      | X           |        | X           |        | X      | X           | X      | X           |                           |
| <i>Eclipta prostrata</i><br>( <i>Eclipta alba</i> )           | Yerba de Tajo                            |             | N           | A           | 1           | X      |             |        |             |        |        |             |        |             | R <a href="#">Note 84</a> |
| <i>Elaeagnus umbellata</i>                                    | Autumn Olive                             |             | E           | A           | 2<br>L3     | X      | X           | X      | X           |        | X      | X           | X      |             | I <a href="#">Note 85</a> |
| <i>Eleusine indica</i>  | Goose Grass                              |             | E           | A           | 2<br>L3     |        |             |        |             |        |        |             | X      |             |                           |
| <i>Ellisia nyctelea</i>                                       | Aunt Lucy                                |             | N           | A           | 2<br>L3     | X      |             |        |             |        | X      |             |        |             |                           |
| <i>Elymus canadensis</i>                                      | Nodding Wild Rye<br>Canada Wild Rye      | X           | N           | PS          | 2<br>L3     | X      |             | X      |             |        | X      |             |        |             |                           |
| <i>Elymus hystrix</i>   | Bottlebrush Grass                        |             | N           | PS          | 2           | X      |             |        |             |        |        |             |        |             |                           |
| <i>Elymus villosus</i>  | Silky Wild Rye<br>Slender Wild Rye       |             | N           | PS?<br>A?   | 3           | X      |             | X      |             |        | X      |             |        |             |                           |
| <i>Elymus virginicus</i>                                      | Virginia Wild Rye                        |             | N           | PS?<br>A?   | 3           | X      | X           | X      | X           |        | X      | X           |        |             |                           |
| <i>Enemion biternatum</i><br>( <i>Isopyrum biternatum</i> )   | False Rue Anemone                        |             | N           | P           | 1           | X      |             |        |             |        |        |             |        |             | R                         |
| <i>Epilobium coloratum</i>                                    | Cinnamon Willow Herb                     |             | N           | PS?<br>A?   | 2<br>L3     |        | X           | X      | X           | X      |        | X           |        |             |                           |
| <i>Eragrostis cilianensis</i>                                 | Stinking Love Grass                      |             | E           | A           | 2           |        |             |        |             |        |        |             | X      |             |                           |
| <i>Eragrostis minor</i><br>( <i>Eragrostis poaeoides</i> )    | Little Love Grass                        |             | E           | A           | 2           |        | X           |        |             |        |        |             | X      |             |                           |
| <i>Eragrostis pectinacea</i>                                  | Tufted Love Grass                        |             | N           | A           | 2           | X      | X           |        |             |        |        |             | X      | X           |                           |
| <i>Eragrostis spectabilis</i>                                 | Purple Lace Grass<br>Tumble Grass        |             | N           | A           | 1           |        |             |        |             |        | X      |             |        |             | R                         |
| <i>Erechtites hieracifolia</i>                                | Fireweed                                 |             | N           | A           | 2<br>L3     | X      |             |        |             |        | X      | X           | X      |             |                           |
| <i>Erigeron annuus</i>  | Annual Fleabane                          |             | N           | A           | 3           | X      |             | X      |             |        | X      |             | X      |             |                           |
| <i>Erigeron philadelphicus</i>                                | Marsh Fleabane                           |             | N           | A           | 2           | X      | X           |        |             |        | X      | X           | X      |             |                           |
| <i>Eriophila verna</i><br>( <i>Draba verna</i> )              | Vernal Whitlow Grass                     |             | E           | A           | 1<br>L4     |        |             |        |             |        |        |             | X      |             | <a href="#">Note 86</a>   |
| <i>Erodium cicutarium</i>                                     | Crane's Bill<br>Pin Clover               |             | E           | A           | 1           |        |             |        |             |        |        |             | X      |             |                           |
| <i>Eryngium yuccifolium</i>                                   | Rattlesnake Master                       | X           | N           | PS          | 3<br>L4     | X      |             | X      | X           |        |        |             |        |             |                           |
| <i>Erythronium albidum</i>                                    | White Trout Lily<br>White Adder's Tongue |             | N           | PS          | 2<br>L5     | X      |             |        |             |        |        |             |        |             |                           |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name   | Common name                            | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes     |
|---|--|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|-----------|
| <i>Euonymus alatus</i>  | Burning-bush<br>Winged Wahoo           |             | E           | A           | 2           | X      |             |        |             |        | X      |             |        |             | I         |
| <i>Euonymus atropurpureus</i>   | Wahoo                                  |             | N           | A           | 1           | X      |             |        |             |        |        |             |        |             | R         |
| <i>Euonymus fortunei</i>  | Wintercreeper<br>Climbing Euonymus     |             | E           | A           | 2           | X      |             |        |             |        |        |             |        |             | I         |
| <i>Euonymus yedoensis</i>   | Japanese Spindle Tree<br>Yedo Euonymus |             | E           | PS          | 1           | X      |             |        |             |        |        |             |        |             | Note 87   |
| <i>Eupatoriadelphus purpureus</i><br>( <i>Eupatorium purpureum</i> )                | Purple Joe Pye Weed                    |             | N           | PS          | 2<br>L3     | X      | X           |        |             |        |        |             |        |             |           |
| <i>Eupatorium altissimum</i>  | Tall Boneset<br>Tall Thoroughwort      | X           | N           | A           | 2<br>L3     | X      | X           | X      |             |        | X      | X           | X      |             |           |
| <i>Eupatorium perfoliatum</i>   | Common Boneset                         |             | N           | A?<br>P?    | 1           |        |             | X      |             |        |        |             |        |             | R Note 88 |
| <i>Eupatorium serotinum</i>   | Late Boneset                           |             | N           | A           | 2           | X      |             |        |             |        | X      |             |        |             |           |
| <i>Euphorbia corollata</i>  | Flowering Spurge                       | X           | N           | PS          | 2<br>L3     | X      |             | X      |             |        | X      |             |        |             |           |
| <i>Euthamia graminifolia</i><br>( <i>Solidago graminifolia</i> )                    | Hairy Grass-leaved<br>Goldenrod        | X           | N           | A?<br>PS?   | 3           | X      | X           | X      | X           |        | X      | X           |        |             |           |
| <i>Euthamia gymnospermoides</i><br>( <i>Solidago gymnospermoides</i> )              | Viscid Grass-leaved<br>Goldenrod       |             | N           | A?<br>P?    | 1           |        |             | X      |             |        |        |             |        |             | R Note 89 |
| <i>Fallopia scandens</i><br>( <i>Polygonum scandens</i> )                           | Climbing Buckwheat<br>False Buckwheat  |             | E           | A           | 3           | X      | X           | X      |             |        | X      | X           | X      |             |           |
| <i>Festuca arundinacea</i><br>( <i>Festuca elatior</i><br>var. <i>arundinacea</i> ) | Tall Fescue                            |             | E           | A?<br>PS?   | 3<br>L5     | X      |             | X      | X           |        | X      | X           | X      |             | I Note 90 |
| <i>Festuca rubra</i>  | Red Fescue                             |             | E           | PS          | 3           | X      |             |        |             |        |        |             | X      |             |           |
| <i>Filipendula rubra</i>  | Queen of the Prairie                   | X           | N           | PS          | 1<br>L3     |        | X           |        |             |        |        |             |        |             | R Note 91 |
| <i>Fragaria virginiana</i>  | Wild Strawberry                        | X           | N           | A<br>P      | 2<br>L3     | X      |             | X      |             |        | X      |             | X      |             |           |
| <i>Fragaria x ananassa</i>  | Domestic Strawberry                    |             | E           | A           | 1           |        |             | X      |             |        | X      |             | X      |             |           |
| <i>Fraxinus americana</i>   | White Ash                              |             | N           | PS          | 2           | X      |             |        |             |        |        |             |        |             |           |
| <i>Fraxinus lanceolata</i>  | Green Ash                              |             | N           | PS          | 4           | X      | X           | X      | X           |        | X      | X           | X      |             |           |
| <i>Fraxinus pennsylvanica</i>   | Red Ash                                | X           | N           | PS          | 2           | X      |             |        |             |        |        |             |        |             |           |
| <i>Galinsoga quadrisulcata</i><br>( <i>Galinsoga ciliata</i> )                      | Peruvian Daisy<br>Common Quickweed     |             | E           | A           | 2<br>L4     |        |             |        |             |        |        |             | X      |             |           |
| <i>Galium aparine</i>   | Cleavers<br>Annual Bedstraw            |             | N           | A           | 3<br>L4     | X      | X           |        |             |        | X      | X           | X      |             |           |
| <i>Galium triflorum</i>   | Sweet-scented Bedstraw                 |             | N           | A?<br>P?    | 1           | X      |             |        |             |        |        |             |        |             | R         |
| <i>Gaura biennis</i>  | Biennial Gaura<br>Butterfly Weed       |             | N           | PS          | 3           |        |             | X      |             |        | X      |             |        |             |           |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name                                     | Common name                                    | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes     |
|---|--|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|-----------|
| <i>Gentiana alba</i><br>( <i>Gentiana flavida</i> ) | Pale Gentian<br>Yellowish Gentian              | X           | N           | PS          | 4           | X      |             | X      |             |        | X      |             |        |             | Note 92   |
| <i>Gentiana andrewsii</i>                           | Bottle Gentian<br>Closed Gentian               | X           | N           | PS          | 2<br>L3     |        |             | X      |             |        |        |             |        |             | Note 93   |
| <i>Gentiana x pallidocyanea</i>                     | Hybrid Closed Gentian                          |             | N           | PS          | 2<br>L3     |        |             | X      |             |        |        |             |        |             | Note 94   |
| <i>Geranium maculatum</i>                           | Wild Geranium                                  | X           | N           | PS          | 2<br>L3     | X      |             |        |             |        |        |             |        |             |           |
| <i>Geum canadense</i>                               | White Avens                                    |             | N           | A           | 4           | X      | X           | X      | X           |        | X      | X           | X      |             |           |
| <i>Geum verum</i>                                   | Spring Avens                                   |             | N           | A           | 3           | X      | X           |        |             |        | X      | X           | X      |             |           |
| <i>Ginkgo biloba</i>                                | Ginkgo<br>Maidenhair Tree                      |             | E           | A           | 1           | X      |             |        |             |        |        |             |        |             | Note 95   |
| <i>Glechoma hederacea</i>                           | Creeping Charlie<br>Ground Ivy                 |             | E           | A           | 4<br>L5     | X      | X           | X      |             |        | X      | X           | X      |             | I Note 96 |
| <i>Gleditsia triacanthos</i>                        | Honey Locust                                   |             | N           | PS          | 3           | X      | X           | X      |             |        | X      | X           |        |             |           |
| <i>Glyceria striata</i>                             | Fowl Manna Grass                               |             | N           | PS          | 2           | X      |             | X      | X           | X      | X      | X           |        |             |           |
| <i>Glycine max</i>                                  | Soybean  |             | E           | A           | 1           |        |             |        |             |        |        |             | X      |             | Note 97   |
| <i>Gymnocladus dioicus</i>                          | Kentucky Coffee Tree                           |             | N           | PS          | 2<br>L4     | X      | X           |        |             |        |        |             | X      |             |           |
| <i>Hackelia virginiana</i>                          | Stickseed<br>Beggars' Lice                     |             | N           | A           | 3           | X      | X           | X      |             |        | X      | X           | X      |             |           |
| <i>Hamamelis vernalis</i>                           | Vernal Witch Hazel                             | X           | E           | PS          | 1<br>L3     |        |             |        |             |        | X      |             |        |             |           |
| <i>Helenium autumnale</i>                           | Yellow Sneezeweed                              | X           | N           | PS          | 2<br>L3     | X      |             | X      | X           | X      |        |             |        |             |           |
| <i>Helianthus annuus</i>                            | Annual Sunflower<br>Garden Sunflower           | X           | N           | PS          | 1<br>L3     |        |             |        |             |        |        |             | X      |             | R Note 98 |
| <i>Helianthus decapetalus</i>                       | Ten-petaled Sunflower<br>Thin-leaved Sunflower |             | N           | PS          | 1           | X      |             |        |             |        |        |             |        |             | R         |
| <i>Helianthus giganteus</i>                         | Tall Sunflower<br>Giant Sunflower              |             | NI          | PS          | 2<br>L3     | X      |             |        |             |        |        |             |        |             |           |
| <i>Helianthus grosseserratus</i>                    | Saw-toothed Sunflower                          | X           | N           | PS          | 3<br>L4     | X      |             | X      | X           |        | X      | X           |        |             |           |
| <i>Helianthus mollis</i>                            | Downy Sunflower                                |             | N           | PS          | 2<br>L5     |        |             | X      |             |        |        |             |        |             |           |
| <i>Helianthus strumosus</i>                         | Pale-leaved Sunflower                          |             | N           | PS          | 1           | X      |             |        |             |        |        |             |        |             | R         |
| <i>Helianthus tuberosus</i>                         | Jerusalem Artichoke                            |             | N           | PS          | 1           |        |             |        |             |        |        |             | X      |             | R Note 99 |
| <i>Helianthus x luxurians</i>                       | Luxuriant Sunflower<br>Hybrid Sunflower        |             | N           | PS          | 2           |        |             | X      |             |        |        |             |        |             | Note 100  |
| <i>Heliopsis helianthoides</i>                      | False Sunflower<br>Ox-eye                      | X           | N           | PS          | 3<br>L4     | X      |             | X      |             |        | X      |             |        |             |           |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name  | Common name                           | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes                      |
|--|---------------------------------------|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|----------------------------|
| <i>Hemerocallis fulva</i>  | Orange Day Lily                       |             | E           | A?<br>PS?   | 2<br>L5     | X      | X           |        |             |        | X      | X           |        |             | I                          |
| <i>Hibiscus esculentus</i><br>( <i>Abelmoschus esculentus</i> )                                | Okra                                  |             | E           | PS          | 1           |        |             |        |             |        |        |             | X      |             |                            |
| <i>Hibiscus laevis</i><br>( <i>Hibiscus militaris</i> )  | Halberd-leaved<br>Rose Mallow         |             | N           | PS          | 2           |        |             |        |             | X      |        |             |        | X           |                            |
| <i>Hibiscus moscheutos</i><br>( <i>Hibiscus lasiocarpus</i> )<br>( <i>Hibiscus palustris</i> ) | Swamp Rose Mallow                     |             | N           | PS          | 1           |        |             |        |             | X      |        |             |        | X           | R <a href="#">Note 101</a> |
| <i>Hibiscus trionum</i>  | Flower of an Hour                     |             | E           | A           | 2           |        |             |        |             |        |        |             | X      |             |                            |
| <i>Holosteum umbellatum</i>  | Jagged Chickweed                      |             | E           | A           | 2           |        | X           |        |             |        | X      |             | X      |             |                            |
| <i>Hordeum jubatum</i>   | Squirrel-tail                         |             | N           | A           | 2           | X      |             | X      |             | X      | X      |             | X      |             |                            |
| <i>Hordeum pusillum</i>  | Little Barley                         |             | N           | A           | 1           |        |             |        |             |        |        |             | X      |             | R <a href="#">Note 102</a> |
| <i>Humulus lupulus</i>   | Hops<br>Common Hop                    |             | N           | A           | 2           |        |             |        |             |        |        |             | X      |             | <a href="#">Note 103</a>   |
| <i>Hydrophyllum virginianum</i>  | Virginia Waterleaf                    |             | N           | P           | 1           | X      |             |        |             |        |        |             |        |             | R                          |
| <i>Hypericum perforatum</i>  | Common St. John's Wort                |             | E           | A           | 2<br>L4     | X      |             | X      |             |        | X      |             |        |             | I                          |
| <i>Hypericum punctatum</i>   | Spotted St. John's Wort               |             | N           | A           | 1           | X      |             |        |             |        |        |             |        |             | R <a href="#">Note 104</a> |
| <i>Hypericum pyramidatum</i>   | Giant St. John's Wort                 |             | N           | PS          | 2           | X      |             | X      |             |        | X      |             |        |             | <a href="#">Note 105</a>   |
| <i>Ilex verticillata</i>   | Winterberry Holly                     |             | NI          | PS          | 1           | X      |             |        |             |        |        |             |        |             | R <a href="#">Note 106</a> |
| <i>Iodanthus pinnatifidus</i>  | Purple Rocket                         |             | N           | A?<br>PS?   | 1           | X      |             |        |             |        |        |             |        |             | R                          |
| <i>Ipomoea hederacea</i>   | Ivy-leaved Morning Glory              |             | E           | A           | 2           | X      |             |        |             |        |        |             | X      |             |                            |
| <i>Ipomoea pandurata</i>   | Wild Sweet Potato<br>Man of the Earth |             | N           | A           | 1           | X      |             |        |             |        |        |             |        |             | R <a href="#">Note 107</a> |
| <i>Ipomoea purpurea</i>  | Common Morning Glory                  |             | E           | A           | 1           |        |             |        |             |        |        |             | X      |             |                            |
| <i>Iris shrevei</i>  | Wild Blue Iris                        |             | N           | PS          | 1<br>L4     |        |             |        |             | X      |        |             |        |             | R                          |
| <i>Iris x germanica</i>  | Garden Iris<br>Bearded Iris           |             | E           | P           | 1           | X      |             |        |             |        |        |             | X      |             |                            |
| <i>Juglans cinerea</i>   | Butternut<br>White Walnut             |             | N           | PP          | 2           | X      | X           |        |             |        |        |             |        |             | <a href="#">Note 108</a>   |
| <i>Juglans nigra</i>   | Black Walnut                          |             | N           | PS          | 3<br>L5     | X      | X           | X      | X           |        | X      | X           | X      |             |                            |
| <i>Juncus dudleyi</i>  | Dudley's Rush                         |             | N           | PS?<br>A?   | 1<br>L5     |        |             |        |             | X      |        |             |        |             | R                          |
| <i>Juncus interior</i>   | Inland Rush                           |             | N           | A           | 3           | X      | X           | X      | X           | X      | X      | X           |        |             |                            |
| <i>Juncus tenuis</i>   | Path Rush                             |             | N           | A           | 3<br>L5     | X      | X           | X      | X           | X      | X      | X           | X      |             |                            |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name  | Common name                              | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes                      |
|--|--|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|----------------------------|
| <i>Juncus torreyi</i>  | Torrey's Rush                            |             | N           | A           | 2<br>L4     | X      | X           | X      | X           | X      | X      | X           |        |             |                            |
| <i>Juniperus virginiana</i>  | Eastern Red Cedar                        |             | N           | PS          | 2           | X      |             | X      |             |        | X      |             |        |             |                            |
| <i>Lactuca canadensis</i>  | Yellow Wild Lettuce                      |             | N           | A           | 2           | X      |             | X      |             |        | X      | X           |        |             |                            |
| <i>Lactuca serriola</i>  | Prickly Lettuce                          |             | E           | A           | 2           | X      |             |        |             |        | X      | X           |        |             |                            |
| <i>Lagenaria siceraria</i>   | White-flowered Gourd                     |             | E           | PS          | 1           |        |             |        |             |        |        |             | X      |             |                            |
| <i>Lamium amplexicaule</i>   | Henbit                                   |             | E           | A           | 2           | X      | X           |        |             |        | X      | X           | X      |             |                            |
| <i>Lamium purpureum</i>  | Purple Dead Nettle                       |             | E           | A           | 3<br>L4     | X      | X           |        |             |        | X      | X           | X      |             |                            |
| <i>Leersia oryzoides</i>   | Rice Cut Grass                           |             | N           | A           | 2           |        |             |        |             |        |        |             |        | X           | <a href="#">Note 109</a>   |
| <i>Leersia virginica</i>   | White Grass                              |             | N           | A           | 3<br>L4     | X      | X           | X      | X           | X      | X      | X           | X      |             |                            |
| <i>Lemna minor</i>   | Lesser Duckweed                          |             | N           | A           | 3<br>L5     |        |             |        |             |        |        |             |        | X           | <a href="#">Note 110</a>   |
| <i>Leonurus cardiaca</i>   | Motherwort                               |             | E           | A           | 2           | X      |             |        |             |        | X      | X           |        |             |                            |
| <i>Lepidium campestre</i>  | Field Pepper Grass                       |             | E           | A           | 2           | X      | X           | X      | X           |        | X      | X           | X      |             |                            |
| <i>Lepidium densiflorum</i>  | Small Pepper Grass                       |             | E           | A           | 2           | X      | X           | X      | X           |        | X      | X           | X      |             |                            |
| <i>Lepidium virginicum</i>   | Common Pepper Grass                      |             | N           | A           | 2           |        |             | X      |             |        | X      | X           |        |             |                            |
| <i>Lespedeza capitata</i>  | Round-headed Bush Clover                 | X           | N           | PS          | 3           | X      |             | X      |             |        | X      |             |        |             |                            |
| <i>Lespedeza cuneata</i>   | Sericea Lespedeza<br>Chinese Bush Clover |             | E           | A           | 2<br>L4     |        |             | X      |             |        |        |             |        |             | I                          |
| <i>Leucanthemum vulgare</i><br>( <i>Chrysanthemum leucanthemum</i> ) | Ox-eye Daisy                             |             | E           | A           | 2           | X      |             | X      |             |        | X      |             |        |             |                            |
| <i>Leucospora multifida</i><br>( <i>Conobea multifida</i> )          | Obe-wan-conobea<br>Narrow-leaf Pale-seed |             | N           | A           | 2           | X      |             |        |             |        |        |             | X      | X           | <a href="#">Note 111</a>   |
| <i>Liatris pycnostachya</i>  | Prairie Blazing Star                     | X           | N           | PS          | 2           |        |             | X      |             |        |        |             |        |             |                            |
| <i>Liatris spicata</i>   | Marsh Blazing Star                       |             | N           | PS          | 2<br>L3     |        |             | X      | X           | X      |        |             |        |             |                            |
| <i>Ligustrum obtusifolium</i>  | Border Privet<br>Blunt-leaved Privet     |             | E           | A           | 2           |        |             |        |             |        | X      | X           |        |             | I                          |
| <i>Ligustrum vulgare</i>   | Common Privet                            |             | E           | A           | 2           | X      | X           |        |             |        | X      |             |        |             | I                          |
| <i>Lilium lancifolium</i><br>( <i>Lilium tigrinum</i> )              | Tiger Lily                               |             | E           | PS          | 1           |        |             |        |             |        |        |             | X      |             |                            |
| <i>Lilium superbum</i>   | Turk's Cap Lily                          |             | NI          | PS          | 1<br>L3     |        |             | X      |             |        |        |             |        |             | R                          |
| <i>Lindera benzoin</i>   | Spicebush                                |             | N           | PP          | 2           | X      | X           |        |             |        |        |             |        |             |                            |
| <i>Linum medium</i>  | Wild Flax                                |             | N           | P           | 1           | X      |             |        |             |        |        |             |        |             | R <a href="#">Note 112</a> |
| <i>Liparis liliifolia</i>  | Twayblade Orchid                         |             | N           | A           | 1<br>L3     | X      |             |        |             |        |        |             |        |             | R <a href="#">Note 113</a> |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name   | Common name   | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes      |
|---|---|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|------------|
| Liquidambar styraciflua   | Sweetgum  |             | NI          | PS          | 2           | X      |             |        | X           |        |        |             | X      |             | Note 114   |
| Liriodendron tulipifera   | Tuliptree<br>Yellow Poplar                          |             | NI          | PS          | 2<br>L3     | X      |             |        |             |        | X      |             | X      |             | Note 115   |
| Lobelia cardinalis  | Cardinal Flower                                     | X           | N           | PS          | 2           | X      |             |        | X           |        |        |             |        | X           |            |
| Lobelia siphilitica   | Great Blue Lobelia<br>Blue Cardinal Flower          | X           | N           | PS          | 2           | X      | X           | X      | X           | X      |        |             |        |             |            |
| Lolium perenne  | English Rye Grass                                   |             | E           | PS          | 3<br>L4     | X      |             |        |             | X      |        | X           |        |             |            |
| Lonicera japonica   | Japanese Honeysuckle                                |             | E           | A           | 2<br>L5     | X      |             |        |             | X      |        |             |        |             | I          |
| Lonicera maackii  | Amur Honeysuckle                                    |             | E           | A           | 4<br>L5     | X      | X           | X      | X           |        | X      | X           | X      |             | I Note 116 |
| Lonicera tatarica   | Tartarian Honeysuckle<br>Tatarian Honeysuckle       |             | E           | A           | 1           |        | X           |        |             |        |        |             |        |             | I          |
| Lonicera x bella  | Showy Fly Honeysuckle<br>"Bell's Honeysuckle"       |             | E           | PS          | 2           | X      |             |        |             | X      |        |             |        |             | I Note 117 |
| Ludwigia peploides<br>(Jussiaea repens)                                       | Creeping Primrose Willow<br>Floating Water Primrose |             | N           | A           | 1           |        |             |        |             |        |        |             |        | X           | R Note 118 |
| Lychnis coronaria<br>(Silene coronaria)                                       | Rose Campion<br>Mullein Pink                        |             | E           | PS          | 1           |        |             |        |             |        |        |             | X      |             | Note 119   |
| Lycopersicon esculentum<br>(Lycopersicum esculentum)                          | Tomato  |             | E           | PS          | 1<br>L3     |        |             |        |             |        |        |             | X      |             |            |
| Lysimachia ciliata  | Fringed Loosestrife                                 |             | N           | PS          | 1<br>L3     | X      |             |        |             | X      |        |             |        |             | R          |
| Lysimachia nummularia   | Moneywort   |             | E           | A?<br>PS?   | 1<br>L4     |        |             |        | X           |        |        |             |        | X           | I          |
| Lythrum alatum  | Winged Loosestrife                                  |             | N           | A?<br>PS?   | 1<br>L3     |        |             | X      | X           |        |        |             |        |             | R          |
| Maclura pomifera  | Hedge-apple<br>Osage Orange                         |             | E           | A           | 2           | X      | X           |        |             |        |        |             |        |             |            |
| Malus baccata   | Siberian Crab                                       |             | E           | A           | 3           | X      | X           | X      | X           |        | X      | X           | X      |             | I Note 120 |
| Malus ioensis   | Iowa Crab   |             | N           | PS          | 1           | X      |             |        |             |        |        |             |        |             | R Note 121 |
| Malus prunifolia  | Plum-leaved Crab                                    |             | E           | PS          | 1           |        |             |        |             | X      |        | X           |        |             | I Note 122 |
| Malus pumila  | Domestic Apple                                      |             | E           | A           | 2           | X      |             |        |             |        |        |             |        |             |            |
| Malus sieboldii<br>(Malus floribunda)<br>(Malus sargentii)<br>(Malus toringo) | Japanese Crab                                       | X           | E           | PS          | 4           | X      | X           | X      | X           | X      | X      | X           | X      |             | I Note 123 |
| Malus x soulardii   | Soulard Crab  |             | E           | PP          | 1           |        |             | X      |             |        |        |             |        |             | Note 124   |
| Malva neglecta  | Common Mallow                                       |             | E           | A           | 1<br>L3     |        |             |        |             |        |        |             | X      |             |            |



**Table 1. Annotated list of the flora *continued*.**

| Scientific name   | Common name                          | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes                      |
|---|--------------------------------------|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|----------------------------|
| <i>Matricaria discoidea</i><br>( <i>Matricaria matricarioides</i> ) | Pineapple Weed                       |             | E           | A           | 2<br>L3     | X      |             |        |             |        |        |             | X      |             |                            |
| <i>Medicago lupulina</i>  | Black Medic                          |             | E           | A           | 3           |        |             |        |             |        |        |             | X      |             |                            |
| <i>Medicago sativa</i>  | Alfalfa                              |             | E           | A           | 1           |        |             | X      |             |        |        |             |        |             |                            |
| <i>Melilotus albus</i><br>( <i>Melilotus alba</i> )                 | White Sweet Clover                   | X           | E           | A           | 3           | X      | X           |        |             | X      | X      |             |        |             | I <a href="#">Note 125</a> |
| <i>Melilotus officinalis</i>  | Yellow Sweet Clover                  | X           | E           | A           | 2           | X      | X           |        |             | X      |        |             |        |             | I <a href="#">Note 126</a> |
| <i>Melissa officinalis</i>  | Lemon Balm                           |             | E           | A           | 1           |        |             |        |             |        |        |             |        | X           |                            |
| <i>Menispermum canadensis</i>                                       | Moonseed                             |             | N           | A           | 1           | X      |             |        |             |        |        |             |        |             | R <a href="#">Note 127</a> |
| <i>Mentha arvensis</i>  | Field Mint                           |             | E           | A?<br>PS?   | 1<br>L3     |        |             |        | X           |        |        |             |        |             |                            |
| <i>Mentha spicata</i>   | Spearmint                            |             | E           | PS          | 1           |        |             |        |             |        |        |             | X      |             |                            |
| <i>Mentha x piperita</i>  | Peppermint                           |             | E           | PS          | 1           |        |             |        |             |        |        |             | X      |             |                            |
| <i>Mertensia virginica</i>  | Virginia Bluebells                   |             | N           | PS          | 2<br>L4     | X      | X           |        |             |        |        |             |        |             |                            |
| <i>Mimulus ringens</i>  | Sessile Monkey-flower                |             | N           | PS?<br>A?   | 2           |        | X           |        | X           | X      | X      |             | X      |             |                            |
| <i>Miscanthus sinensis</i>  | Chinese Silver Grass<br>Miscanthus   |             | E           | PP          | 1           | X      |             |        |             |        |        |             |        |             | I <a href="#">Note 128</a> |
| <i>Mollugo verticillata</i>   | Carpetweed                           |             | E           | A           | 2           |        |             |        |             |        |        |             | X      | X           |                            |
| <i>Monarda fistulosa</i>  | Bergamot                             | X           | N           | PS          | 4           | X      | X           | X      | X           | X      | X      | X           |        |             |                            |
| <i>Morus alba</i>   | White Mulberry                       | X           | E           | A           | 3<br>L4     | X      | X           | X      | X           | X      | X      | X           |        |             | I <a href="#">Note 129</a> |
| <i>Muhlenbergia frondosa</i>  | Satin Grass                          |             | N           | A           | 2           | X      | X           |        |             | X      |        |             |        |             |                            |
| <i>Muhlenbergia schreberi</i>                                       | Nimble Will                          |             | N           | A           | 3<br>L4     | X      | X           |        |             | X      | X      |             |        |             |                            |
| <i>Myosoton aquaticum</i>   | Giant Chickweed<br>Water Chickweed   |             | E           | A           | 2<br>L3     | X      | X           |        |             | X      |        |             |        | X           |                            |
| <i>Napaea dioica</i>  | Glade Mallow                         |             | N           | PS          | 1           | X      |             |        |             |        |        |             |        |             | R                          |
| <i>Narcissus pseudo-narcissus</i>                                   | Daffodil                             |             | E           | PS          | 2           | X      |             |        |             | X      |        |             |        |             |                            |
| <i>Nepeta cataria</i>   | Catnip                               |             | E           | A           | 2           | X      | X           |        |             | X      | X      |             |        |             |                            |
| <i>Oenanthe sarmentosa</i>  | Pacific Water Parsley                |             | E           | A           | 1           | X      |             |        |             |        |        |             | X      |             | I <a href="#">Note 130</a> |
| <i>Oenothera biennis</i>  | Common Evening<br>Primrose           | X           | N           | A           | 3           | X      | X           |        |             | X      | X      |             |        |             |                            |
| <i>Oligoneuron rigidum</i><br>( <i>Solidago rigida</i> )            | Stiff Goldenrod<br>Prairie Goldenrod | X           | N           | PS          | 3           | X      | X           |        |             | X      |        |             |        |             |                            |
| <i>Ornithogalum umbellatum</i>                                      | Star of Bethlehem                    |             | E           | A           | 1           |        |             |        |             |        |        |             | X      |             | I                          |
| <i>Osmorhiza claytonii</i>  | Sweet Cicely                         |             | N           | A           | 2           | X      |             |        |             |        |        |             |        |             |                            |
| <i>Osmorhiza longistylis</i>  | Anise Root                           |             | N           | A           | 3           | X      |             |        |             |        |        |             |        |             |                            |
| <i>Ostrya virginiana</i>  | Hop Hornbeam                         |             | N           | PP          | 1           | X      |             |        |             |        |        |             |        |             | R                          |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name   | Common name                                 | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes                      |
|---|---|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|----------------------------|
| <i>Oxalis fontana</i><br>( <i>Oxalis europea</i> )<br>( <i>Oxalis stricta</i> , misapplied)       | Tall Yellow Wood Sorrel<br>Sour Grass       |             | N           | A           | 2<br>L4     | X      |             |        |             |        |        |             |        |             |                            |
| <i>Oxalis stricta</i><br>( <i>Oxalis dillenii</i> )   | Common Yellow<br>Wood Sorrel<br>Sour Grass  |             | N           | A           | 3           | X      | X           |        |             | X      | X      |             |        |             |                            |
| <i>Panicum dichotomiflorum</i>  | Fall Panicum                                |             | N           | A           | 2           | X      | X           |        |             | X      | X      | X           |        |             |                            |
| <i>Panicum virgatum</i>   | Switch Grass                                | X           | N           | PS          | 2<br>L3     | X      |             | X      | X           | X      |        |             |        |             |                            |
| <i>Parthenium integrifolium</i>   | Feverfew<br>Wild Quinine                    | X           | N           | PS          | 2<br>L3     |        |             | X      |             | X      |        |             |        |             |                            |
| <i>Parthenocissus quinquefolia</i>  | Virginia Creeper<br>Woodbine                |             | N           | A           | 3           | X      | X           | X      |             | X      | X      |             |        |             |                            |
| <i>Pastinaca sativa</i>   | Wild Parsnip                                |             | E           | A           | 3           | X      | X           | X      | X           | X      | X      | X           |        |             | I <a href="#">Note 131</a> |
| <i>Pedicularis canadensis</i>   | Canada Lousewort<br>Wood Betony             | X           | N           | PS          | 1<br>L3     |        |             | X      |             |        |        |             |        |             | R                          |
| <i>Pedicularis lanceolata</i>   | Swamp Wood Betony<br>Lance-leaved Lousewort |             | N           | PP          | 1           |        |             | X      |             |        |        |             |        |             | R <a href="#">Note 132</a> |
| <i>Penstemon digitalis</i>  | Foxglove Beardtongue                        | X           | N           | PS          | 4           | X      |             | X      | X           | X      | X      | X           |        |             |                            |
| <i>Penthorum sedoides</i>   | Ditch Stonecrop                             |             | N           | A           | 2<br>L3     |        | X           |        |             | X      | X      |             | X      |             |                            |
| <i>Perideridia americana</i>  | Thicket Parsley<br>Wild Dill                |             | N           | PS?<br>A?   | 1           | X      |             |        |             |        |        |             |        |             | R <a href="#">Note 133</a> |
| <i>Perilla frutescens</i>   | Beefsteak Plant                             |             | E           | PS          | 1<br>L3     | X      |             |        |             |        |        | X           |        |             | I <a href="#">Note 134</a> |
| <i>Persicaria cespitosa</i><br>( <i>Persicaria longiseta</i> )<br>( <i>Polygonum cespitosum</i> ) | Creeping Smartweed                          |             | E           | A           | 3<br>L5     | X      | X           | X      |             | X      | X      | X           |        |             |                            |
| <i>Persicaria coccinea</i><br>( <i>Polygonum coccineum</i> )                                      | Scarlet Smartweed                           |             | N           | A           | 2           | X      | X           |        |             | X      |        |             |        |             |                            |
| <i>Persicaria hydropiper</i><br>( <i>Polygonum hydropiper</i> )                                   | Water Pepper                                |             | N           | A           | 3<br>L5     |        |             | X      |             |        |        |             | X      |             |                            |
| <i>Persicaria pensylvanica</i><br>( <i>Polygonum pensylvanicum</i> )                              | Pinkweed<br>Common Smartweed                |             | N           | A           | 2           |        | X           | X      |             |        |        | X           | X      |             |                            |
| <i>Persicaria punctata</i><br>( <i>Polygonum punctatum</i> )                                      | Dotted Smartweed                            |             | N           | A           | 2<br>L4     |        |             | X      |             |        | X      |             | X      |             |                            |
| <i>Persicaria vulgaris</i><br>( <i>Persicaria maculosa</i> )<br>( <i>Polygonum persicaria</i> )   | Lady's Thumb                                |             | E           | A           | 2<br>L3     |        |             | X      |             |        |        | X           | X      |             |                            |
| <i>Phalaris arundinacea</i>   | Reed Canary Grass                           |             | E           | A           | 4<br>L5     | X      | X           | X      | X           | X      | X      | X           | X      | X           | I <a href="#">Note 135</a> |
| <i>Phellodendron amurense</i>   | Amur Cork Tree                              |             | E           | A           | 2<br>L3     | X      |             |        |             |        |        |             |        |             | I                          |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name   | Common name                              | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes    |
|---|--|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|----------|
| <i>Phleum pratense</i>  | Timothy                                  | X           | E           | A           | 3           | X      |             | X      |             |        | X      |             | X      |             |          |
| <i>Phlox divaricata</i>   | Blue Phlox                               |             | N           | P           | 1           | X      |             |        |             |        |        |             |        |             | R        |
| <i>Phlox paniculata</i>   | Summer Phlox<br>Garden Phlox             |             | N           | PS<br>A     | 2           | X      |             |        |             |        |        |             |        | X           |          |
| <i>Phyla lanceolata</i><br>( <i>Lippia lanceolata</i> )               | Fog-fruit                                |             | N           | P           | 1           |        |             |        |             | X      |        |             |        |             | R        |
| <i>Physalis heterophylla</i>  | Clammy Ground Cherry                     |             | N           | A           | 2<br>L3     | X      |             | X      |             |        |        |             | X      |             |          |
| <i>Physalis subglabrata</i>   | Smooth Ground Cherry                     |             | N           | A           | 2           | X      |             | X      |             |        | X      |             | X      |             |          |
| <i>Physostegia speciosa</i>   | Showy False Dragonhead                   |             | N           | PS          | 2<br>L3     |        |             | X      |             |        |        |             |        |             |          |
| <i>Physostegia virginiana</i>   | Obedient Plant<br>False Dragonhead       | X           | N           | PS          | 2           | X      |             | X      | X           |        |        |             |        |             | Note 136 |
| <i>Phytolacca americana</i>   | Pokeweed<br>Pokeberry                    |             | N           | A           | 2<br>L3     | X      | X           |        |             |        | X      |             | X      |             |          |
| <i>Pilea pumila</i>   | Clearweed<br>Richweed                    |             | N           | A           | 4<br>L5     | X      | X           |        |             |        |        |             | X      | X           |          |
| <i>Pinus flexilis</i>   | Limber Pine                              |             | E           | PP          | 1           | X      |             |        |             |        |        |             |        |             |          |
| <i>Pinus strobus</i>  | White Pine                               |             | NI          | PS          | 2           | X      |             |        |             |        |        |             |        |             | Note 137 |
| <i>Plantago lanceolata</i>  | Buckhorn<br>Narrow-leaved Plantain       |             | E           | A           | 3<br>L4     | X      |             | X      |             |        | X      |             | X      |             |          |
| <i>Plantago major</i>   | Common Plantain                          | X           | E           | A           | 3<br>L4     |        |             |        |             |        |        |             | X      |             |          |
| <i>Plantago rugelii</i>   | Rugel's Plantain<br>Red-stalked Plantain |             | N           | A           | 2<br>L3     | X      | X           |        |             |        | X      | X           | X      |             |          |
| <i>Platanus occidentalis</i>  | Sycamore                                 |             | N           | A?<br>PS?   | 1           | X      |             |        |             |        |        |             |        |             | R        |
| <i>Platanus x acerifolia</i>  | London Plane Tree                        |             | E           | PP          | 1           | X      |             |        |             |        |        |             |        |             |          |
| <i>Poa annua</i>  | Annual Bluegrass                         |             | E           | A           | 3<br>L4     | X      | X           | X      | X           |        | X      | X           | X      |             |          |
| <i>Poa compressa</i>  | Canada Bluegrass                         |             | E           | A           | 2           | X      |             | X      |             |        | X      |             | X      |             |          |
| <i>Poa pratensis</i>  | Kentucky Bluegrass                       | X           | E           | A           | 3<br>L5     | X      | X           | X      | X           | X      | X      | X           | X      |             | Note 138 |
| <i>Poa sylvestris</i>   | Woodland Bluegrass                       |             | N           | A           | 3           | X      | X           | X      |             |        | X      |             |        |             |          |
| <i>Podophyllum peltatum</i>   | Mayapple                                 |             | N           | PS          | 2<br>L3     | X      |             |        |             |        |        |             |        |             |          |
| <i>Polemonium reptans</i>   | Jacob's Ladder                           | X           | N           | PS          | 2<br>L3     | X      |             |        |             |        |        |             |        |             |          |
| <i>Polygonatum commutatum</i><br>( <i>Polygonatum canaliculatum</i> ) | Great Solomon's Seal                     |             | N           | PS          | 2<br>L3     | X      |             | X      |             |        |        |             |        |             |          |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name   | Common name                               | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes                      |
|---|---|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|----------------------------|
| <i>Polygonum arenastrum</i><br>( <i>Polygonum aviculare</i> ,<br>misapplied)                | Sidewalk Knotweed                         |             | E           | A           | 3           | X      |             | X      |             |        | X      |             | X      |             |                            |
| <i>Polygonum erectum</i>  | Erect Knotweed                            |             | N           | A           | 1           |        |             |        |             |        |        |             |        | X           | R <a href="#">Note 139</a> |
| <i>Populus deltoides</i>  | Eastern Cottonwood                        |             | N           | A           | 3           | X      | X           | X      | X           |        | X      | X           | X      |             |                            |
| <i>Portulaca oleracea</i>   | Purslane                                  |             | E           | A           | 2           |        |             |        |             |        |        |             | X      | X           |                            |
| <i>Potamogeton nodosus</i>  | Long-leaved Pondweed                      |             | N           | A           | 1           |        |             |        |             |        |        |             |        | X           | R <a href="#">Note 140</a> |
| <i>Potentilla arguta</i>  | Prairie Cinquefoil                        | X           | N           | PS          | 2           |        |             | X      |             |        |        |             |        |             |                            |
| <i>Potentilla norvegica</i>   | Rough Cinquefoil                          |             | E           | A           | 2           | X      | X           | X      | X           |        | X      | X           | X      |             |                            |
| <i>Potentilla simplex</i>   | Common Cinquefoil<br>Old-field Cinquefoil |             | N           | A           | 1           | X      |             |        |             |        |        |             |        |             | R                          |
| <i>Prunella vulgaris</i>  | Self-heal<br>Heal-all                     |             | N           | A           | 2           | X      |             | X      |             |        | X      |             | X      |             |                            |
| <i>Prunus americana</i><br>( <i>Prunus lanata</i> )   | Wild Plum                                 |             | N           | PS?<br>A?   | 2<br>L5     | X      |             | X      |             |        | X      |             | X      |             |                            |
| <i>Prunus avium</i>   | Sweet Cherry                              |             | E           | PS          | 1           | X      |             | X      |             |        |        |             |        |             | <a href="#">Note 141</a>   |
| <i>Prunus padus</i>   | European Bird Cherry                      |             | E           | PS          | 1           | X      |             |        |             |        |        |             | X      |             |                            |
| <i>Prunus serotina</i>  | Wild Black Cherry                         |             | N           | A           | 4           | X      | X           | X      | X           |        | X      | X           | X      |             |                            |
| <i>Pseudognaphalium<br/>obtusifolium</i><br>( <i>Gnaphalium obtusifolium</i> )              | Sweet Everlasting<br>Old Field Balsam     |             | N           | A           | 1           |        |             |        |             |        | X      |             |        |             | R                          |
| <i>Pseudotsuga menziesii</i>  | Douglas Fir                               |             | E           | PP          | 1           | X      |             |        |             |        |        |             |        |             |                            |
| <i>Ptelea trifoliata</i>  | Wafer Ash<br>Hop Tree                     |             | N           | PP          | 1           |        |             | X      |             |        |        |             |        |             | R                          |
| <i>Pycnanthemum pilosum</i><br>( <i>Pycnanthemum verticillatum</i><br>var. <i>pilosum</i> ) | Hairy Mountain Mint                       |             | N           | PS          | 2           | X      |             | X      |             |        | X      |             |        |             |                            |
| <i>Pycnanthemum tenuifolium</i><br>( <i>Pycnanthemum flexuosum</i> )                        | Slender Mountain Mint                     |             | N           | PS          | 3           | X      |             | X      |             |        | X      |             |        |             |                            |
| <i>Pycnanthemum virginianum</i>   | Virginia Mountain Mint                    | X           | N           | PS          | 3           | X      |             | X      |             |        | X      |             |        |             |                            |
| <i>Pyrus calleryana</i>   | Callery Pear<br>"Bradford Pear"           |             | E           | PS          | 4           | X      | X           | X      | X           |        | X      | X           | X      |             | I <a href="#">Note 142</a> |
| <i>Pyrus longipes</i>   | Long-stalked Pear                         |             | E           | PP          | 1           |        |             |        |             |        | X      |             |        |             |                            |
| <i>Quercus alba</i>   | White Oak                                 |             | N           | PS          | 2           | X      |             |        |             |        |        |             |        |             | <a href="#">Note 143</a>   |
| <i>Quercus bicolor</i>  | Swamp White Oak                           |             | N           | PS          | 3           | X      |             | X      | X           | X      |        |             |        |             |                            |
| <i>Quercus coccinea</i>   | Scarlet Oak                               |             | NI          | PP          | 1           |        |             |        |             |        | X      |             |        |             | R <a href="#">Note 144</a> |
| <i>Quercus imbricaria</i>   | Shingle Oak                               |             | N           | PS          | 2           | X      |             |        |             |        |        |             |        |             |                            |
| <i>Quercus macrocarpa</i>   | Burr Oak                                  |             | N           | PS          | 2           | X      |             | X      |             |        | X      |             |        |             | <a href="#">Note 145</a>   |
| <i>Quercus muhlenbergii</i><br>( <i>Quercus prinoides</i><br>var. <i>acuminata</i> )        | Chinquapin Oak<br>Yellow Chestnut Oak     |             | N           | PP          | 1           |        |             | X      |             |        |        |             |        |             | R <a href="#">Note 146</a> |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name  | Common name  | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes                      |
|--|--|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|----------------------------|
| <i>Quercus palustris</i>                                 | Pin Oak  |             | N           | PS          | 2           | X      |             | X      |             |        |        |             |        |             |                            |
| <i>Quercus prinus</i><br>( <i>Quercus montana</i> )      | Rock Chestnut Oak                                  |             | NI          | PS          | 1           |        |             | X      |             |        |        |             |        |             | R <a href="#">Note 147</a> |
| <i>Quercus rubra</i>                                     | Red Oak  |             | N           | PS          | 2           | X      |             | X      |             |        |        |             |        |             | <a href="#">Note 148</a>   |
| <i>Quercus shumardii</i>                                 | Shumard Oak  |             | NI          | PP          | 1           |        |             |        |             | X      |        |             |        |             | R                          |
| <i>Quercus x saulii</i>                                  | Saul's Oak   |             | NI          | A           | 1           |        |             | X      |             |        |        |             |        |             | R <a href="#">Note 149</a> |
| <i>Ranunculus abortivus</i>                              | Small-flowered Buttercup<br>Kidney-leaved Crowfoot |             | N           | A           | 3           | X      | X           | X      | X           |        | X      | X           | X      |             |                            |
| <i>Ranunculus ficaria</i><br>( <i>Ficaria verna</i> )    | Fig Buttercup<br>Lesser Celandine                  |             | E           | A           | 1<br>L4     |        |             |        |             |        |        |             |        | X           | I <a href="#">Note 150</a> |
| <i>Ranunculus septentrionalis</i>                        | Swamp Buttercup<br>Marsh Buttercup                 |             | N           | A           | 1           |        | X           |        |             |        |        |             |        |             | R                          |
| <i>Raphanus raphanistrum</i>                             | Wild Radish  |             | E           | A           | 2           |        |             |        |             | X      |        | X           |        |             |                            |
| <i>Ratibida pinnata</i>                                  | Yellow Coneflower<br>Gray-headed Coneflower        | X           | N           | PS          | 3<br>L4     | X      |             | X      |             |        | X      | X           |        |             |                            |
| <i>Rhamnus cathartica</i>                                | Common Buckthorn<br>European Buckthorn             |             | E           | A           | 2<br>L3     | X      | X           | X      | X           |        | X      | X           | X      |             | I <a href="#">Note 151</a> |
| <i>Rhus glabra</i>                                       | Smooth Sumac                                       |             | N           | PS          | 2<br>L4     | X      |             | X      |             |        | X      |             |        |             |                            |
| <i>Rhus hirta</i><br>( <i>Rhus typhina</i> )             | Staghorn Sumac                                     |             | N           | PS          | 1<br>L4     | X      |             | X      |             |        | X      |             |        |             | R <a href="#">Note 152</a> |
| <i>Ribes cynosbati</i>                                   | Prickly Gooseberry                                 |             | N           | A           | 1           | X      |             |        |             |        |        |             |        |             | R <a href="#">Note 153</a> |
| <i>Rorippa palustris</i><br>( <i>Rorippa islandica</i> ) | Marsh Yellow Cress                                 |             | N           | A           | 2<br>L3     |        | X           |        |             | X      |        | X           |        | X           |                            |
| <i>Rorippa sinuata</i>                                   | Spreading Yellow Cress                             |             | N           | A           | 2           |        |             |        | X           |        |        |             |        | X           |                            |
| <i>Rosa carolina</i>                                     | Pasture Rose                                       | X           | N           | PS          | 2           |        |             | X      |             |        |        |             |        |             |                            |
| <i>Rosa multiflora</i>                                   | Multiflora Rose                                    | X           | E           | A           | 3           | X      | X           | X      | X           |        | X      | X           | X      |             | I <a href="#">Note 154</a> |
| <i>Rubus allegheniensis</i>                              | Common Blackberry<br>Allegheny Blackberry          |             | N           | A           | 3<br>L4     | X      |             | X      |             |        | X      |             |        |             |                            |
| <i>Rubus flagellaris</i>                                 | Common Dewberry                                    |             | N           | A           | 2           | X      |             | X      |             |        | X      |             |        |             |                            |
| <i>Rubus occidentalis</i>                                | Black Raspberry                                    |             | N           | A           | 3<br>L4     | X      |             | X      |             |        | X      |             |        |             |                            |
| <i>Rubus ulmifolius</i>                                  | Elm-leaved Blackberry<br>Thornless Blackberry      |             | E           | A           | 1           | X      |             |        |             |        |        |             |        |             | <a href="#">Note 155</a>   |
| <i>Rudbeckia hirta</i><br>( <i>Rudbeckia serotina</i> )  | Black-eyed Susan                                   | X           | N           | PS          | 3           | X      |             | X      |             |        | X      |             |        |             | <a href="#">Note 156</a>   |
| <i>Rudbeckia laciniata</i>                               | Goldenglow<br>Cut-leaved Coneflower                |             | N           | A?<br>PS?   | 2           | X      | X           |        |             |        |        |             |        |             |                            |
| <i>Rudbeckia subtomentosa</i>                            | Sweet Black-eyed Susan<br>Fragrant Coneflower      | X           | N           | PS          | 2           | X      |             | X      |             |        | X      |             |        |             |                            |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name  | Common name                                | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes                      |
|--|--|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|----------------------------|
| Rudbeckia sullivantii<br>(Rudbeckia fulgida<br>var. sullivantii) | Sullivant's Coneflower                     |             | N           | P           | 1           |        |             | X      |             |        |        |             |        |             | R <a href="#">Note 157</a> |
| Rudbeckia triloba  | Brown-eyed Susan<br>Three-lobed Coneflower | X           | N           | PS          | 2           | X      | X           |        |             | X      |        |             |        |             |                            |
| Ruellia humilis  | Wild Petunia                               |             | N           | A?<br>PS?   | 2           |        |             | X      |             | X      |        | X           |        |             |                            |
| Ruellia strepens   | Smooth Ruellia                             |             | N           | PS          | 2           | X      | X           |        |             |        |        |             |        |             |                            |
| Rumex altissimus   | Pale Dock                                  |             | N           | A           | 3           |        |             | X      | X           | X      | X      | X           | X      |             |                            |
| Rumex crispus  | Curly Dock                                 | X           | E           | A           | 3           | X      | X           | X      | X           | X      | X      | X           | X      |             |                            |
| Rumex obtusifolius   | Broad-leaved Dock<br>Bitter Dock           |             | E           | A           | 1           |        |             |        |             | X      |        |             |        |             |                            |
| Sagittaria latifolia   | Common Arrowhead                           |             | N           | P           | 1           |        |             |        |             | X      |        |             |        |             | R <a href="#">Note 158</a> |
| Salix alba   | Golden Weeping Willow                      |             | E           | PS?<br>A?   | 1           | X      |             |        |             |        |        |             |        |             | <a href="#">Note 159</a>   |
| Salix amygdaloides   | Peach-leaved Willow                        |             | N           | A           | 3           | X      | X           |        |             | X      |        |             |        | X           |                            |
| Salix interior<br>(Salix exigua)                                 | Sandbar Willow                             |             | N           | A           | 3<br>L4     | X      | X           | X      | X           | X      | X      | X           |        | X           |                            |
| Salix nigra  | Black Willow                               |             | N           | A           | 3           | X      | X           |        |             | X      |        |             | X      | X           |                            |
| Salvia azurea<br>(Salvia pitcheri)                               | Wild Blue Sage                             |             | N           | P           | 1           |        |             | X      |             |        |        |             |        |             | R <a href="#">Note 160</a> |
| Sambucus canadensis  | Elderberry                                 |             | N           | A           | 3           | X      | X           | X      | X           |        | X      | X           | X      |             |                            |
| Sanguinaria canadensis   | Bloodroot                                  |             | N           | PS          | 1<br>L2     | X      |             |        |             |        |        |             |        |             | R                          |
| Sanicula canadensis  | Canada Black Snakeroot                     |             | N           | A           | 3           | X      | X           |        |             | X      |        |             |        |             |                            |
| Sanicula odorata<br>(Sanicula gregaria)                          | Common Black Snakeroot                     |             | N           | A           | 4           | X      | X           |        |             |        |        |             |        |             |                            |
| Sassafras albidum  | Sassafras                                  |             | N           | PS?<br>A?   | 1           |        |             | X      |             |        |        | X           |        |             | R <a href="#">Note 161</a> |
| Schizachyrium scoparium<br>(Andropogon scoparius)                | Little Bluestem                            | X           | N           | PS          | 3           | X      | X           |        |             | X      |        |             |        |             |                            |
| Schoenoplectus<br>tabernaemontani<br>(Scirpus validus)           | Soft-stemmed Bulrush<br>Great Bulrush      |             | N           | PS<br>A?    | 1<br>L3     |        |             |        |             | X      |        |             |        | X           | R <a href="#">Note 162</a> |
| Scilla sibirica  | Siberian Squill                            |             | E           | A           | 1           | X      |             |        |             |        |        |             |        | X           |                            |
| Scirpus atrovirens   | Dark Green Bulrush                         |             | N           | PS<br>A     | 2<br>L3     | X      |             | X      | X           | X      | X      | X           |        |             |                            |
| Scirpus pendulus   | Drooping Bulrush<br>Red Bulrush            |             | N           | PS          | 2           |        |             | X      | X           | X      | X      | X           |        |             |                            |
| Scrophularia marilandica   | Maryland Figwort<br>Late Figwort           |             | N           | A?<br>P?    | 1           | X      |             |        |             |        |        |             |        |             | R                          |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name   | Common name                                 | U<br>P<br>D | N<br>a<br>t | O<br>n    | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes                    |
|---|---|-------------|-------------|-----------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|--------------------------|
| <i>Securigera varia</i><br>( <i>Coronilla varia</i> )   | Crown Vetch                                 |             | E           | A         | 1<br>L4     | X      |             |        |             |        |        |             |        |             | I                        |
| <i>Senecio glabellus</i><br>( <i>Packera glabellus</i> )  | Butterweed                                  |             | N           | A         | 3           | X      | X           | X      | X           | X      | X      | X           | X      |             |                          |
| <i>Senna marilandica</i><br>( <i>Cassia marilandica</i> )   | Maryland Senna                              |             | N           | PS        | 2           | X      | X           | X      | X           | X      | X      |             |        |             |                          |
| <i>Setaria faberi</i>   | Giant Foxtail                               |             | E           | A         | 2<br>L5     | X      | X           |        |             | X      | X      |             |        | I           | <a href="#">Note 163</a> |
| <i>Setaria glauca</i><br>( <i>Setaria lutea</i> )<br>( <i>Setaria lutescens</i> )   | Yellow Foxtail                              |             | E           | A         | 2<br>L3     | X      | X           |        |             | X      | X      |             |        |             |                          |
| <i>Setaria viridis</i>  | Green Foxtail                               |             | E           | A         | 1           |        |             |        |             |        |        | X           |        |             |                          |
| <i>Sida spinosa</i>   | Prickly Sida                                |             | E           | A         | 2<br>L3     |        | X           |        |             | X      | X      |             |        |             |                          |
| <i>Silene antirrhina</i>  | Sleepy Catchfly                             |             | N           | A         | 1           |        |             |        |             |        |        | X           |        | R           | <a href="#">Note 164</a> |
| <i>Silene regia</i>   | Royal Catchfly                              |             | NI          | PS        | 2<br>L3     |        | X           |        |             |        |        |             |        |             | <a href="#">Note 165</a> |
| <i>Silphium integrifolium</i>   | Rosinweed                                   | X           | N           | PS        | 3           | X      | X           |        |             | X      |        |             |        |             |                          |
| <i>Silphium laciniatum</i>  | Compass Plant                               | X           | N           | PS        | 2<br>L3     | X      | X           |        |             | X      |        |             |        |             | <a href="#">Note 166</a> |
| <i>Silphium perfoliatum</i>   | Cup Plant                                   | X           | N           | PS        | 3<br>L4     | X      | X           | X      | X           | X      | X      |             |        |             |                          |
| <i>Silphium terebinthinaceum</i>  | Prairie Dock                                | X           | N           | PS        | 2<br>L3     | X      | X           |        |             | X      |        |             |        |             |                          |
| <i>Sisymbrium officinale</i>  | Hedge Mustard                               |             | E           | A         | 1           |        |             |        |             |        |        | X           |        |             |                          |
| <i>Smilacina racemosa</i>   | False Solomon's Seal                        |             | N           | PS        | 2<br>L4     | X      | X           |        |             |        |        |             |        |             |                          |
| <i>Smilacina stellata</i>   | Starry False<br>Solomon's Seal              |             | N           | PS        | 2<br>L4     | X      |             |        |             |        |        |             |        |             |                          |
| <i>Smilax tamnoides</i><br>( <i>Smilax hispida</i> )  | Bristly Cat Briar<br>Greenbrier             |             | N           | A         | 2           | X      | X           | X      |             | X      |        |             |        |             |                          |
| <i>Solanum carolinense</i>  | Horse Nettle                                | X           | N           | A         | 2           | X      | X           |        |             | X      | X      | X           |        |             |                          |
| <i>Solanum dulcamara</i>  | Deadly Nightshade<br>Bittersweet Nightshade |             | E           | A         | 2<br>L3     | X      | X           |        |             | X      | X      | X           |        |             |                          |
| <i>Solanum ptycanthum</i><br>( <i>Solanum ptychanthum</i> )<br>( <i>Solanum americanum</i> )<br>( <i>Solanum nigrum</i> ) | Black Nightshade                            |             | N           | A         | 2           | X      |             |        |             | X      | X      | X           |        |             |                          |
| <i>Solidago altissima</i><br>( <i>Solidago canadensis</i> )   | Tall Goldenrod<br>"Canada Goldenrod"        | X           | N           | A         | 4<br>L5     | X      | X           | X      | X           | X      | X      | X           |        | I           | <a href="#">Note 167</a> |
| <i>Solidago missouriensis</i><br>( <i>Solidago glaberrima</i> )   | Missouri Goldenrod                          |             | N           | PS?<br>A? | 1           |        | X           |        |             |        |        |             |        | R           | <a href="#">Note 168</a> |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name  | Common name                                     | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes      |
|--|---|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|------------|
| Solidago nemoralis                                       | Gray Goldenrod<br>Old-field Goldenrod           | X           | N           | PS          | 2<br>L3     |        |             | X      |             |        |        |             |        |             | Note 169   |
| Solidago speciosa  | Showy Goldenrod                                 | X           | N           | PS          | 2           |        |             | X      |             |        |        |             |        |             | Note 170   |
| Sonchus asper  | Prickly Sow Thistle<br>Spiny Sow Thistle        |             | E           | A           | 2           | X      | X           | X      |             |        | X      |             | X      |             |            |
| Sonchus oleraceus  | Smooth Sow Thistle<br>Common Sow Thistle        |             | E           | A           | 1           |        |             |        |             |        |        |             |        | X           |            |
| Sorghastrum nutans                                       | Indian Grass                                    | X           | N           | PS          | 4<br>L5     | X      | X           | X      | X           |        | X      | X           | X      |             |            |
| Spartina pectinata                                       | Prairie Cord Grass<br>Slough Grass              | X           | N           | PS          | 2<br>L3     | X      | X           | X      | X           | X      |        | X           |        | X           | Note 171   |
| Sphenopholis obtusata                                    | Wedge Grass                                     |             | N           | A?<br>PS?   | 2           | X      |             | X      |             |        | X      |             |        |             |            |
| Spiranthes ovalis  | October Ladies' Tresses<br>Oval Ladies' Tresses |             | N           | A           | 1           | X      |             |        |             |        |        |             |        |             | R Note 172 |
| Sporobolus heterolepis                                   | Prairie Dropseed                                | X           | N           | P           | 2           |        |             | X      |             |        | X      |             |        |             |            |
| Sporobolus vaginiflorus                                  | Poverty Grass                                   |             | N           | A           | 2           | X      |             |        |             |        | X      |             | X      |             |            |
| Stachys pilosa<br>(Stachys palustris<br>var. homotricha) | Marsh Hedge Nettle<br>Woundwort                 |             | N           | PS          | 1<br>L3     | X      |             |        |             |        |        |             |        |             | R          |
| Staphylea trifolia                                       | Bladdernut                                      |             | N           | PS          | 1           | X      |             |        |             |        |        |             |        |             | R          |
| Stellaria media  | Common Chickweed                                |             | E           | A           | 3           | X      | X           |        |             |        | X      | X           | X      |             |            |
| Symphoricarpos orbiculatus                               | Coralberry<br>Buckbrush                         |             | N           | A?<br>PS?   | 1           | X      |             |        |             |        |        |             |        |             | R          |
| Syringa reticulata                                       | Japanese Tree Lilac                             | X           | E           | PS          | 1           |        |             |        |             |        |        |             | X      |             | I Note 173 |
| Taraxacum officinale                                     | Common Dandelion                                |             | E           | A           | 4           | X      |             | X      |             |        | X      |             | X      |             |            |
| Taxodium distichum                                       | Bald Cypress                                    |             | NI          | PS          | 1           |        |             |        |             |        |        |             |        | X           | R Note 174 |
| Taxus baccata  | English Yew<br>Common Yew                       |             | E           | PP          | 1           | X      |             |        |             |        |        |             |        |             |            |
| Teucrium canadense                                       | American Germander                              |             | N           | A           | 2<br>L3     | X      |             | X      |             |        | X      |             |        |             |            |
| Thalictrum revolutum                                     | Waxy Meadow Rue                                 |             | N           | A?<br>PS?   | 2           | X      |             | X      |             |        |        |             |        |             |            |
| Thaspium trifoliatum                                     | Meadow Parsnip                                  | X           | N           | PS          | 1           | X      |             |        |             |        |        |             |        |             | R Note 175 |
| Thlaspi arvensis   | Field Penny Cress                               |             | E           | A           | 3<br>L5     | X      | X           |        |             |        | X      | X           | X      |             |            |
| Tilia americana  | American Basswood                               |             | N           | PS          | 2           | X      |             |        |             |        |        |             |        |             |            |
| Tilia cordata  | Little-leaved Linden                            |             | E           | PS          | 3<br>L4     | X      |             |        |             |        |        |             |        |             |            |
| Tilia platyphyllos<br>(Tilia platyphylla)                | Big-leaved Linden<br>Broadleaf Lime             |             | E           | PS          | 2           | X      |             |        |             |        | X      |             |        |             |            |



**Table 1. Annotated list of the flora *continued*.**

| Scientific name  | Common name                            | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes      |
|--|--|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|------------|
| <i>Tilia tomentosa</i>   | Silver Linden                          |             | E           | PP          | 1           | X      |             |        |             |        |        |             |        |             |            |
| <i>Toxicodendron radicans</i><br>( <i>Rhus radicans</i> )            | Poison Ivy                             | X           | N           | A           | 3           | X      | X           | X      |             |        | X      | X           | X      |             |            |
| <i>Tradescantia ohiensis</i>   | Ohio Spiderwort                        | X           | N           | PS          | 4           | X      |             | X      | X           |        | X      |             |        |             |            |
| <i>Tragopogon pratensis</i>  | Common Goat's Beard                    |             | E           | A           | 2           | X      |             |        |             |        | X      |             | X      |             |            |
| <i>Tridens flavus</i><br>( <i>Triodia flava</i> )                    | Purple-top<br>Greasy Grass             |             | N           | A           | 2           | X      |             | X      |             |        | X      |             | X      |             |            |
| <i>Trifolium campestre</i><br>( <i>Trifolium procumbens</i> )        | Low Hop Clover<br>Pinnate Hop Clover   |             | E           | A           | 3           | X      |             | X      |             |        | X      |             | X      |             |            |
| <i>Trifolium hybridum</i>  | Alsike Clover                          |             | E           | A           | 3           | X      |             | X      |             |        | X      |             | X      |             |            |
| <i>Trifolium pratense</i>  | Red Clover                             | X           | E           | A           | 3           | X      |             | X      |             |        | X      |             | X      |             |            |
| <i>Trifolium repens</i>  | White Clover                           | X           | E           | A           | 3<br>L4     | X      |             | X      |             |        | X      |             | X      |             |            |
| <i>Trillium recurvatum</i>   | Wake Robin<br>Purple Trillium          |             | N           | PS          | 2           | X      |             |        |             |        |        |             |        |             |            |
| <i>Tripsacum dactyloides</i>   | Gama Grass                             | X           | N           | PS          | 2<br>L3     | X      | X           | X      | X           |        | X      | X           |        |             |            |
| <i>Triticum aestivum</i>   | Wheat                                  |             | E           | P<br>A      | 1<br>L3     | X      |             |        |             |        |        |             | X      |             | Note 176   |
| <i>Tsuga canadensis</i>  | Eastern Hemlock                        |             | E           | PP          | 1<br>L3     | X      |             |        |             |        |        |             |        |             | Note 177   |
| <i>Typha x glauca</i>  | Hybrid Cat-tail<br>White Cat-tail      |             | E           | A           | 1           |        |             |        |             |        |        |             |        | X           | I Note 178 |
| <i>Ulmus americana</i>   | American Elm                           |             | N           | A           | 2           | X      | X           |        |             |        |        |             |        |             |            |
| <i>Ulmus pumila</i>  | Siberian Elm<br>"Chinese Elm"          |             | E           | A           | 1           |        |             |        |             |        | X      |             |        |             | I Note 179 |
| <i>Ulmus rubra</i>   | Slippery Elm                           |             | N           | A           | 1           |        |             | X      |             |        |        |             |        |             | R Note 180 |
| <i>Veratrum woodii</i>   | False Hellebore                        |             | NI          | PP          | 1           | X      |             |        |             |        |        |             |        |             | R          |
| <i>Verbascum blattaria</i>   | Moth Mullein                           |             | E           | A           | 2           | X      |             |        |             |        | X      | X           | X      |             |            |
| <i>Verbena bracteata</i>   | Prostrate Vervain<br>Bracted Vervain   |             | N           | A           | 2           |        |             |        |             |        |        |             | X      |             |            |
| <i>Verbena hastata</i>   | Blue Vervain                           |             | N           | A           | 2           | X      |             | X      | X           | X      | X      | X           |        |             |            |
| <i>Verbena urticifolia</i>   | White Vervain                          |             | N           | A           | 3           | X      | X           | X      |             |        | X      | X           | X      |             |            |
| <i>Verbesina alternifolia</i><br>( <i>Actinomeris alternifolia</i> ) | Wingstem<br>Yellow Ironweed            |             | N           | PS          | 2<br>L3     | X      | X           | X      |             |        | X      |             |        |             |            |
| <i>Verbesina helianthoides</i>                                       | Yellow Crownbeard                      |             | N           | PS          | 1<br>L4     | X      |             | X      |             |        |        |             |        |             | R          |
| <i>Vernonia arkansana</i><br>( <i>Vernonia crinita</i> )             | Ozark Ironweed<br>Arkansas Ironweed    |             | N           | PS          | 2           |        |             | X      | X           | X      |        |             |        |             | Note 181   |
| <i>Vernonia baldwinii</i>  | Baldwin's Ironweed<br>Western Ironweed |             | N           | PS          | 2           |        |             | X      |             |        |        |             |        |             |            |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name  | Common name                           | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes      |
|--|---------------------------------------|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|------------|
| <i>Vernonia fasciculata</i>  | Smooth Ironweed                       | X           | N           | PS          | 1           |        |             | X      | X           | X      |        |             |        |             | R          |
| <i>Vernonia missurica</i>  | Missouri Ironweed                     |             | N           | PS<br>A?    | 2<br>L3     | X      |             | X      |             |        |        |             |        |             |            |
| <i>Vernonia x illinoensis</i>  | Illinois Ironweed                     |             | N           | PS?<br>A?   | 2           |        |             |        |             |        | X      |             |        |             | Note 182   |
| <i>Veronica arvensis</i>   | Corn Speedwell                        |             | E           | A           | 3           | X      | X           |        |             |        | X      | X           | X      |             |            |
| <i>Veronica peregrina</i>  | Purslane Speedwell<br>White Speedwell |             | N           | A           | 3           | X      | X           |        |             |        | X      | X           | X      |             |            |
| <i>Veronica polita</i>   | Wayside Speedwell                     |             | E           | A           | 3           | X      | X           |        |             |        | X      | X           | X      |             |            |
| <i>Veronica serpyllifolia</i>  | Thyme-leaved Speedwell                |             | E           | A           | 2<br>L4     | X      | X           |        |             |        |        |             | X      |             | Note 183   |
| <i>Veronicastrum virginicum</i>  | Culver's Root<br>Candelabra Plant     | X           | N           | PS          | 3           | X      |             | X      |             |        |        |             |        |             |            |
| <i>Viburnum lentago</i>  | Nannyberry                            |             | N           | PS          | 2<br>L3     | X      | X           | X      |             |        |        |             |        |             |            |
| <i>Viburnum opulus</i>   | European Cranberry Bush               |             | E           | PS          | 3           | X      | X           | X      | X           |        | X      | X           |        |             | I Note 184 |
| <i>Viburnum prunifolium</i>  | Black Haw                             |             | N           | PS          | 2           | X      |             | X      |             |        | X      |             |        |             |            |
| <i>Viburnum recognitum</i>   | Smooth Arrow-wood                     |             | N           | PS          | 3           | X      | X           | X      | X           |        | X      | X           |        |             |            |
| <i>Viburnum trilobum</i>   | High-bush Cranberry                   |             | N           | PP          | 1           |        |             | X      |             |        |        |             |        |             | R          |
| <i>Vicia angustifolia</i>  | Narrow-leaved Vetch                   |             | E           | A           | 1           |        |             |        |             |        | X      |             | X      |             |            |
| <i>Vinca minor</i>   | Common Periwinkle<br>Myrtle           |             | E           | A?<br>PS?   | 1           | X      |             |        |             |        |        |             |        |             | I          |
| <i>Viola bicolor</i><br>( <i>Viola priceana</i> )<br>( <i>Viola sororia</i> var. <i>priceana</i> ) | Confederate Violet                    |             | E           | A           | 4           | X      | X           |        |             |        | X      | X           | X      |             | Note 185   |
| <i>Viola pratensis</i>   | Common Blue Violet                    |             | N           | A           | 4           | X      | X           |        |             |        | X      | X           | X      |             |            |
| <i>Viola pubescens</i>   | Downy Yellow Violet                   |             | NI          | A?<br>PS?   | 1           | X      |             |        |             |        |        |             |        |             | R Note 186 |
| <i>Viola striata</i>   | Cream Violet                          |             | N           | PS<br>A?    | 2           | X      |             |        |             |        | X      |             |        |             |            |
| <i>Vitis cinerea</i>   | Winter Grape                          |             | N           | A           | 2           | X      |             |        |             |        | X      |             |        |             |            |
| <i>Vitis riparia</i>   | Riverbank Grape                       |             | N           | A           | 2           | X      |             |        |             |        |        |             |        |             |            |
| <i>Vitis vulpina</i>   | Frost Grape                           |             | N           | A           | 2           | X      |             | X      |             |        | X      |             |        |             |            |
| <i>Xanthium strumarium</i>   | Common Cocklebur                      |             | N           | A           | 2           |        |             |        | X           |        |        |             | X      | X           |            |
| <i>Zea mays</i>  | Corn                                  |             | E           | PS          | 1           |        |             |        |             |        |        |             | X      |             |            |
| <i>Zizia aurea</i>   | Golden Alexanders                     | X           | N           | PS          | 3<br>L4     | X      |             | X      |             |        | X      |             |        |             |            |
| <i>Zoysia japonica</i>   | Zoysia                                |             | E           | PS          | 2           |        |             |        |             |        |        |             | X      |             | Note 187   |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name  | Common name                      | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes                    |
|--|----------------------------------|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|--------------------------|
| <b>Additional species that definitely have been observed in Meadowbrook Park</b> |                                  |             |             |             |             |        |             |        |             |        |        |             |        |             |                          |
| <i>Allium cernuum</i>  | Nodding Onion                    | X           | N           | P           |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 188</a> |
| <i>Amsonia tabernaemontana</i>   | Blue Star                        |             | N           | P           |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 189</a> |
| <i>Artemisia ludoviciana</i>   | White Sage<br>Western Mugwort    | X           | E           | P           |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 190</a> |
| <i>Baptisia bracteata</i><br>( <i>Baptisia leucophaea</i> )                      | Cream Wild Indigo                | X           | N           | P           |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 191</a> |
| <i>Ceanothus americanus</i>  | New Jersey Tea                   | X           | N           | P           |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 192</a> |
| <i>Echinacea paradoxa</i>  | Ozark Coneflower                 |             | E           | P           |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 193</a> |
| <i>Erigeron strigosus</i>  | Daisy Fleabane                   |             | N           | A           |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 194</a> |
| <i>Heterostipa spartea</i><br>( <i>Stipa spartea</i> )                           | Porcupine Grass                  |             | N           | P           |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 195</a> |
| <i>Heuchera richardsonii</i>   | Prairie Alumroot                 | X           | N           | P           |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 196</a> |
| <i>Hypericum sphaerocarpum</i>   | Round-Fruited St. John's<br>Wort |             | N           | A?<br>P?    |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 197</a> |
| <i>Lathyrus hirsutus</i>   | Singletery Pea                   |             | E           | A           |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 198</a> |
| <i>Liatris aspera</i>  | Rough Blazing Star               | X           | N           | P           |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 199</a> |
| <i>Lilium michiganense</i>   | Michigan Lily                    | X           | N           | P           |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 200</a> |
| <i>Monarda bradburiana</i>   | Bradbury's Bee-balm              |             | N           | P           |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 201</a> |
| <i>Penstemon tubaeiflorus</i>  | Western Beardtongue              |             | E           | P           |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 202</a> |
| <i>Reseda luteola</i>  | Weld<br>Dyer's Rocket            |             | E           | PS          |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 203</a> |
| <i>Senecio plattensis</i>  | Prairie Ragwort                  |             | N           | P           |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 204</a> |
| <i>Verbascum thapsus</i>   | Great Mullein<br>Woolly Mullein  |             | E           | A           |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 205</a> |
| <i>Verbena stricta</i>   | Hoary Vervain                    |             | N           | A           |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 206</a> |
| <b>Other species that have been reported from Meadowbrook Park</b>               |                                  |             |             |             |             |        |             |        |             |        |        |             |        |             |                          |
| <i>Anemone cylindrica</i>  | Thimbleweed                      | X           | N           |             |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 207</a> |
| <i>Cirsium altissimum</i>  | Tall Thistle                     | X           | N           |             |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 208</a> |
| <i>Cirsium vulgare</i>   | Bull Thistle                     | X           | E           |             |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 209</a> |
| <i>Erigeron asperugineus</i>   | Idaho Fleabane<br>Rough Fleabane | X           | E           |             |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 210</a> |
| <i>Gaura parviflora</i>  | Small-flowered Gaura             | X           | N           |             |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 211</a> |
| <i>Helianthus maximilianii</i>   | Maximilian's Sunflower           | X           | E           |             |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 212</a> |
| <i>Oenothera albicaulis</i>  | Prairie Evening Primrose         | X           | E           |             |             |        |             |        |             |        |        |             |        |             | <a href="#">Note 213</a> |

**Table 1. Annotated list of the flora *continued*.**

| Scientific name  | Common name                        | U<br>P<br>D | N<br>a<br>t | O<br>g<br>n | A<br>b<br>n | M<br>W | W<br>m<br>W | M<br>P | W<br>m<br>P | W<br>P | M<br>M | W<br>m<br>M | D<br>L | C<br>r<br>k | Notes    |
|--|------------------------------------|-------------|-------------|-------------|-------------|--------|-------------|--------|-------------|--------|--------|-------------|--------|-------------|----------|
| Penstemon pallidus   | Pale Beardtongue                   | X           | N           |             |             |        |             |        |             |        |        |             |        |             | Note 214 |
| Phlox pilosa   | Downy Phlox<br>Prairie Phlox       | X           | N           |             |             |        |             |        |             |        |        |             |        |             | Note 215 |
| <b>Other species that are on planting lists for Meadowbrook Park</b>               |                                    |             |             |             |             |        |             |        |             |        |        |             |        |             |          |
| Anemone canadensis   | Meadow Anemone                     | X           | N           |             |             |        |             |        |             |        |        |             |        |             | Note 216 |
| Angelica atropurpurea  | Great Angelica                     | X           | N           |             |             |        |             |        |             |        |        |             |        |             | Note 217 |
| Asclepias sullivantii  | Sullivant's Milkweed               | X           | N           |             |             |        |             |        |             |        |        |             |        |             | Note 218 |
| Carex comosa   | Bristly Sedge                      | X           | N           |             |             |        |             |        |             |        |        |             |        |             | Note 219 |
| Gentianella quinquefolia<br>(Gentiana quinquefolia)                                | Stiff Gentian                      | X           | N           |             |             |        |             |        |             |        |        |             |        |             | Note 220 |
| Liatris cylindracea  | Cylindrical Blazing Star           | X           | N           |             |             |        |             |        |             |        |        |             |        |             | Note 221 |
| Lilium philadelphicum<br>(Lilium umbellatum)                                       | Wood Lily                          | X           | N           |             |             |        |             |        |             |        |        |             |        |             | Note 222 |
| Oligoneuron album<br>(Aster ptarmicoides)<br>(Solidago ptarmicoides)               | Stiff Aster                        | X           | NI          |             |             |        |             |        |             |        |        |             |        |             | Note 223 |
| Penstemon grandiflorus   | Large-flowered<br>Beardtongue      | X           | NI          |             |             |        |             |        |             |        |        |             |        |             | Note 224 |
| Polytaenia nuttallii   | Prairie Parsley                    | X           | N           |             |             |        |             |        |             |        |        |             |        |             | Note 225 |
| Prenanthes racemosa  | Glaucous White Lettuce             | X           | N           |             |             |        |             |        |             |        |        |             |        |             | Note 226 |
| Schoenoplectus pungens<br>(Scirpus americanus,<br>misapplied)<br>(Scirpus pungens) | Three-square<br>Chair-maker's Rush | X           | N           |             |             |        |             |        |             |        |        |             |        |             | Note 227 |
| Senna hebecarpa  | Wild Senna                         | X           | N           |             |             |        |             |        |             |        |        |             |        |             | Note 228 |
| Sisyrinchium campestre   | Prairie Blue-eyed Grass            | X           | N           |             |             |        |             |        |             |        |        |             |        |             | Note 229 |
| Sparganium eurycarpum  | Common Bur-reed                    | X           | N           |             |             |        |             |        |             |        |        |             |        |             | Note 230 |
| Spiranthes cernua  | Nodding Ladies' Tresses            | X           | N           |             |             |        |             |        |             |        |        |             |        |             | Note 231 |
| Viola pedatifida   | Prairie Violet                     | X           | N           |             |             |        |             |        |             |        |        |             |        |             | Note 232 |
| Zizia aptera   | Heart-leaved Meadow<br>Parsnip     | X           | NI          |             |             |        |             |        |             |        |        |             |        |             | Note 233 |

## ANALYSIS OF THE FLORA

### Overview

The list of plants in Table 1 includes 608 species that were identified at Meadowbrook Park in 2011. The plants represent 100 plant families. The five largest families are: aster (97 species), grass (67 species), rose (34 species), mint (24 species), and sedge (22 species).\*

The genus with the most species consists of sedges (*Carex*, with 16 species). The next largest genera are: asters (12 species), oaks (11 species), sunflowers (eight species), and maples (seven species).

A total of 371 species in the study area are native to east-central Illinois, 22 are native elsewhere in Illinois, and 215 are not native to the state. Roughly half of the plant species at Meadowbrook probably were planted, and the rest appear to have arrived there naturally.

Six hundred and eight is a big list of species, but not every one of the plants is numerous enough and well enough established in the park to be a permanent part of the flora. I judge that as many as 71 of the species on the list cannot be expected to be present reliably from year to year. They include escapes from the Organic Gardens, other scarce annuals, and perennials that occur in the park as only a few seedlings.

Another 150 to 160 of the plants in Table 1 are expected to be longer-lasting but their persistence at Meadowbrook Park is nonetheless tenuous. A species such as this probably will continue to be found in succeeding years, but the number of individual plants is so small and the species occupies such a limited area that it is vulnerable to extinguishment from gradual habitat change (*e.g.* shading by encroaching shrubs) or destruction by activities such as herbiciding and earthmoving.

The balance of the flora – about 380 species – are widespread and abundant enough to be considered secure in the park.†

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\* Twelve kinds of hybrid plants that have been formally named as hybrid species are included in Table 1. A hybrid species is the fertile product of interbreeding by two different species. Although a hybrid species has characteristics that are intermediate between its parent species, it can reproduce and “breed true,” maintaining its distinctness from the parent species. A hybrid species has an x in its scientific name, as in *Platanus x acerifolia*.

† In addition to the 608 species that I observed in 2011, 19 species are known to have occurred in the study area in past years, and some of them are likely to still be present. Another nine species have been reported from the park, but the reports may be based on misidentifications. In addition, 18 other species reportedly were planted in the prairie restoration areas but were not found in 2011. All of these additional species are listed at the end of Table 1, and each is discussed in Appendix 4.

**Table 2. Comparison of the floristic diversity of Meadowbrook Park and other sites in east-central Illinois.** The tabulation shows the number of vascular plant species identified by intensive botanical surveys of Meadowbrook Park and other areas in the region that are about the same size as Meadowbrook Park or larger.

| Study area  | Acres           | Species | Reference                      |
|---|-----------------|---------|--------------------------------|
| Brownfield Woods and Trelease Woods, Champaign County                     | 100             | 274     | Jones (1947)                   |
| Horseshoe Bottom Nature Preserve, Vermilion County                        | 99              | 463     | Larimore <i>et al.</i> (2000)  |
| Vermilion River Observatory, Vermilion County                             | 490             | 475     | Phillippe <i>et al.</i> (2003) |
| Walnut Point State Park, Douglas County                                   | 671             | 503     | Phillippe and Ebinger (1977)   |
| Iroquois County Conservation Area, Iroquois County                        | Approx. 1,900   | 562     | Phillippe <i>et al.</i> (2009) |
| Meadowbrook Park study area   | 120             | 608     | This study                     |
| Allerton Park and a nearby prairie remnant along a railroad, Piatt County | More than 1,500 | 707     | Jones and Bell (1974)          |

Table 2 shows the number of plant species growing without cultivation at Meadowbrook Park compared with nearby areas that have been intensively botanized. The results of the studies are not exactly comparable because different criteria were used to determine whether to list a species as part of an area's flora, and the botanical surveys were not equally thorough. However, the table demonstrates that Meadowbrook Park has an extraordinarily diverse flora.

### Composition of the vegetation

Meadowbrook Park has a high diversity of native plant species, but the composition of the vegetation departs from natural conditions in three major ways. (1) Non-native species make up a substantial part of the flora. (2) Many native species are absent from the park even though they are common in the same habitats elsewhere in the region. (3) Of the native species that are present in the park, many of them are far less numerous than they would be under natural conditions.

All of present-day Meadowbrook Park was treeless prairie in the early 1800s. The number of plant species that were growing in the 120-acre study area two centuries ago is unknown, but it is likely to have been well over 200 species. I estimate that at least 60 of the plant species that are in the park today must have also been present in the original prairie. Another 40 or 50

There is a hotel close to the station, where we got a tolerable tea (our kind cicerone, Mr. Johnson, had brought a basket of sandwiches, and we dined on them in the train), and then we got into a waggon with a pair of horses, and drove through the old town of Urbana, and out upon the great prairie. I do not fancy there exists in the whole world such a sight as we beheld. From an eminence, as far as the eye could comprehend the scene, it traversed the richest undulating fields of grass, almost unbroken by fence, plough, or house. We walked some distance up to the knees in the luxuriant herbage.

– British author William Ferguson, June 4, 1855.

of the prairie species that are now in the park may have been present in the original prairie, but more than half of the site's original prairie flora probably is missing.\*

Many typical tall-grass prairie species such as Indian Grass and White Wild Indigo are well established in the park, but most of the native species are far less common in Meadowbrook Prairie than they are in natural prairie remnants, and some important species are barely represented at Meadowbrook. For instance I know of one Leadplant in Meadowbrook Prairie, but a natural prairie often has more than a thousand Leadplants per acre. Other characteristic species are entirely missing, particularly little early-bloomers such as Yellow Star Grass (*Hypoxis hirsuta*) and Blue-eyed Grass (*Sisyrinchium albidum*). Although the Walker Grove Wetland has a good diversity of native plants, it lacks many species that are to be expected in that habitat, such as Seedbox (*Ludwigia alternifolia*) and spike rushes (*Eleocharis*).

False Sunflower, Broad-leaved Purple Coneflower, Cup Plant, and Cream Gentian are among the most common and conspicuous plants in Meadowbrook Prairie – but these four species are never abundant and widespread in the region's natural prairies. False Sunflower is primarily a savanna species: wherever it occurs in a prairie east of the Mississippi River, it usually is not far from trees. Broad-leaved Purple Coneflower is a species of semi-shaded woodland; I have yet to see it out in an open prairie under natural conditions. (3) Cup Plant naturally occurs in moist bottomland habitats, but in nearly five decades I have never found it in a natural Illinois prairie. (4) Cream Gentian is primarily a species of savannas and woodland edges; I have hardly ever seen it in a prairie unless it was planted. These four species are, however, so abundant in Meadowbrook Prairie and at many other prairie restorations that the visiting public has come to think of them as major components of the native prairie flora.

Wooded parts of the park lack many of the region's forest herbs, including commonplace species such as Orange Jewelweed (*Impatiens capensis*) and Woodland Lettuce (*Lactuca floridana*). The most abundant forest herbs at Meadowbrook are disturbance-tolerant species with stickery "hitchhiker" seeds such as White Avens and Black Snakeroot.

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\* The 60 or so species that must have been present on the tract two centuries ago include the region's common and characteristic prairie species such as Big Bluestem and Compass Plant. The 40 to 50 additional species that may or may not have originally been present include less abundant species such as Canada Milk Vetch and weedy natives such as Giant Ragweed.

## Rare native plants

Appendix 2 is a tabulation of 116 native plant species that are rare at Meadowbrook Park (defined as species with only one or two individuals or small colonies known in the park). Although these plants are rare at Meadowbrook, almost none are rare in their range as a whole or even in the rest of Illinois. Some of the park's rarities are sensitive, conservative species that merit protection and monitoring (for example, White Turtlehead). Others such as Sweet Everlasting are weedy plants that do not call for any particular care; they might even increase in numbers if their habitat were lightly disturbed.

Figure 3 illustrates the distribution of rare native plants in the study area. There are concentrations of rare species along the Wildflower Walk, bordering McCullough Creek, in the Savanna Peninsula, in Walker Grove (especially the wetland), and in higher quality parts of Meadowbrook Prairie.

## Special habitats

Seven parts of Meadowbrook Park are of special interest because they have a high diversity of native plants and harbor species that are found nowhere else in the park:

- Prairie restoration along the Prairie Path from the rail fence south to Marker
- Prairie restoration immediately east and south of the Savanna Peninsula, and on either side of the path extending west from the tip of the Savanna Peninsula
- Hickman Wildflower Walk
- Wooded corridor along McCullough Creek
- Savanna Peninsula
- Walker Grove Wetland
- Beaver Pond

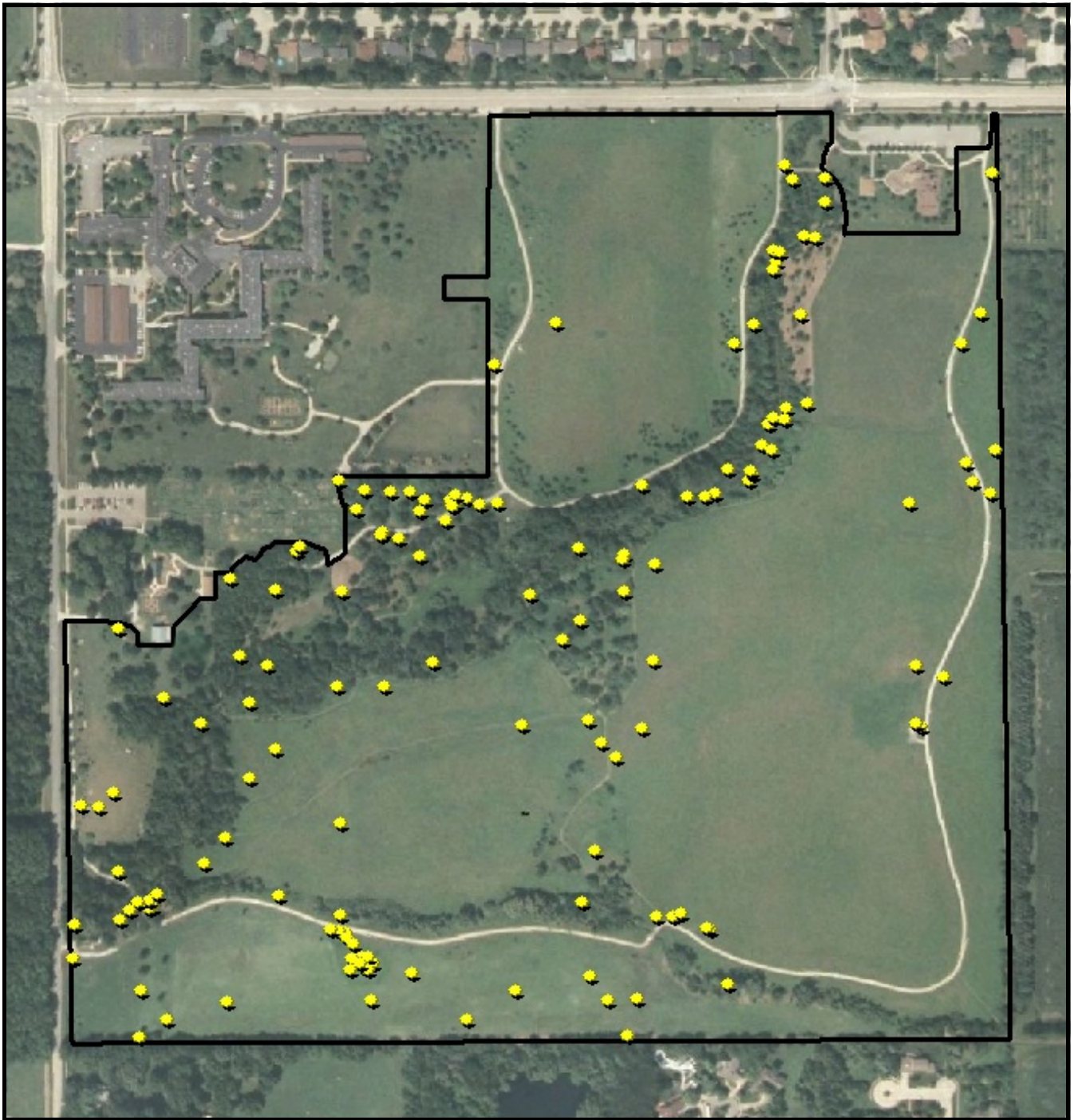
***Meadowbrook Prairie.***—In the parts of Meadowbrook Park that have been planted to prairie vegetation, the highest diversity of native species is mostly close to paths. These areas have enjoyed the most intensive prairie restoration efforts. For the most part, the rest of Meadowbrook Prairie is characterized by dense grass, high numbers of only a few kinds of native wildflowers, and a lack of many typical prairie species.

***Hickman Wildflower Walk.***—About 20 of Meadowbrook's native plant species can be found only near the Wildflower Walk. They include spring ephemerals such as Jack in the Pulpit as well as three kinds of fall-blooming asters.

***Wooded corridor along McCullough Creek.***—The strip of woods beside McCullough Creek has about 30 kinds of native plants that are known nowhere else in the park. With 92 species of woody plants and many fine specimen trees, there is good potential for developing a nature trail or labeled tree walk alongside the creek.

***Savanna Peninsula.***—Only four of the park's native plant species are restricted to the Savanna Peninsula, but two of them are orchids.





**Figure 3. Distribution of rare native plants in Meadowbrook Park.** Each dot is a location listed in Appendix 2. Rare plants are concentrated in the special habitats described on pages 36 and 38.

**Walker Grove Wetland.**—This area of less than an acre in Walker Grove has 12 native species that occur nowhere else in the park, including Marsh Marigold, Wild Blue Iris, and False Aster.

**Beaver Pond.**—The largest beaver impoundment on McCullough Creek is called Beaver Pond. Seven native plants are either limited to the water and shores of Beaver Pond, or they are most abundant there. They include true aquatics such as Long-leaved Pondweed as well as mud-dwellers like Erect Knotweed.

Two other spots – around the Sanitary District’s pump station and the compost heaps – have concentrations of unusual and uncommon plants. Although most of those plants are not native to America, they nonetheless add variety and interest to the flora. From a botanical perspective, the least interesting part of the park is the meadow and brush between the Hickman Wildflower Walk and McCullough Creek.

## **Invasive plants**

An invasive plant is one that aggressively spreads and dominates an area, out-competing other species and changing the habitat so that it is unsuitable for other plants. Most invasives are exotics, but a few indigenous species can become so abundant and persistent that they significantly impede vegetation restoration and management efforts. Appendix 3 lists and discusses the 59 invasive plant species found in Meadowbrook Park.

Figure 4 shows the location of the 158 invasive plant infestations that are enumerated in Table 5 (Appendix 3). Invasive plants are concentrated in the wooded areas. In contrast, prairie vegetation is inhospitable to most invasives if it is successfully managed with fire.

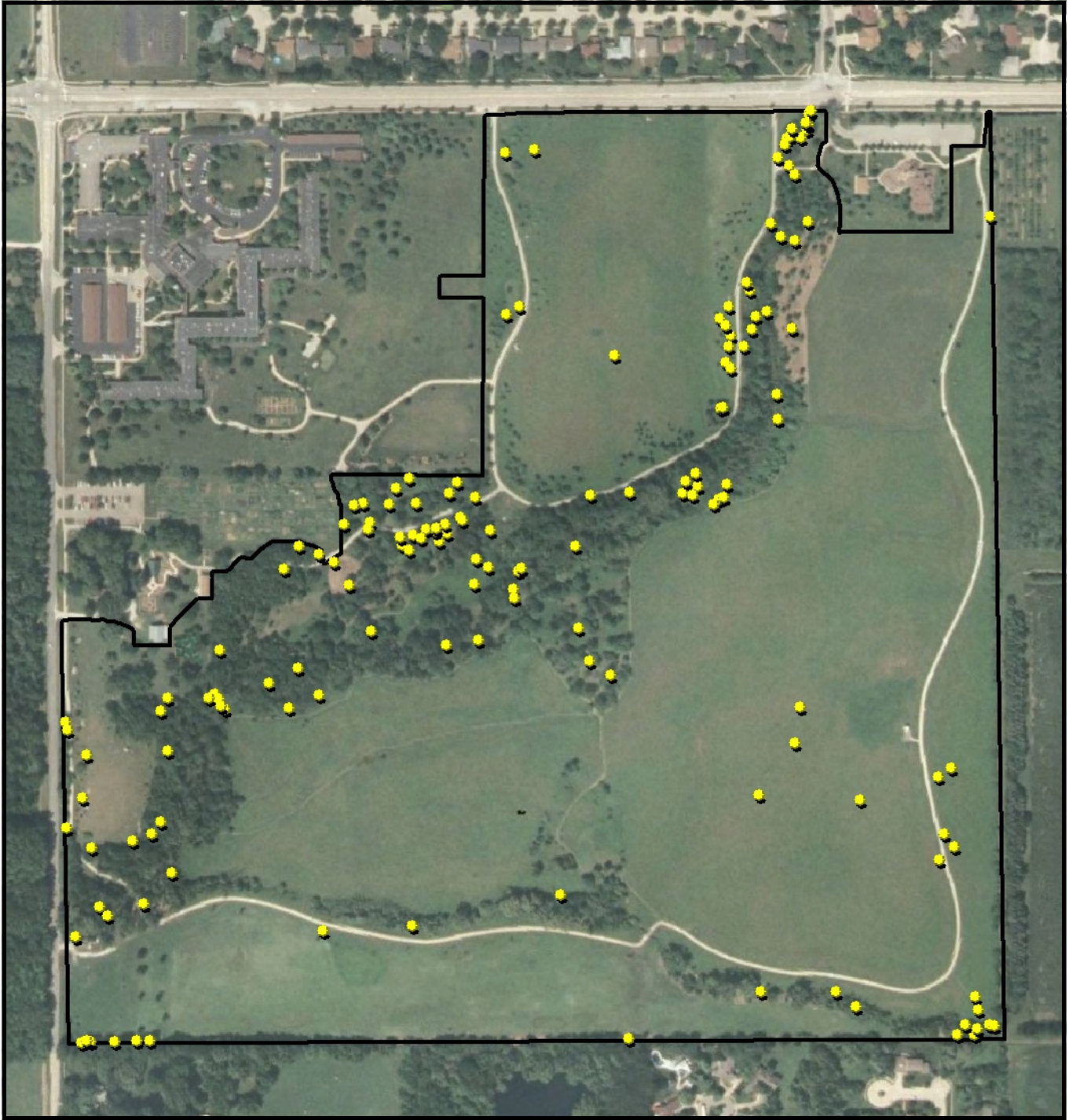
Parts of Meadowbrook Park are overwhelmed by exotic, invasive vegetation – if the non-native plants were all removed, the land would be laid bare. If Meadowbrook Park were abandoned, it would grow into a thickety forest of crabs, honeysuckles, Callery Pear, and other weedy trees and shrubs. Nobody knows what such a woods will eventually develop into: nothing like this aggressive mix of exotic and native trees and shrubs has ever before occupied the face of the Earth.

## **Sources of adventive and invasive plants**

An *adventive* species is a plant that has spread into Meadowbrook Park on its own, without being planted. Adventives often die out before they become well established. Only the most aggressive species that replace other vegetation are classified as *invasives*.

## **Gardening**

In the spring of 2011, a fraction of an acre near the compost heaps east of the Organic Gardens had 22 kinds of garden vegetables, herbs, and flowers that are usually found only under cultivation – including Tomato, Coriander, Horseradish, Hollyhock, and Borage. These species had spread from the gardens via seeds and composted plants, and most of them died out early in the growing season either because they were mowed or because growing conditions were



**Figure 4. Distribution of invasive plants in Meadowbrook Park.** Each dot is the location of an individual or a patch of an invasive species that is listed in Table 5. The locations include all infestations of species that were *thoroughly documented* and the most significant infestations of species that were *selectively documented* during field surveys. Locations of species that were *generally described* are not shown, but their pattern of distribution is basically the same as the other invasive species. The three levels of documentation (*thorough*, *selective*, and *general*) are defined on page 61.

suboptimal. In addition to the cultivated plants that escaped into the study area, Peruvian Daisy and five other weeds that are common in the Organic Gardens have spread into the same small area east of the gardens.

Beefsteak Plant is the only species grown in the Organic Gardens that has established a vigorous, reproducing population in the adjacent park land. Beefsteak Plant is an invasive species; three other invasives that occur in wild parts of the park are also cultivated in the Herb Garden or Sensory Garden: Common St. John's Wort, Blackberry Lily, and Indian Strawberry. Considering where the St. John's Wort is distributed in the park, it does not appear to have spread from the gardens. Some of the Indian Strawberry that is growing wild in the park may have originated from the Sensory Garden, but this species is so well established throughout the park and the rest of Urbana that its presence cannot be attributed solely to the patch in the Sensory Garden. It seems likely, though, that the single wild-growing Blackberry Lily in Meadowbrook Park came from the Sensory Garden.

### ***McCullough Creek***

The source of McCullough Creek is a storm sewer outlet on the south side of Windsor Road. The creek serves as a major avenue for dispersal and establishment of new plants in the park in two ways: (a) seeds and other reproductive bodies are carried downstream by the water, and (b) bare soil in the stream channel provides an ideal seedbed for many kinds of plants. At least eight species appear to have gotten a start in the park by washing down McCullough Creek and sprouting along its banks. They include garden plants such as Lemon Balm as well as weeds (Prostrate Pigweed and Jimson Weed). One of them, Fig Buttercup, is an ornamental flower, but it is also one of the newest and most serious of invasive plants (see Note 150).

The creek's capacity to move seeds is illustrated by a Douglas Fir cone and several Sweetgum seed balls that washed up against the dam at Beaver Pond in the spring of 2011. The nearest Douglas Firs are along Vine Street 1,400 feet upstream from the dam, and the gum balls probably washed into a storm sewer grate somewhere even farther north of Windsor Road.

### ***Neighboring properties***

In addition to traveling by water, some plants have been carried into Meadowbrook Park by animals and wind: Domestic Apple from the orchard on the east; Sweetgum, Northern Catalpa, and Tuliptree from the forestry plantations on the west; and Sweet Cherry, Winterberry Holly, and other horticultural species from residences to the north and south.

Figure 4 shows the influence of gardening, McCullough Creek, and neighboring land use on the establishment of invasive species in the park. Many invasives occur near the gardens, beside McCullough Creek (especially where the stream flows from the residential area into the park at Windsor Road), and at the edges of the park.

The woods along the Hickman Wildflower Walk has the highest density and diversity of invasive plants in Meadowbrook Park. Some the invasives growing there came from neighboring gardens, and some were planted along the walk. The thinly wooded, lightly shaded habitat along the Wildflower Walk is ideal for the establishment of several kinds of aggressive and prolific non-native vines, shrubs, and trees – but the main reason for the

abundance and wide variety of invasive plants along the Wildflower Walk may be the presence of a few big Japanese Crab trees that produce a bounty of little crabapples. Fruit-eating birds flock to those trees, and in the process they end up depositing seeds from other invasive plants that they had recently fed upon elsewhere in the neighborhood.

### **Plants rarely or never documented as part of the Illinois flora**

I found three non-native species growing in old field habitats at Meadowbrook Park that, as far as I have determined, have never been reported in a botanical publication as occurring outside of cultivation in Illinois: Grecian Foxglove, Elm-leaved Blackberry, and Turkestan Bluestem. In addition to those three species, I found two other non-native species and one variety that were only recently reported for the first time as escaped from cultivation in the state: Purple Beautyberry, Ginkgo, and Field Pumpkin.

It is not clear whether any of these plants will establish permanent, reproducing populations and become truly part of the state's flora. All of them except Turkestan Bluestem are horticultural escapes; many botanists would consider their discovery to be inconsequential and not worth announcing in a publication. Each of them is discussed in Appendix 4.

### **Impact of deer on the flora and vegetation**

Deer have an effect on plants at Meadowbrook, but the degree of their impact is uncertain. Although it is not hard to find plants in the park that have been partially eaten by deer,\* it is unknown whether any species has been seriously depleted or even extirpated by deer. Some members of the rose and pea families that are favorite foods of deer (for instance White Avens and tick trefoils) are quite common in Meadowbrook Park, and as a whole, they do not appear to be suffering harm. On the other hand, less common species that are favored by deer (such as Wahoo and Burning-bush) have been heavily browsed back.

Deer relish big, bright, nectar-laden prairie flowers – but the Turk's Cap Lilies in Meadowbrook Park had an astonishing fortune in the late spring of 2011: hundreds of blossoms were arrayed across the prairie – and not a one was consumed by deer.

Long-term, heavy browsing of a woods by deer can create an open understory (shrub layer) with a distinct upper limit or browse line, where the palatable twigs and shoots are nibbled away as high as deer will reach. There is no obvious browse line in Meadowbrook Park, but its absence is not necessarily attributable to a low density of deer. The great majority of the shrub layer in the park consists of Amur Honeysuckle, which deer tend not to eat. Wherever Amur Honeysuckle has been cleared away by the Park District staff in recent years, there is no evidence of a browse line because hardly any woody undergrowth remains to be eaten. Deer may, however, be preventing young trees and shrubs from growing up to replace the honeysuckle bushes that were removed: oak seedlings are scarce and oak saplings are nearly

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\* When a plant is bitten off by a deer, the end of the remaining stub characteristically has a partially torn appearance because deer lack upper incisors and cannot make a clean bite. In contrast, a stem eaten by a rabbit or rodent is sharply clipped.

nonexistent in Meadowbrook Park – perhaps in large part because deer love to eat acorns and oak twigs.

The impact of deer on Meadowbrook’s vegetation could be ascertained by a monitoring program that includes fenced plots where deer are prevented from foraging inside the fence. Much could be learned by comparing the condition and composition of vegetation on either side of a fence around a deer exclosure.

In addition to damaging vegetation, overabundant deer at other places have been implicated in a variety of other ecological assaults, including the spread of diseases and Amur Honeysuckle. For an introduction to research literature about the impact of deer on natural areas, see the summary by White (2009).

### **Impact of beavers on the flora and vegetation**

Beavers maintain a series of dams along the length of the McCullough Creek. Most of the dams are so low that water is raised only a foot or two, staying well within the stream channel. But one dam is big enough to hold water bank-full after rains, impounding the creek for more than a thousand feet and creating Beaver Pond.

A water-control structure installed by the Park District prevents water in Beaver Pond from standing brimfull behind the dam, so a narrow mudflat is quick to show along the edges of the pond as water drains away through a pipe. The muddy shore and the water in Beaver Pond provide habitat for a number of wetland and aquatic plants that would otherwise be scarce or absent from Meadowbrook Park (see page 38).

The effect of beaver-impounded water on the vegetation is mostly restricted to the very margins of McCullough Creek. Along some stretches, Amur Honeysuckle mortality is 100%. In limited areas where the streambank is low, water spreads out behind a beaver dam and creates a zone of wetter soil that is 20 or more feet wide. The increased wetness has stressed or killed some trees, thinning the canopy and making new habitat for sun-loving wetland plants, but the flooding has not caused a big shift in the vegetation.

Beavers are girdling and felling many trees and shrubs along McCullough Creek, especially Hackberries and the bigger Eastern Cottonwoods. Although wire mesh is wrapped around the base of many trees to forestall beavers, they have damaged or toppled a number of prized trees. They have also cut down Callery Pears and other invasives.

### **Environmental factors and the success of restoration efforts**

A plan to restore the ecology of an area needs to explicitly address three time-frames: the past, present, and future. (1) The *past* (that is, the original natural character of an area) is fundamental because it provides a target for restoration activities. (2) The *present* is paramount because living things respond to current conditions, which often differ from the past. (3) As the *future* unfolds, ecological communities can develop along any of several trajectories, depending on how the land is managed.

The success of a prairie restoration is affected by a wide variety of environmental factors – such as the weather, the timing of prescribed fires, and invasive species. A site’s *hydrology* is key because it largely determines soil moisture and ultimately controls the distribution of plants.

While inventorying the flora of Meadowbrook Park, I identified fourteen sets of environmental factors (both ecological processes and physical features) that affect the park’s hydrology. Some of the factors operate to create or maintain dry conditions, and others create or maintain wet conditions. For the most part, water moves into and out of Meadowbrook Park faster than it once did under natural conditions, and most of the land is now better drained than it was originally. To help ensure that restoration efforts succeed, hydrological factors that affect the park need to be addressed. Some undesired factors can be controlled or mitigated; but in certain instances, the only practical course may be to adjust the restoration strategy to accommodate a hydrological condition that cannot be changed.

Walker Grove illustrates the importance of hydrology in ecological restoration. A study by Grimley *et al.* (2008) classified and mapped the soils of Walker Grove on the basis of their magnetic properties, which developed under different degrees of wetness during thousands of years. The restoration map produced by that study characterizes the *past* condition of the land (time period 1 as defined at the bottom of the previous page), and it calls for restoring Walker Grove as follows:

- 1 acre of Wet Prairie\*
- 10 acres of Wet-mesic Prairie
- 2 acres of Mesic Prairie

Based on that map, different parts of Walker Grove were planted with one of three mixtures of seeds (wet, wet-mesic, and mesic). I subsequently examined the *present* composition of the vegetation (time period 2) and mapped the following at Walker Grove:

- 0.4 acre of Wet Prairie
- 0.5 acre of Wet-mesic Prairie
- 12 acres of Mesic Prairie

Why the big differences? Much of Walker Grove is so flat, low-lying, and clayey that it must have originally been Wet Prairie and Wet-mesic Prairie, and the magnetic properties of the soil still reflect those long-ago conditions. But hydrological changes in and around the park make the entire landscape better drained, and nine-tenths of Walker Grove now supports Mesic Prairie vegetation. Since seeds germinate and plants grow in response to *present* conditions, my map shows how the vegetation is responding to restoration efforts regardless of what the restoration map prescribes.

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\* The soil moisture classes *wet*, *wet-mesic*, and *mesic* are defined on page 54.

## **Monitoring changes in Meadowbrook Prairie**

Many species that were planted in Meadowbrook Prairie are thriving, but others either failed to make a start or have since died out. The last 18 species listed in Table 1 are thought to have been planted in the prairie restoration areas, but I could not find any of them in 2011.

Other prairie species that were planted at Meadowbrook are now found in vanishingly low numbers. For instance the Park District's records show that Smooth Blue Aster was part of the planting mix at three times when different parts of Meadowbrook Prairie were seeded: in 1978, in 1997 (3 acres), and in 2006 (2 acres). On my 217-mile walk through Meadowbrook Park, I came across Smooth Blue Aster in only two places: a few plants on either side of the Prairie Path north of the Freyfogle Overlook, and a single plant on the 2 acres of Walker Grove that were seeded in 2006. The Smooth Blue Asters north of the overlook are in a patch with several other showy flowers right next to the path, where they were planted by hand rather than sprouting from seed that was sown widely by a machine.

Although Table 1 and Appendix 4 contain a wealth of information about the current distribution and abundance of plant species in Meadowbrook Park, this report does not chronicle how the vegetation developed since the park was established, and it does not provide a good foundation for detecting future changes and assessing the effectiveness of the restoration program. There are two reasons for these limitations. First, the Park District's records of what was planted (and where) during early restoration activities are fragmentary and sketchy. And second, as thorough as my survey of the flora was, I documented the composition of the vegetation only in general terms.

To detect changes in the vegetation and to monitor the effectiveness of restoration efforts, the Park District needs to have detailed information recorded from a series of small, permanently located plots. With such an approach, each plant species in a plot is identified and quantified (either by counting its stems or recording the amount of ground it covers). When the same plots are reexamined over a period of years, a powerful set of data emerges – from which the Park District can make reliable comparisons, identify trends in the vegetation, and draw firm conclusions about the restoration program. The alternative is to fall back on anecdotal, subjective, and generalized information.



## RECOMMENDATIONS

Information in this report is of immediate use to control invasive plants and protect rare species. I offer three recommendations to further the value of the park's botanical resources:

- Educate the public about the exceptionally high diversity of plant life at Meadowbrook Park.
- Prepare detailed maps of the park's past, present, and intended future vegetation and land cover to guide restoration activities and to serve as educational material for park visitors.
- Assess the success of vegetation restoration efforts with a long-term monitoring program.

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## Appendix 1. Definitions of terms and notes about their application.

### Nativity

Three coded terms in column 4 of Table 1 indicate whether a species is indigenous to the area:

***Native to east-central Illinois.***—These species are thought to have occurred naturally in east-central Illinois throughout recorded history.

***Native elsewhere in Illinois.***—A species is given this designation if it is native to Illinois but its natural, historic range does not include east-central Illinois.\*

***Exotic.***—An *exotic* species is not native to Illinois. Most exotics are Old World plants, but many are native to other parts of the Americas.

### Origin

Each species is annotated in column 5 of Table 1 with one or more of the following four terms to indicate how the plant probably came to occur at Meadowbrook Park:

***Adventive.***—An *adventive* species is one that became established in Meadowbrook Park naturally, without being planted.

***Planted.***—A species is categorized as *planted* if it was deliberately introduced to Meadowbrook Park by seeding or putting plants into the ground. Whenever enough information is available to make the judgment, a planted species is characterized more specifically with one of the following two terms.

***Planted and persisting.***—A species is annotated as *planted and persisting* if it was planted in Meadowbrook Park and it has not reproduced, but it has competed successfully with the surrounding wild vegetation for many years without being cultivated or otherwise tended.

***Planted and spreading.***—A species is denoted as *planted and spreading* if it was planted in Meadowbrook Park or immediately adjacent to the park and it has subsequently reproduced by seed or has spread via rootstocks or roots.†

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\* I usually consulted Mohlenbrock's *Vascular Flora of Illinois* to confirm whether a plant is indigenous to Illinois, and I used Mohlenbrock and Ladd's *Distribution of Illinois Vascular Plants* to determine whether a plant is native to east-central Illinois. I defined east-central Illinois as extending north to Iroquois, Ford, and Livingston Counties, and south to Shelby, Cumberland, and Clark Counties.

† If a plant that naturally grows in a tight clump (such as some kinds of grass) simply grew wider and did not produce any stems that are separate from the clump, I did not consider it to be spreading. Several kinds of trees and shrubs in Timpone Grove have spread a few feet via root sprouts (for instance Bottlebrush Buckeye, *Aesculus parviflora*), but I did not count them as part of the non-cultivated flora of the park.

The origin of many species in Meadowbrook Park – *i.e.* whether adventive or planted – is undocumented and uncertain, so the annotations in the fifth column of Table 1 are often based on a weighing of the available evidence. The more uncertain annotations have question marks.\*

The land that is now Meadowbrook Park was originally all prairie, but it was intensively farmed for more than a century before being acquired by the Park District. Old aerial photography shows that the property once had no trees or uncultivated land except at the farmstead next to Race Street, along fences and ditches, and perhaps some close-cropped pasture. Although the prairie vegetation was destroyed by farming, a few weedier or more resilient members of the original prairie flora may have persisted on the property up to the present time. I do not know, though, which indigenous plants actually survived the farming era, so I annotated every species in the study area as either adventive or planted.

### **Abundance**

A five-level abundance scale in the sixth column of Table 1 estimates how common each species is in Meadowbrook Park:

- 1. *Rare.***—A species is considered *rare* if it is known in the park from only one or two individuals or small patches.
- 2. *Occasional.***—An *occasional* species is known from at least three locations in the park, but it does not occur so frequently that it is apt to be discovered quickly.
- 3. *Common.***—A species is *common* if it can be located without much effort when searching its habitat.
- 4. *Very common.***—These species are encountered with little to no effort in suitable habitat.
- 5. *Abundant.***—An *abundant* species is predominant and ubiquitous in its habitat.

***Local abundance* (“L” annotations).**—Many plant species have a patchy distribution, even within habitat that appears to be well suited for their growth. This sort of uneven pattern can make it difficult or impossible to assign an overall abundance rating. A species might be locally so common that it would rate an abundance of 3 or 4; but considering its habitat as a whole, it might be rated only 2. I qualified the abundance rating for many species by adding an L (for “locally”): *e.g.* L3 means “locally common.”

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\* Almost all of the prairie species in Meadowbrook Park obviously were planted, but the origin of many woodland plants is unclear. I often inferred whether a species was adventive or planted on the basis of its ecology and its location in the park. A weedy species whose seeds are spread by wind or birds is likely to be adventive. On the other hand, if a species usually grows in undisturbed habitats and its seeds are not designed to travel far, then it is more likely to have been planted in the park. If a species was found growing with others that were planted (such as woodland flowers along the Wild-flower Walk), I took its location as evidence that it probably was planted.



These ratings provide a subjective estimate of abundance. Only five classes (*rare* through *abundant*) characterize the entire range of possible population levels for all species, so each one of the classes must embrace a broad range of numbers.

Some plants occur in a wide range of environments, but they are often more common in certain habitats than in others. The abundance rating is an estimate of a species' numbers in its optimal habitat, where it is most common. The rating is not an estimate of the overall abundance of a species in the park as a whole.

Rating the abundance of plants in the Wet Prairie habitat is a special case because the extent of Wet Prairie in the park is very limited (less than half an acre). Any plant that is restricted to the park's Wet Prairie habitat might not be considered truly rare: that is, a species that occurs in every half acre of its habitat would be considered common instead of rare if its habitat were extensive. I therefore adjusted the abundance scale for plants that have their optimal habitat in Wet Prairie so that the least numerous species are rated as *rare* and the most numerous are *very common* or *locally abundant*.

I also adjusted the abundance scale to accommodate various growth forms of plants (*i.e.* trees, shrubs, and herbs). An acre can support hundreds of thousands of herbs but perhaps about a hundred mature trees. Consequently a herbaceous species can be a few orders of magnitude more numerous than a tree species but still be assigned to the same abundance class as the tree.

The apparent abundance and dominance of a plant species often change with the seasons. Some herbaceous species that are abundant in the spring are not to be seen by midsummer; other species that cannot be detected in the early spring are dominant by late summer. I rated the abundance of each species at the time of year when it was most numerous.

## **Habitats**

The classification of habitats in Meadowbrook Park is derived from "Classification of Natural Communities in Illinois" by White and Madany (1978). Five major ecological classes are recognized on the basis of major physiognomic, environmental, and compositional differences:

*Wooded Land.*—Areas that have a complete or partial cover of trees and shrubs.

*Prairie.*—Open areas that are dominated by native grasses and other herbaceous plants.

*Meadow.*—Open areas that are dominated by non-native grasses and other herbaceous plants.

*Developed Land.*—Lawns, walkways, and the arboretum. (The park's buildings, gardens, and parking lots were excluded from the study area.)

*Creek.*—The water, bed, and banks of the two streams in the park.

The Wooded Land, Prairie, and Meadow classes are subdivided according to soil moisture:

*Mesic* soil is well supplied with moisture but it is also well drained, providing a balance of soil moisture and aeration that is optimal for most plant species.

*Wet-mesic* soil is imperfectly or somewhat poorly drained, supporting a mixture of plants that are adapted to both wetlands and better drained areas.

*Wet* soil is saturated during a substantial part of the growing season.

When the ecological classes are combined with the soil moisture classes that are present in Meadowbrook Park, nine habitat types are identified:

|                       |                   |                  |
|-----------------------|-------------------|------------------|
| Mesic Wooded Land     | Wet-mesic Prairie | Wet-mesic Meadow |
| Wet-mesic Wooded Land | Wet Prairie       | Developed Land   |
| Mesic Prairie         | Mesic Meadow      | Creek            |

Wooded Land has a heterogeneous structure. Although no sizeable part of Meadowbrook Park has a well-developed forest structure and environment, trees are close enough together in some areas to form a continuous canopy. The other extreme of Wooded Land consists of areas where shrubs and young trees are scattered among herbaceous vegetation.

Unpaved footpaths through Meadowbrook's prairie restoration areas provide habitat for diminutive, disturbance-tolerant, annual plant species that are rarely if ever found in natural prairie habitats. Examples include Carpetweed, Purslane, and crabgrasses. If such species were found in Meadowbrook Prairie only along trails, they are not listed in Table 1 as occurring in prairie habitats.

Many of the plants that are characteristic of the Wooded Land, Meadow, and Prairie habitats also occur occasionally or rarely in the creek channels. To keep from inflating the plant list for the Creek habitat, I listed only species that are limited to that habitat or are relatively abundant there.

Oaks have been planted in Walker Grove as part of a long-term endeavor to establish savanna vegetation there. The oaks are not large, and Walker Grove has not yet developed a flora that is distinct from that of the prairie restoration areas. Consequently none of the park is classified as a savanna for the purposes of this study.

## Appendix 2. Rare native plants in Meadowbrook Park.

A *rare* plant is defined as one that is known in Meadowbrook Park from only one or two individuals or small colonies. Table 3 lists the 116 rare native plant species in the park with their locations. Geographic coordinates were recorded by a GPS device in degrees of latitude and longitude. A GPS point may locate a single plant, or it may be in the middle of a colony.\*

Most of the species in Table 3 are located with one or two individual points, but for several species, a pair of points marks the extremes of a larger patch rather than two separate locations. Those instances are explained in the Notes column.

**Table 3. Inventory of rare native plants in Meadowbrook Park.**

| Scientific name        | Common name                   | Point | Latitude  | Longitude  | Notes  |
|------------------------|-------------------------------|-------|-----------|------------|--|
| Agastache nepetoides   | Yellow Giant Hyssop           | P209  | 40.080220 | -88.203685 |  |
|                        |                               | P797  | 40.079207 | -88.206555 |  |
| Agrimonia parviflora   | Swamp Agrimony                | P844  | 40.081846 | -88.202587 |  |
| Agrostis hyemalis      | Tickle Grass                  | P521  | 40.082003 | -88.204369 |  |
| Alisma subcordatum     | Small-flowered Water Plantain | P435  | 40.077035 | -88.206253 |  |
| Allium canadense       | Wild Onion                    | P531  | 40.077379 | -88.209217 |  |
|                        |                               | P574  | 40.081993 | -88.202399 |  |
| Amorpha canescens      | Leadplant                     | P480  | 40.078904 | -88.200734 |  |
| Amorpha fruticosa      | False Indigo                  | P333  | 40.082469 | -88.202172 |  |
| Antennaria parlinii    | Parlin's Pusseytoes           | P214  | 40.078396 | -88.208786 |  |
|                        |                               | P299  | 40.078286 | -88.208922 |  |
| Apocynum sibiricum     | Prairie Indian Hemp           | P407  | 40.078658 | -88.203779 | Prairie Indian Hemp is scattered in the prairie between P407 and P765.   |
|                        |                               | P765  | 40.077459 | -88.203133 |  |
| Asclepias verticillata | Whorled Milkweed              | P415  | 40.078500 | -88.207422 |  |
| Asimina triloba        | Pawpaw                        | P704  | 40.079449 | -88.207529 |  |
|                        |                               | P807  | 40.077494 | -88.208616 |  |
| Aster laevis           | Smooth Blue Aster             | P482  | 40.080931 | -88.200276 | P482 and P812 are the north and south limits of Smooth Blue Aster along the Prairie Path. P575 is a separate location. |
|                        |                               | P575  | 40.082416 | -88.202198 |  |
|                        |                               | P812  | 40.080699 | -88.200037 |  |
| Aster lateriflorus     | Side-flowered Aster           | P811  | 40.081030 | -88.199987 |  |
| Aster oblongifolius    | Aromatic Aster                | P787c | 40.080369 | -88.206112 |  |

\* Geographic coordinates are referenced to the World Geodetic System 1984 (WGS-84). The accuracy of GPS points was increased by taking an average of many sequential satellite readings with the GPS receiver. The locations are nominally accurate within a radius of about 6 to 9 feet, but they often proved to be accurate to less than one foot when the same GPS receiver was used to relocate a previously recorded plant.

**Table 3. Inventory of rare native plants *continued*.**

| Scientific name       | Common name               | Point | Latitude  | Longitude  | Notes  |
|-----------------------|---------------------------|-------|-----------|------------|--|
| Aster ontarionis      | Ontario Aster             | P879  | 40.081029 | -88.202219 |  |
|                       |                           | P431b | 40.077033 | -88.206426 |  |
| Aster oolentangiensis | Sky-blue Aster            | P787b | 40.080369 | -88.206112 | P843 and P787b mark the eastern and western extent of Sky-blue Aster along the Wildflower Walk. P816 is a separate location. |
|                       |                           | P816  | 40.076647 | -88.205260 |  |
|                       |                           | P843  | 40.080615 | -88.204946 |  |
| Aster praealtus       | Willow Aster              | P467  | 40.080613 | -88.200851 |  |
| Aster urophyllus      | White Heart-leaved Aster  | P787a | 40.080369 | -88.206112 |  |
| Astragalus canadensis | Canada Milk Vetch         | P356  | 40.076867 | -88.204771 |  |
| Bidens aristosa       | Bearded Beggar-ticks      | T819  | 40.077607 | -88.208341 |  |
| Bidens connata        | Purple-stemmed Tickseed   | T806  | 40.077549 | -88.208541 |  |
| Blephilia hirsuta     | Hairy Wood Mint           | P421  | 40.080559 | -88.205721 |  |
|                       |                           | P526a | 40.080683 | -88.205378 |  |
| Boltonia asteroides   | False Aster               | P564  | 40.077227 | -88.206388 |  |
| Botrychium dissectum  | Cut-leaved Grape Fern     | P890  | 40.080346 | -88.205939 |  |
| Brachyelytrum erectum | False Brome               | P842  | 40.079953 | -88.207165 |  |
| Caltha palustris      | Marsh Marigold            | P025  | 40.077079 | -88.206202 |  |
| Camassia scilloides   | Wild Hyacinth             | P258  | 40.078050 | -88.207673 |  |
|                       |                           | P308  | 40.080287 | -88.206929 |  |
| Carex davisii         | Davis's Sedge             | P279  | 40.082674 | -88.201893 |  |
| Carex gravida         | Long-awned Bracted Sedge  | P458  | 40.078771 | -88.203911 |  |
| Carex hystericina     | Porcupine Sedge           | P433a | 40.077284 | -88.206464 |  |
| Carex laeviconica     | Long-toothed Lake Sedge   | P432a | 40.077078 | -88.206331 |  |
| Carex pellita         | Broad-leaved Woolly Sedge | P432b | 40.077078 | -88.206331 |  |
| Carya illinoensis     | Pecan                     | P719  | 40.080151 | -88.203390 |  |
| Carya ovalis          | Sweet Pignut Hickory      | P409  | 40.082068 | -88.201922 |  |
| Carya ovata           | Shagbark Hickory          | P408  | 40.081385 | -88.201872 |  |
| Celtis laevigata      | Sugarberry                | P348  | 40.082080 | -88.200142 |  |
| Chelone glabra        | White Turtlehead          | P430  | 40.077122 | -88.206405 |  |
| Cornus alternifolia   | Alternate-leaved Dogwood  | P980  | 40.077809 | -88.208715 |  |
| Crataegus crus-galli  | Cock's Spur Thorn         | P318  | 40.078295 | -88.209110 |  |
| Crataegus mollis      | Downy Hawthorn            | P495a | 40.077448 | -88.206520 |  |

**Table 3. Inventory of rare native plants** *continued.*

| Scientific name          | Common name                   | Point | Latitude  | Longitude  | Notes  |
|--------------------------|-------------------------------|-------|-----------|------------|--|
| Crataegus succulenta     | Long-spined Hawthorn          | P301  | 40.080790 | -88.206531 |  |
|                          |                               | P339  | 40.079914 | -88.204622 |  |
| Cyperus ferruginescens   | Rusty Flat-sedge              | P825  | 40.080670 | -88.203053 | P866 and P825 mark the northern and southern limits of Rusty Flat-sedge along McCullough Creek.                            |
|                          |                               | P866  | 40.082547 | -88.202143 |  |
| Cypripedium pubescens    | Yellow Lady's Slipper         | P063  | 40.080616 | -88.205374 |  |
| Dalea candida            | White Prairie Clover          | P406  | 40.077943 | -88.203977 |  |
|                          |                               | P478  | 40.079408 | -88.203400 |  |
| Desmanthus illinoensis   | Illinois Bundle-flower        | P493  | 40.078911 | -88.204707 | P861 and P493 are the eastern and western limits of a patch of bundle-flower along the path west of the Savanna Peninsula. |
|                          |                               | P861  | 40.078952 | -88.204054 |  |
| Eclipta prostrata        | Yerba De Tajo                 | P620  | 40.080883 | -88.202651 |  |
| Enemion biternatum       | False Rue Anemone             | P315  | 40.080654 | -88.205261 |  |
| Eragrostis spectabilis   | Purple Lace Grass             | P837  | 40.081688 | -88.204983 |  |
| Euonymus atropurpureus   | Wahoo                         | P255  | 40.076465 | -88.208524 |  |
|                          |                               | P281  | 40.080690 | -88.202793 |  |
| Eupatorium perfoliatum   | Common Boneset                | P702  | 40.077337 | -88.202841 |  |
| Euthamia gymnospermoides | Viscid Grass-leaved Goldenrod | P818  | 40.076871 | -88.208510 |  |
| Filipendula rubra        | Queen of the Prairie          | P174  | 40.078731 | -88.207163 |  |
| Galium triflorum         | Sweet-scented Bedstraw        | P048  | 40.077515 | -88.208400 |  |
|                          |                               | P426  | 40.077417 | -88.208714 |  |
| Helianthus annuus        | Annual Sunflower              | P451  | 40.080567 | -88.206357 |  |
| Helianthus decapetalus   | Pale Sunflower                | P526b | 40.080683 | -88.205378 |  |
| Helianthus strumosus     | Pale-leaved Sunflower         | P567  | 40.079388 | -88.205602 |  |
| Helianthus tuberosus     | Jerusalem Artichoke           | P452  | 40.080703 | -88.206018 |  |
| Hibiscus moscheutos      | Swamp Rose Mallow             | P168  | 40.077048 | -88.206280 |  |
|                          |                               | P856a | 40.081256 | -88.202098 |  |
| Hordeum pusillum         | Little Barley                 | P251  | 40.077117 | -88.209191 |  |
| Hydrophyllum virginianum | Virginia Waterleaf            | P891  | 40.080392 | -88.206096 |  |
| Hypericum punctatum      | Spotted St. John's wort       | P213  | 40.079127 | -88.208281 |  |
| Ilex verticillata        | Winterberry Holly             | P040  | 40.080643 | -88.205418 | A total of four holly seedlings were found between P040 and P838.  |
|                          |                               | P838  | 40.080699 | -88.205823 |  |
| Iodanthus pinnatifidus   | Purple Rocket                 | P337  | 40.080181 | -88.203714 |  |

**Table 3. Inventory of rare native plants *continued*.**

| Scientific name                      | Common name             | Point | Latitude  | Longitude  | Notes   |
|--------------------------------------|-------------------------|-------|-----------|------------|---|
| <i>Ipomoea pandurata</i>             | Wild Sweet Potato       | P283  | 40.082927 | -88.201682 |   |
| <i>Iris shrevei</i>                  | Wild Blue Iris          | P359  | 40.077129 | -88.206244 |   |
| <i>Juncus dudleyi</i>                | Dudley's Rush           | P431a | 40.077033 | -88.206426 |   |
| <i>Lilium superbum</i>               | Turk's Cap Lily         | P443  | 40.078153 | -88.206526 | P443 and P462 mark the east and west extremes of a band of more than a dozen clumps of lilies.    |
|                                      |                         | P462  | 40.077846 | -88.207877 |   |
| <i>Linum medium</i>                  | Wild Flax               | P402  | 40.080781 | -88.200219 |   |
| <i>Liparis liliifolia</i>            | Twayblade Orchid        | P305  | 40.079716 | -88.204130 |   |
| <i>Ludwigia peploides</i>            | Creeping Water Primrose | P747  | 40.080869 | -88.202423 |   |
| <i>Lysimachia ciliata</i>            | Fringed Loosestrife     | P314  | 40.080476 | -88.205472 |   |
|                                      |                         | P358  | 40.077135 | -88.206304 |   |
| <i>Lythrum alatum</i>                | Winged Loosestrife      | P367  | 40.077321 | -88.206479 |   |
|                                      |                         | P479  | 40.077443 | -88.203206 |   |
| <i>Malus ioensis</i>                 | Iowa Crab               | P208  | 40.079937 | -88.203688 |   |
|                                      |                         | P324  | 40.083214 | -88.202115 |   |
| <i>Menispermum canadensis</i>        | Moonseed                | P445  | 40.079083 | -88.207428 |   |
| <i>Napaea dioica</i>                 | Glade Mallow            | P327  | 40.083162 | -88.202000 |   |
| <i>Ostrya virginiana</i>             | Hop Hornbeam            | P454  | 40.082564 | -88.202211 |   |
|                                      |                         | P457  | 40.080847 | -88.202411 |   |
| <i>Pedicularis canadensis</i>        | Canada Lousewort        | P035  | 40.078883 | -88.203516 |   |
| <i>Pedicularis lanceolata</i>        | Swamp Wood Betony       | P705  | 40.077353 | -88.202864 |   |
| <i>Perideridia americana</i>         | Thicket Parsley         | P345  | 40.080751 | -88.203513 |   |
| <i>Phlox divaricata</i>              | Blue Phlox              | P622  | 40.080595 | -88.205397 |   |
| <i>Phyla lanceolata</i>              | Fog-fruit               | P473b | 40.077335 | -88.206610 |   |
| <i>Platanus occidentalis</i>         | Sycamore                | P440a | 40.077547 | -88.204115 |   |
| <i>Polygonum erectum</i>             | Erect Knotweed          | P335  | 40.080796 | -88.202450 | Erect Knotweed occurs at P335 and a few other spots farther north along the shore of Beaver Pond. |
| <i>Potamogeton nodosus</i>           | Long-leaved Pondweed    | P544  | 40.081065 | -88.202319 |   |
| <i>Potentilla simplex</i>            | Common Cinquefoil       | P447  | 40.077561 | -88.208426 |   |
|                                      |                         | P820  | 40.079365 | -88.207243 |   |
| <i>Pseudognaphalium obtusifolium</i> | Sweet Everlasting       | P703  | 40.079944 | -88.206506 |   |
|                                      |                         | P910  | 40.080208 | -88.205722 |   |
| <i>Ptelea trifoliata</i>             | Wafer Ash               | P437  | 40.076810 | -88.203570 |   |
| <i>Quercus coccinea</i>              | Scarlet Oak             | P455  | 40.083158 | -88.200073 |   |

**Table 3. Inventory of rare native plants *continued*.**

| Scientific name                | Common name             | Point | Latitude  | Longitude  | Notes   |
|--------------------------------|-------------------------|-------|-----------|------------|---|
| Quercus muhlenbergii           | Chinquapin Oak          | P322  | 40.076649 | -88.208248 |   |
|                                |                         | P855  | 40.076987 | -88.204025 |   |
| Quercus prinus                 | Rock Chestnut Oak       | P158a | 40.081838 | -88.200321 |   |
| Quercus shumardii              | Shumard Oak             | P186  | 40.077596 | -88.207132 |   |
| Quercus x saulii               | Saul's Oak              | P158b | 40.081820 | -88.200296 |   |
| Ranunculus septentrionalis     | Swamp Buttercup         | P548  | 40.078919 | -88.207904 |   |
| Rhus hirta                     | Staghorn Sumac          | P336  | 40.080670 | -88.202889 |   |
|                                |                         | P518  | 40.083120 | -88.201691 |   |
| Ribes cynosbati                | Prickly Gooseberry      | P501  | 40.076924 | -88.202661 |   |
| Rudbeckia sullivantii          | Sullivant's Coneflower  | P973  | 40.076802 | -88.203854 |   |
| Sagittaria latifolia           | Arrowleaf               | P434b | 40.077325 | -88.206541 |   |
| Salvia azurea                  | Blue Sage               | P758  | 40.077444 | -88.203366 |   |
| Sanguinaria canadensis         | Bloodroot               | P019a | 40.080040 | -88.207620 |   |
| Sassafras albidum              | Sassafras               | P216a | 40.079651 | -88.208735 |   |
|                                |                         | P488  | 40.076784 | -88.207654 |   |
| Schoenoplectus tabernaemontani | Soft-stemmed Bulrush    | P433b | 40.077284 | -88.206464 |   |
|                                |                         | P572  | 40.081273 | -88.202198 |   |
| Scrophularia marilandica       | Maryland Figwort        | P423  | 40.077506 | -88.208426 |   |
| Silene antirrhina              | Sleepy Catchfly         | P835  | 40.078919 | -88.200785 |   |
| Solidago missouriensis         | Missouri Goldenrod      | P623  | 40.079373 | -88.200775 |   |
| Spiranthes ovalis              | October Ladies' Tresses | P477  | 40.080279 | -88.204137 |   |
| Stachys pilosa                 | Marsh Hedge Nettle      | P420  | 40.080603 | -88.205135 |   |
| Staphylea trifolia             | Bladdernut              | P307  | 40.080253 | -88.206953 |   |
| Symphoricarpos orbiculatus     | Coralberry              | P870  | 40.082658 | -88.201785 |   |
| Taxodium distichum             | Bald Cypress            | P571  | 40.081224 | -88.202248 | Bald Cypress seedlings were found on McCullough Creek between these two points.   |
|                                |                         | P791  | 40.081348 | -88.202081 |   |
| Thaspium trifoliatum           | Meadow Parsnip          | P041  | 40.080637 | -88.205677 |   |
| Ulmus rubra                    | Slippery Elm            | P537  | 40.079283 | -88.200511 |   |
| Veratrum woodii                | False Hellebore         | P311  | 40.080716 | -88.206282 | P311 is an approximate location: the GPS point that was originally recorded proved inaccurate, and the plant died back and disappeared for the year before it could be relocated. |

**Table 3. Inventory of rare native plants** *continued.*

| Scientific name         | Common name         | Point | Latitude  | Longitude  | Notes   |
|-------------------------|---------------------|-------|-----------|------------|---|
| Verbesina helianthoides | Yellow Crownbeard   | P569  | 40.079213 | -88.206087 |   |
| Vernonia fasciculata    | Smooth Ironweed     | P166  | 40.077011 | -88.205815 | The points mark the approximate eastern and southern limits of Smooth Ironweed in the park. |
|                         |                     | P566  | 40.076800 | -88.206219 |   |
| Viburnum trilobum       | High-bush Cranberry | P293  | 40.079565 | -88.204313 |   |
| Viola pubescens         | Downy Yellow Violet | P024  | 40.076529 | -88.203653 |   |



### **Appendix 3. Invasive plants in Meadowbrook Park.**

Table 4 is a list of 59 invasive plant species that occur in Meadowbrook Park. The list includes the following: (a) any species that I observed to be an invasive problem in the park, (b) other species that I know to have potential to become significant invaders of Meadowbrook's habitats, and (c) all other species that are included in *Invasive Plants of East Central Illinois* by the East Central Illinois Master Naturalists and Champaign County Master Gardeners (2011).

Invasive plants in Meadowbrook Park are documented with three different levels of detail, depending on the nature of the infestations:

***Thoroughly documented.***—Thirty species are so localized in the park that there is a reasonable expectation of keeping them under control. For this group, every known individual or patch is described in Table 5.

***Selectively documented.***—Seven species occur in the park as scattered individuals or small colonies that are too numerous to be thoroughly documented, but they have at least one significant infestation (which is often the seed source for new occurrences). For these species, the biggest, densest, or otherwise most significant infestations are described in Table 5.

***Generally described.***—Twenty-two invasive plant species are so widespread and abundant in Meadowbrook Park that it would be impractical to document them thoroughly. Instead their habitats and abundance in the park are described in Table 1 and Appendix 4.

**Table 4. Annotated list of invasive plants in Meadowbrook Park.**

Column C indicates whether a species was *thoroughly documented* (T), *selectively documented* (S), or *generally described* (G); these three levels of documentation are described on page 61.

Column D is my judgment of the severity of each species' infestation in Meadowbrook Park on a scale from 1 (very low) to 4 (very high). The first number describes the current level of infestation, and the second number is a prediction of how bad the problem could become in the long term (generally within 20 to 30 years at most) if no control measures are taken.

| Scientific name              | Common name              | (C) | (D) |
|------------------------------|--------------------------|-----|-----|
| <i>Acer ginnala</i>          | Amur Maple               | T   | 2/3 |
| <i>Acer platanoides</i>      | Norway Maple             | T   | 1/1 |
| <i>Agropyron repens</i>      | Quack Grass              | S   | 1/1 |
| <i>Ailanthus altissima</i>   | Tree of Heaven           | T   | 1/3 |
| <i>Ajuga reptans</i>         | Carpet Bugle Weed        | S   | 1/2 |
| <i>Alliaria petiolata</i>    | Garlic Mustard           | G   | 2/4 |
| <i>Alnus glutinosa</i>       | Black Alder              | T   | 2/3 |
| <i>Arctium minus</i>         | Burdock                  | G   | 1/2 |
| <i>Artemisia vulgaris</i>    | Common Mugwort           | S   | 2/3 |
| <i>Belamcanda chinensis</i>  | Blackberry Lily          | T   | 1/2 |
| <i>Bromus inermis</i>        | Smooth Brome             | G   | 1/2 |
| <i>Catalpa speciosa</i>      | Northern Catalpa         | S   | 1/2 |
| <i>Celastrus orbiculatus</i> | Round-leaved Bittersweet | T   | 1/3 |
| <i>Cirsium arvense</i>       | Canada Thistle           | G   | 1/3 |
| <i>Clematis terniflora</i>   | Yam-leaved Clematis      | T   | 2/3 |
| <i>Conium maculatum</i>      | Poison Hemlock           | G   | 2/3 |
| <i>Convallaria majalis</i>   | Lily of the Valley       | T   | 1/1 |
| <i>Daucus carota</i>         | Wild Carrot              | G   | 1/2 |
| <i>Duchesnea indica</i>      | Indian Strawberry        | S   | 2/3 |
| <i>Elaeagnus umbellata</i>   | Autumn Olive             | S   | 2/4 |
| <i>Euonymus alatus</i>       | Burning-bush             | T   | 1/4 |
| <i>Euonymus fortunei</i>     | Wintercreeper            | T   | 1/3 |
| <i>Festuca arundinacea</i>   | Tall Fescue              | G   | 1/2 |
| <i>Glechoma hederacea</i>    | Creeping Charlie         | G   | 2/2 |

**Table 4. Annotated list of invasive plants** *continued.*

| <b>Scientific name</b>  | <b>Common name</b>     | <b>(C)</b> | <b>(D)</b> |
|-------------------------|------------------------|------------|------------|
| Hemerocallis fulva      | Orange Day Lily        | T          | 2/2        |
| Hypericum perforatum    | Common St. John's Wort | T          | 1/2        |
| Lespedeza cuneata       | Sericea Lespedeza      | T          | 2/3        |
| Ligustrum obtusifolium  | Border Privet          | T          | 1/2        |
| Ligustrum vulgare       | Common Privet          | T          | 1/2        |
| Lonicera japonica       | Japanese Honeysuckle   | T          | 1/4        |
| Lonicera maackii        | Amur Honeysuckle       | G          | 4/4        |
| Lonicera tatarica       | Tartarian Honeysuckle  | T          | 1/1        |
| Lonicera x bella        | Showy Fly Honeysuckle  | T          | 1/2        |
| Lysimachia nummularia   | Moneywort              | T          | 1/4        |
| Malus baccata           | Siberian Crab          | G          | 1/2        |
| Malus prunifolia        | Plum-leaved Crab       | G          | 1/1        |
| Malus sieboldii         | Japanese Crab          | G          | 4/4        |
| Melilotus albus         | White Sweet Clover     | G          | 2/4        |
| Melilotus officinalis   | Yellow Sweet Clover    | G          | 1/2        |
| Miscanthus sinensis     | Chinese Silver Grass   | T          | 1/2        |
| Morus alba              | White Mulberry         | G          | 2/2        |
| Oenanthe sarmentosa     | Pacific Water Parsley  | T          | 1/2        |
| Ornithogalum umbellatum | Star of Bethlehem      | T          | 1/3        |
| Pastinaca sativa        | Wild Parsnip           | G          | 2/3        |
| Perilla frutescens      | Beefsteak Plant        | T          | 1/2        |
| Phalaris arundinacea    | Reed Canary Grass      | G          | 3/4        |
| Phellodendron amurense  | Amur Cork Tree         | T          | 1/4        |
| Pyrus calleryana        | Callery Pear           | G          | 3/4        |
| Ranunculus ficaria      | Fig Buttercup          | T          | 1/4        |
| Rhamnus cathartica      | Common Buckthorn       | S          | 1/4        |
| Rosa multiflora         | Multiflora Rose        | G          | 2/1        |
| Securigera varia        | Crown Vetch            | T          | 1/2        |
| Setaria faberi          | Giant Foxtail          | G          | 1/1        |

**Table 4. Annotated list of invasive plants** *continued.*

| <b>Scientific name</b> | <b>Common name</b>      | <b>(C)</b> | <b>(D)</b> |
|------------------------|-------------------------|------------|------------|
| Solidago altissima     | Tall Goldenrod          | G          | 4/4        |
| Syringa reticulata     | Japanese Tree Lilac     | T          | 1/1        |
| Typha x glauca         | Hybrid Cat-tail         | T          | 1/4        |
| Ulmus pumila           | Siberian Elm            | T          | 1/2        |
| Viburnum opulus        | European Cranberry Bush | G          | 2/3        |
| Vinca minor            | Common Periwinkle       | T          | 1/3        |

**Table 5. Inventory of invasive plants in Meadowbrook Park.**

The table includes invasive species that are *thoroughly documented* or *selectively documented* but not species that are *generally described*, as discussed on page 61.

| Scientific name | Common name | GPS point | Latitude<br>Longitude   | Date     | Number, size, and extent  | Vigor and stage of growth  | Location and habitat  |
|-----------------|-------------|-----------|-------------------------|----------|---|--|---|
| Acer ginnala    | Amur Maple  | P104      | 40.076821<br>-88.200121 | 05/24/11 | Two saplings 4 to 6 feet tall.  | Healthy.   | Mesic Prairie.  |
| Acer ginnala    | Amur Maple  | P105      | 40.080803<br>-88.205783 | 05/25/11 | A sapling 7 feet tall.  | Crooked but growing well.  | Among goldenrods in an opening in Mesic Wooded Land.  |
| Acer ginnala    | Amur Maple  | P106      | 40.078347<br>-88.209048 | 05/24/11 | Two mature, planted trees; also, scores of seedlings growing in the surrounding lawn and in the mulch around these two maples and the bases of neighboring trees. | Most of the seedlings were dead and gone by July. The ones in the lawn were mowed off. Most of the seedlings in the mulch had been herbicided, but a few survived and were growing well. | Timpone Family Ornamental Tree Grove.   |
| Acer ginnala    | Amur Maple  | P107      | 40.077965<br>-88.208954 | 05/24/11 | A seedling about 7 inches tall, in its second year of growth.   | Jack White pulled the seedling out of the ground.  | At the edge of Mesic Wooded Land, next to the lawn.   |
| Acer ginnala    | Amur Maple  | P334b     | 40.081445<br>-88.202103 | 07/03/11 | A seedling about 10 inches tall.  | Healthy.   | About 2 feet downstream from the privet at P334a, 1½ feet E from the mud bank of the creek, among sedges and grasses, with Amur Honeysuckle on three sides. |
| Acer ginnala    | Amur Maple  | P355      | 40.076607<br>-88.199982 | 07/04/11 | Two stems, 10 and 12 feet tall.   | Healthy but crowded by shrubs and trees.   | At the edge of woods on the W side of the trail. There may be more Amur Maples hidden nearby among the brush.   |
| Acer ginnala    | Amur Maple  | P490      | 40.076611<br>-88.200217 | 07/22/11 | A tree 3 to 4 inches in diameter, probably about 20 feet tall.  | Healthy but overtopped by other trees.   | On the N bank of the creek, nearly in the bed of the creek.   |
| Acer ginnala    | Amur Maple  | P499      | 40.076576<br>-88.200102 | 07/24/11 | Several stems 1 to 2 feet tall, growing from the base of a dead, leaning, 7-foot-long sapling.  | Healthy.   | On the S bank of the creek in Wet-mesic Wooded Land.  |

**Table 5. Inventory of invasive plants** *continued.*

| Scientific name            | Common name    | GPS point | Latitude<br>Longitude   | Date     | Number, size, and extent                             | Vigor and stage of growth  | Location and habitat  |
|----------------------------|----------------|-----------|-------------------------|----------|--|--|---|
| <i>Acer ginnala</i>        | Amur Maple     | P513      | 40.076600<br>-88.199932 | 07/26/11 | A 5-foot sapling.                                    | Thrifty.   | Mesic Wooded Land, 2 feet from the E edge of the path, overtopped by blackberries and Sandbar Willows.  |
| <i>Acer ginnala</i>        | Amur Maple     | P822      | 40.076728<br>-88.200086 | 09/25/11 | A 6-foot sapling.                                    | Thrifty.   | Mesic Prairie, 4 feet from the right side of the path as one walks SE on the path.  |
| <i>Acer ginnala</i>        | Amur Maple     | P856b     | 40.081256<br>-88.202098 | 07/26/11 | A 5-inch seedling.                                   | Jack White pulled it up.   | At the high-water mark on the shore of the Beaver Pond.   |
| <i>Acer platanoides</i>    | Norway Maple   | P338      | 40.079650<br>-88.204085 | 07/03/11 | A tree about 10 inches in diameter and 20 feet tall. | Healthy, with a full crown, but apparently sterile: the tree did not bloom in 2011, and there are no Norway Maple seedlings or saplings nearby, which indicates that the tree may have never produced any seeds. | In the middle of the Savanna Peninsula.   |
| <i>Agropyron repens</i>    | Quack Grass    | P344      | 40.080160<br>-88.206537 | 07/03/11 | A patch 20 feet across.                              | This is the largest, most vigorous patch of Quack Grass in the park (except in the Organic Gardens).   | At the edge of the walk at the SE corner of the Organic Gardens. Quack Grass is scattered throughout the sunny parts of the park, but is generally not much of a pest. Only this one patch at P344 is included in the invasive plant inventory. |
| <i>Ailanthus altissima</i> | Tree of Heaven | P062      | 40.080691<br>-88.205380 | 05/12/11 | Three stems.   | The largest stem is a vigorous, 2-foot shoot. Several feet to the N are sprouts (this year's growth) from two other small trees that were cut.   | Open Mesic Wooded Land, mostly ash trees.   |
| <i>Ailanthus altissima</i> | Tree of Heaven | P108      | 40.079483<br>-88.207674 | 05/24/11 | A sapling 7 feet tall.                               | Vigorous.  | Mesic Wooded Land.  |

**Table 5. Inventory of invasive plants *continued.***

| Scientific name            | Common name       | GPS point | Latitude Longitude      | Date     | Number, size, and extent   | Vigor and stage of growth                 | Location and habitat  |
|----------------------------|-------------------|-----------|-------------------------|----------|--|---|---|
| <i>Ailanthus altissima</i> | Tree of Heaven    | P877      | 40.080774<br>-88.205301 | 10/04/11 | At least 14 stems, up to 9 inches tall, in an area about 8 feet across.  | Shade suppressed, not vigorous.           | Mesic Wooded Land, mostly beneath the crown of a White Pine.  |
| <i>Ajuga reptans</i>       | Carpet Bugle Weed | P008      | 40.076863<br>-88.201511 | 04/10/11 | A patch 3 by 3 feet.   | Dense and producing flowering stalks.     | Mesic Prairie, at the edge of trees and shrubs along the creek.   |
| <i>Ajuga reptans</i>       | Carpet Bugle Weed | P031      | 40.082770<br>-88.201797 | 04/29/11 | A patch that is densest in an area about 2 by 5 feet, spreading farther N and S along the creek.   | Not very thick, but vigorously flowering. | Open Mesic Wooded Land bordering the creek.   |
| <i>Alnus glutinosa</i>     | Black Alder       | P619      | 40.081815<br>-88.202431 | 08/08/11 | Many plants of all sizes, from large trees to seedlings, extending for about 1,500 feet along McCullough Creek from Windsor Road to the Wildflower Walk. The entire area where alders are common covers about 6 acres. | Healthy and reproducing well.             | P619 marks only one spot in the alder stand. A map outlining the great majority of Black Alders in the park was submitted to the Park District as a product separate from this report. Alders are concentrated on the W side of the creek, where they were originally planted. They have also spread into the adjacent prairie. A few seedling alders may be found in open areas downstream from the main stand, but almost all such seedlings are killed by occasional mowing. |
| <i>Artemisia vulgaris</i>  | Common Mugwort    | P051      | 40.083365<br>-88.202026 | 05/12/11 | A band roughly 4 to 5 feet wide, extending downstream from the GPS point for at least 15 feet; also extending upstream from the GPS point.   | Small, weak plants, thinly scattered.     | On the slope on the W side of the creek. Note: Several other mugwort patches similar to this one are scattered all along the length of the creek. Those other patches are not especially vigorous or extensive, and they are not documented in this table. This patch at P051 is included as a representative example of the smaller or weaker mugwort colonies in the park.  |

**Table 5. Inventory of invasive plants** *continued.*

| Scientific name              | Common name              | GPS point | Latitude Longitude      | Date     | Number, size, and extent  | Vigor and stage of growth  | Location and habitat  |
|------------------------------|--------------------------|-----------|-------------------------|----------|---|--|---|
| <i>Artemisia vulgaris</i>    | Common Mugwort           | P618      | 40.082765<br>-88.202197 | 08/08/11 | Two patches: one patch begins about 18 feet N of a park bench and extends 15 feet farther N along the brookside walk; the other patch begins about 10 feet S of the bench and extends 10 feet farther along the walk. The patches vary from 4 to 8 feet wide. | These patches were dense and vigorous in the spring, but they were later herbicided.   | Along the edge of the woods on the E side of the brookside walk.  |
| <i>Artemisia vulgaris</i>    | Common Mugwort           | P621      | 40.080402<br>-88.204967 | 08/08/11 | A patch about 30 feet long and between 5 and 12 feet wide.  | This is by far the largest and most vigorous patch of mugwort in the park. The stand is dense, up to 7 feet tall, and getting ready to flower. | On the W side of the path, in front of an ash tree and a mulberry tree.   |
| <i>Belamcanda chinensis</i>  | Blackberry Lily          | P554      | 40.080181<br>-88.205111 | 07/30/11 | A single-stemmed plant about 4½ feet tall.  | Vigorous, fruiting.  | Mesic Meadow, amid a dense, tall stand of goldenrod.  |
| <i>Catalpa speciosa</i>      | Northern Catalpa         | P211      | 40.080654<br>-88.205123 | 06/24/11 | A cluster of four mature trees.   | Fruiting.  | In Mesic Wooded Land at the E end of the Wildflower Walk. These trees are the source of many seedling and sapling catalpas in the park. The other major source is on the W side of Race Street. |
| <i>Celastrus orbiculatus</i> | Round-leaved Bittersweet | P127a     | 40.080349<br>-88.205876 | 05/24/11 | One plant with several vines, the largest 4 to 5 feet long.   | Growing rapidly.   | Under a Silver Maple in Mesic Wooded Land.  |
| <i>Celastrus orbiculatus</i> | Round-leaved Bittersweet | P155      | 40.080368<br>-88.205737 | 05/25/11 | A patch about 8 feet in diameter with many vines 3 to 6 feet long.  | Expanding vigorously   | Mesic Wooded Land, at the edge of the mowed strip on the S side of the Wildflower Walk, beside two tall Wild Black Cherry trees.  |
| <i>Celastrus orbiculatus</i> | Round-leaved Bittersweet | P177      | 40.078933<br>-88.209217 | 06/07/11 | A patch extending for 10 feet parallel to the road and 5 feet wide, growing up to 10 feet above the ground.   | Vigorous, with flower buds.  | Brushy border of the park.  |



**Table 5. Inventory of invasive plants** *continued.*

| Scientific name              | Common name              | GPS point | Latitude<br>Longitude   | Date     | Number, size, and extent  | Vigor and stage of growth                  | Location and habitat  |
|------------------------------|--------------------------|-----------|-------------------------|----------|---|--|---|
| <i>Celastrus orbiculatus</i> | Round-leaved Bittersweet | P180      | 40.078120<br>-88.209231 | 06/07/11 | Several vines about 6 feet long.  | Vigorous, but with no flowers apparent.    | Among raspberry canes at the edge of the park. More vines are off the park property, closer to Race Street.   |
| <i>Celastrus orbiculatus</i> | Round-leaved Bittersweet | P212      | 40.080400<br>-88.206199 | 06/24/11 | At least five stems, the longest 5 feet.  | Growing rapidly.                           | Mesic Wooded Land, 1 foot from the edge of the lawn, midway between a cherry tree and a Douglas Fir.  |
| <i>Celastrus orbiculatus</i> | Round-leaved Bittersweet | P257      | 40.078050<br>-88.207673 | 06/14/11 | Three vines, 4 to 5 feet long.  | Vigorous.                                  | Climbing out of dense Reed Canary Grass, in semi-shade under a high canopy of walnut trees.   |
| <i>Celastrus orbiculatus</i> | Round-leaved Bittersweet | P497      | 40.076748<br>-88.201310 | 07/24/11 | A few stems clambering and twining on an Amur Honeysuckle.  | Fruiting sparsely.                         | Rooted 2 to 3 feet S of the bank of the creek.  |
| <i>Celastrus orbiculatus</i> | Round-leaved Bittersweet | P503      | 40.077365<br>-88.205756 | 07/24/11 | One branching stem about 8 feet long and up to 4 feet above the ground.   | Sterile but vigorous.                      | At the base of a dead Amur Honeysuckle on the S bank of the creek.  |
| <i>Celastrus orbiculatus</i> | Round-leaved Bittersweet | P505      | 40.078683<br>-88.209007 | 07/26/11 | A seedling 5 inches long.   | Jack White pulled it up.                   | In mulch around a tree in Timpone Ornamental Tree Grove, close to a large bittersweet plant along Race Street that probably is the parent.  |
| <i>Celastrus orbiculatus</i> | Round-leaved Bittersweet | P546      | 40.078073<br>-88.208357 | 06/29/11 | A single stem growing about 2½ feet tall without the support of other plants.   | Healthy.                                   | Mesic Wooded Land, about 4 feet S of the trail, 4 feet from a Silver Maple.   |
| <i>Celastrus orbiculatus</i> | Round-leaved Bittersweet | P608      | 40.077537<br>-88.208441 | 07/10/11 | At least two vines about 3 feet long; probably more vines close-by, hidden in the dense vegetation.                   | Sterile but vigorous.                      | The two highly visible vines are hanging out over the lawn from a patch of Yellow Crownbeard, on the E side of the walk.  |
| <i>Clematis terniflora</i>   | Yam-leaved Clematis      | P030      | 40.083641<br>-88.201761 | 04/26/11 | A single vine about 8 inches long on April 26. On June 24 the vine was 3 feet long, growing parallel to the sidewalk. | Growing well but in danger of being mowed. | In the narrow, weedy strip between the sidewalk on Windsor Road and the culvert. The vine is 1½ feet S of the sidewalk and 6 inches from the edge of the mowed strip on the S side of the sidewalk. |

**Table 5. Inventory of invasive plants** *continued.*

| Scientific name     | Common name         | GPS point | Latitude Longitude      | Date     | Number, size, and extent   | Vigor and stage of growth   | Location and habitat  |
|---------------------|---------------------|-----------|-------------------------|----------|--|---|---|
| Clematis terniflora | Yam-leaved Clematis | P128      | 40.083621<br>-88.201785 | 05/24/11 | A single plant with four vines, 2 to 3 feet long.  | Growing but suppressed by a thick overgrowth of brush.                                    | On the W end of the pile of big concrete pieces above the culverts under Windsor Road, near the top of the pile.  |
| Clematis terniflora | Yam-leaved Clematis | P189      | 40.082083<br>-88.202205 | 06/08/11 | At least five stems in a twisted clump, up to 4 feet long, with another stem climbing more than 6 feet up a small dead tree.             | Growing well but evidently partially eaten by deer.                                       | At the edge between bushes and a grassy area, 3 to 5 feet from the edge of water in the creek, beneath a young Honey Locust in Wet-mesic Wooded Land.   |
| Clematis terniflora | Yam-leaved Clematis | P192      | 40.080686<br>-88.203042 | 06/09/11 | Several vines clambering up to 7 feet high and covering an area more than 10 feet across.  | Vigorous and expanding.   | Growing on Amur Honeysuckle in Mesic Wooded Land on the creek bank.   |
| Clematis terniflora | Yam-leaved Clematis | P193      | 40.080737<br>-88.202893 | 06/09/11 | One vine is climbing 4 feet up a willow. A second vine, 8 feet upstream, is growing mostly on the ground and covers an area 3 by 4 feet. | The first vine is thriving. The second vine is shade-suppressed but growing toward light. | The first vine is on a Peach-leaved Willow that is a little less than 1 foot in diameter. The second vine is at the base of a Peach-leaved Willow that is more than 1 foot in diameter. A third small clematis vine midway between this GPS point and the dam for Beaver Pond was found and pulled out of the ground. |
| Clematis terniflora | Yam-leaved Clematis | P210      | 40.080778<br>-88.203018 | 06/24/11 | One plant with several vines that are 1 to 2½ feet long, trailing on the ground.   | The plant is struggling after being damaged by flood scouring.                            | An opening in Mesic Wooded Land that was created when Amur Honeysuckle was removed.   |
| Clematis terniflora | Yam-leaved Clematis | P416      | 40.079110<br>-88.207690 | 07/08/11 | A vine 2 feet long.  | Chlorotic.  | At the edge of Amur Honeysuckle and Mesic Wooded Land, in the shade of goldenrod and bergamot, on the E side of the trail.  |
| Clematis terniflora | Yam-leaved Clematis | P550      | 40.079051<br>-88.207666 | 07/30/11 | A vine 3½ feet long.   | Growing but somewhat weak and chlorotic.  | About 3½ feet from the center of the path, on the W side, beneath overarchng Amur Honeysuckle limbs.  |

**Table 5. Inventory of invasive plants *continued.***

| Scientific name            | Common name         | GPS point | Latitude Longitude      | Date     | Number, size, and extent  | Vigor and stage of growth                | Location and habitat   |
|----------------------------|---------------------|-----------|-------------------------|----------|---|--|--|
| <i>Clematis terniflora</i> | Yam-leaved Clematis | P745      | 40.080601<br>-88.202738 | 09/03/11 | A medium-sized patch growing up to 2 to 3 feet above the ground.  | Flowering conspicuously.                 | On the N side of the trail, beneath Amur Honeysuckle.  |
| <i>Clematis terniflora</i> | Yam-leaved Clematis | P746      | 40.080655<br>-88.202636 | 09/03/11 | A patch about 10 feet across, up to 6 feet above the ground.  | Flowering conspicuously.                 | Among young Staghorn Sumacs.   |
| <i>Clematis terniflora</i> | Yam-leaved Clematis | P798      | 40.079112<br>-88.207785 | 09/20/11 | A vine 5 feet tall.   | Flowering.                               | On an ash sapling in Mesic Wooded Land about 15 feet N of a big, dying Silver Maple.                   |
| <i>Clematis terniflora</i> | Yam-leaved Clematis | P952      | 40.080675<br>-88.202947 | 11/18/11 | A group of vines covering an area 6 by 8 feet, climbing up to 5 feet up onto Amur Honeysuckle.              | Healthy.                                 | Mesic Wooded Land within 3 feet of the bank of McCullough Creek.                                       |
| <i>Convallaria majalis</i> | Lily of the Valley  | P325      | 40.083263<br>-88.202104 | 07/03/11 | Two stems with single leaves, growing close together.   | Very small.                              | In the lawn on the W side of the walk. These plants could not be found again after the lawn was mowed. |
| <i>Duchesnea indica</i>    | Indian Strawberry   | P015      | 40.082057<br>-88.204809 | 04/14/11 | A patch roughly 15 by 20 feet.  | Dense.                                   | Beneath serviceberry bushes along the W border of the Sculpture Garden.                                |
| <i>Duchesnea indica</i>    | Indian Strawberry   | P032      | 40.082624<br>-88.201923 | 04/29/11 | A patch extending for more than 10 feet.  | Sparse.                                  | The patch is right next to the bare, muddy bank of the creek on level, grassy ground.                  |
| <i>Duchesnea indica</i>    | Indian Strawberry   | P055      | 40.083136<br>-88.201925 | 05/12/11 | A patch 2 to 3 feet wide and 8 feet long.   | Thin but vigorous and flowering.         | On the streambank.   |
| <i>Duchesnea indica</i>    | Indian Strawberry   | P057      | 40.081350<br>-88.202643 | 05/12/11 | A patch concentrated in an area about 10 feet in diameter, with more (thinner and straggling) stems beyond. | Thin and shade-suppressed but flowering. | Beneath River Birches.   |

**Table 5. Inventory of invasive plants** *continued.*

| Scientific name            | Common name       | GPS point | Latitude<br>Longitude   | Date     | Number, size, and extent   | Vigor and stage of growth   | Location and habitat  |
|----------------------------|-------------------|-----------|-------------------------|----------|--|---|---|
| <i>Duchesnea indica</i>    | Indian Strawberry | P059      | 40.080696<br>-88.203581 | 05/12/11 | A patch roughly 15 feet in diameter, with an irregularly extended border where it is actively spreading. | Thin (not a dense mat) but actively spreading, vigorous, and flowering.                                 | Beneath Black Alders.   |
| <i>Duchesnea indica</i>    | Indian Strawberry | P060      | 40.080670<br>-88.203970 | 05/12/11 | A patch about 10 feet in diameter.   | Dense, vigorous, thriving, flowering.   | In semi-shade at the edge of alders and maples.   |
| <i>Duchesnea indica</i>    | Indian Strawberry | P072      | 40.079993<br>-88.205130 | 05/19/11 | A patch about 4 feet across.   | Relatively thin and weak, but flowering and spreading.  | Beneath dense grass and goldenrod.  |
| <i>Elaeagnus umbellata</i> | Autumn Olive      | P066      | 40.079031<br>-88.207623 | 05/19/11 | A bush 10 feet tall.   | Male (incapable of producing seeds).  | At the edge of Mesic Wooded Land.   |
| <i>Elaeagnus umbellata</i> | Autumn Olive      | P070      | 40.079879<br>-88.204726 | 05/19/11 | A tree about 8 inches in diameter and 20 feet tall.  | A vigorous male with vigorous basal sprouts.  | On an earth mound in open Mesic Wooded Land.  |
| <i>Elaeagnus umbellata</i> | Autumn Olive      | P178      | 40.078870<br>-88.209198 | 06/07/11 | A bush about 10 feet tall.   | The bush is suppressed because it is overtopped by a walnut tree. It has no fruit, so it may be a male. | In the strip of woods between the walk and the W boundary of the park.  |
| <i>Elaeagnus umbellata</i> | Autumn Olive      | P413      | 40.079137<br>-88.206680 | 07/08/11 | A bush more than 15 feet tall, with a 30-foot crown spread.  | Fruiting.   | At the edge of Mesic Wooded Land, beneath walnut trees.   |
| <i>Elaeagnus umbellata</i> | Autumn Olive      | P474      | 40.079119<br>-88.208198 | 07/15/11 | A bush 9 feet tall.  | Fruiting but somewhat spindly because of shading.   | Mesic Wooded Land, overtopped by walnuts.   |
| <i>Elaeagnus umbellata</i> | Autumn Olive      | P496      | 40.076864<br>-88.202260 | 07/24/11 | A bush 9 feet tall.  | The plant was once much taller, but the largest stems have died. Fruiting sparsely.                     | Mesic Wooded Land on the S bank of the creek.   |
| <i>Elaeagnus umbellata</i> | Autumn Olive      | P555      | 40.080118<br>-88.204986 | 07/30/11 | A bushy tree about 20 feet tall with a 20-foot crown. Several young Autumn Olives are growing nearby.    | The big plant is vigorous and fruiting. The smaller plants are healthy.                                 | The big plant is at the edge between Mesic Meadow and Mesic Wooded Land. The smaller plants are adjacent open, sunny areas. |

**Table 5. Inventory of invasive plants** *continued.*

| Scientific name          | Common name   | GPS point | Latitude<br>Longitude   | Date     | Number, size, and extent  | Vigor and stage of growth   | Location and habitat   |
|--------------------------|---------------|-----------|-------------------------|----------|---|---|--|
| <i>Euonymus alatus</i>   | Burning Bush  | P129      | 40.083407<br>-88.202004 | 05/24/11 | A seedling nearly 1 foot tall.  | Not vigorous, a little chlorotic.   | Mesic Meadow, about 3 feet W (upslope) and 12½ feet S (downstream) from the large honeysuckle bush at P052. This seedling is marked with an orange flag on a steel pin.  |
| <i>Euonymus alatus</i>   | Burning Bush  | P289b     | 40.080319<br>-88.205482 | 06/18/11 | Two seedlings.  | Jack White pulled them up.  | Mesic Wooded Land, beneath a big Shadbush.   |
| <i>Euonymus alatus</i>   | Burning Bush  | P710      | 40.080281<br>-88.204115 | 08/23/11 | Three small stems (5 to 7 inches tall) within a few feet of each other. | Jack White dug up one plant and tried to pull up the other two, but they snapped off at ground level. | The three stems were in the area that had been cleared of brush on the N side of the path to improve habitat for the colony of ladies' tresses. The stems appeared to be sprouts from a mature root system, but no large bush could be found; perhaps it was cut when brush was removed. |
| <i>Euonymus fortunei</i> | Wintercreeper | P252      | 40.076469<br>-88.209057 | 06/14/11 | A patch approximately 20 by 8 to 10 feet.                               | Healthy but not smothering other vegetation, and not climbing trees.                                  | Mesic Wooded Land, on the S border of the park. The vine is also on the neighboring property.  |
| <i>Euonymus fortunei</i> | Wintercreeper | P511      | 40.077287<br>-88.209115 | 07/26/11 | A patch about 5 by 7 feet.  | Very sparse, weak plants.   | NE of the NW corner of the fence that surrounds the Sanitary District's lift station, beneath Amur Honeysuckle in the narrow area between the fence and the creek.   |
| <i>Euonymus fortunei</i> | Wintercreeper | P738      | 40.079227<br>-88.207184 | 09/03/11 | A 2-foot, creeping stem with short offshoots.                           | Weak. Jack White pulled it up.  | On the S bank of the creek, N of a Black Walnut and 7 feet downstream from a Black Willow that grows in the creek bed.   |
| <i>Euonymus fortunei</i> | Wintercreeper | P740      | 40.078168<br>-88.208269 | 09/03/11 | A patch about 4 feet across.  | Thin.   | Mesic Wooded Land about 6 feet S of the path, on the SE side of a Wild Black Cherry that has been de-barked by beaver.   |
| <i>Euonymus fortunei</i> | Wintercreeper | P893      | 40.080101<br>-88.207036 | 10/17/11 | A 3-inch seedling.  | Jack White pulled it up.  | Mesic Wooded Land.   |

**Table 5. Inventory of invasive plants** *continued.*

| Scientific name      | Common name            | GPS point | Latitude<br>Longitude   | Date     | Number, size, and extent   | Vigor and stage of growth                                       | Location and habitat   |
|----------------------|------------------------|-----------|-------------------------|----------|--|---|--|
| Hemerocallis fulva   | Orange Day Lily        | P037      | 40.079980<br>-88.206379 | 05/01/11 | A small group of plants.   | Ready to flower.  | Newly established in a recent pile of earth.                                 |
| Hemerocallis fulva   | Orange Day Lily        | P069      | 40.079948<br>-88.204740 | 05/19/11 | A patch about 20 feet across.  | Dense, vigorous.  | In a large opening among scattered trees in the floodplain.                  |
| Hemerocallis fulva   | Orange Day Lily        | P071a     | 40.079560<br>-88.205086 | 05/19/11 | A patch 10 by 20 feet.   | Not vigorous because of dense shade from overtopping trees.     | Mesic Wooded Land.   |
| Hemerocallis fulva   | Orange Day Lily        | P153      | 40.080597<br>-88.206333 | 01/01/00 | Two clumps in an area about 2 by 4 feet.   | Healthy but too shaded for optimal growth.                      | Beneath a small coffeetree in Mesic Wooded Land at the edge of a mowed area. |
| Hemerocallis fulva   | Orange Day Lily        | P309      | 40.080282<br>-88.206881 | 06/29/11 | A patch about 8 feet across.   | A little thin because of its semi-shaded habitat, but blooming. | Mesic Wooded Land, beneath a Black Walnut.                                   |
| Hemerocallis fulva   | Orange Day Lily        | P310      | 40.080222<br>-88.206682 | 06/29/11 | A patch about 3 feet across.   | Healthy, beginning to bloom.                                    | At the edge between the lawn and the unmowed area next to a culvert.         |
| Hemerocallis fulva   | Orange Day Lily        | P341      | 40.079522<br>-88.205410 | 07/03/11 | A patch about 20 feet across.  | Not dense, but flowering.                                       | Mesic Wooded Land (semi-shade), between the creek and a big Silver Maple.    |
| Hypericum perforatum | Common St. John's Wort | P047      | 40.083301<br>-88.204819 | 05/03/11 | One clump plus a smaller stem growing nearby.  | Not yet flowering.  | Eroded W-facing slope beneath a River Birch at the edge of Mesic Prairie.    |
| Hypericum perforatum | Common St. John's Wort | P162      | 40.077976<br>-88.200329 | 05/28/11 | A patch more than 10 feet across.  | A fairly dense colony, not yet flowering.                       | Mesic Prairie.   |
| Hypericum perforatum | Common St. John's Wort | P369      | 40.080727<br>-88.205912 | 07/04/11 | A group of six large stems and several smaller stems in an area 1 by 4 feet at the edge of the lawn; also, careful looking will reveal a few more stems nearby among the goldenrods and other weeds. | The large stems are nearly ready to flower.                     | Mesic Meadow.  |

**Table 5. Inventory of invasive plants** *continued.*

| Scientific name             | Common name            | GPS point | Latitude<br>Longitude   | Date     | Number, size, and extent  | Vigor and stage of growth                                    | Location and habitat   |
|-----------------------------|------------------------|-----------|-------------------------|----------|---|--|--|
| <i>Hypericum perforatum</i> | Common St. John's Wort | P527      | 40.080599<br>-88.205986 | 07/29/11 | At least five stems in an area 2 by 4 feet.   | Weak; out-competed by other plants.                          | Among goldenrods in an opening in Mesic Wooded Land. An Elderberry bush is 8 feet to the W. There may be more stems of St. John's Wort here: the vegetation is very dense and difficult to search. |
| <i>Hypericum perforatum</i> | Common St. John's Wort | P907      | 40.083323<br>-88.204527 | 10/25/11 | About 20 stems with seed capsules and several fresh offshoots in an area about 4 feet across. | Healthy.   | Mesic Prairie, overtopped by Tall Goldenrod.   |
| <i>Hypericum perforatum</i> | Common St. John's Wort | P926      | 40.081744<br>-88.203732 | 10/31/11 | Eight stems with seed capsules.   | Healthy.   | Mesic Prairie.   |
| <i>Lespedeza cuneata</i>    | Sericea Lespedeza      | P160      | 40.078582<br>-88.200364 | 05/28/11 | A patch 4 feet in diameter.   | Growing vigorously, not yet flowering.                       | Mesic Prairie.   |
| <i>Lespedeza cuneata</i>    | Sericea Lespedeza      | P161      | 40.078512<br>-88.200495 | 05/28/11 | Thinly scattered plants, an outlier of a larger colony to the N.                              | Not as robust as the larger colony to the N at P160.         | Mesic Prairie. Close inspection is likely to reveal more <i>Sericea Lespedeza</i> in the near vicinity.  |
| <i>Lespedeza cuneata</i>    | Sericea Lespedeza      | P353      | 40.077876<br>-88.200484 | 07/04/11 | Several stems in an area 10 feet across.  | Beginning to flower. Most of it was herbicided recently.     | Mesic Prairie.   |
| <i>Lespedeza cuneata</i>    | Sericea Lespedeza      | P492      | 40.078076<br>-88.200435 | 07/22/11 | At least 6 stems in a 5- by 12-foot area.   | Thinly scattered; two stems are ready to flower.             | Mesic Prairie. A search might reveal more plants nearby.   |
| <i>Lespedeza cuneata</i>    | Sericea Lespedeza      | P536      | 40.078375<br>-88.202284 | 07/29/11 | A single multi-stemmed plant, 3 feet tall.  | Not yet flowering.   | Mesic Prairie.   |
| <i>Lespedeza cuneata</i>    | Sericea Lespedeza      | P539      | 40.078335<br>-88.201269 | 07/30/11 | Two large patches about 10 feet apart. One patch is 10 x 15 feet; the other is 10 by 10 feet. | Hundreds of vigorous stems, not yet flowering.               | Mesic Prairie.   |
| <i>Lespedeza cuneata</i>    | Sericea Lespedeza      | P541      | 40.079050<br>-88.201876 | 07/30/11 | A patch about 30 feet in diameter.  | Probably more than 1,000 stems, vigorous, not yet flowering. | Mesic Prairie.   |
| <i>Lespedeza cuneata</i>    | Sericea Lespedeza      | P920      | 40.078774<br>-88.201922 | 10/28/11 | A clump of eight stems with seed pods.  | Healthy.   | Mesic Prairie.   |

**Table 5. Inventory of invasive plants *continued.***

| Scientific name               | Common name   | GPS point | Latitude<br>Longitude   | Date     | Number, size, and extent   | Vigor and stage of growth  | Location and habitat   |
|-------------------------------|---------------|-----------|-------------------------|----------|--|--|--|
| <i>Ligustrum obtusifolium</i> | Border Privet | P130a     | 40.083485<br>-88.201953 | 05/24/11 | A bush 6 feet tall.  | Vigorous, flowering.   | Mesic Meadow.  |
| <i>Ligustrum obtusifolium</i> | Border Privet | P187      | 40.083204<br>-88.201982 | 06/08/11 | Several sprouts less than 1 foot tall.                                       | Shade-suppressed.  | On the W bank of the creek, beneath the PrairiePlay Bridge (about 1½ feet S of the N edge of the bridge).  |
| <i>Ligustrum obtusifolium</i> | Border Privet | P343      | 40.079349<br>-88.206889 | 07/03/11 | A bush about 10 feet tall.   | Not fruiting, probably because the site is so wet and shady.                                       | Under a big Silver Maple in Wet-mesic Wooded Land, at the edge of water on the N side of the creek, close to a beaver dam (upstream from the dam). |
| <i>Ligustrum obtusifolium</i> | Border Privet | P553      | 40.079631<br>-88.206161 | 07/30/11 | A bush 9 feet tall.  | Fruiting but not vigorous.   | Mesic Wooded Land, shaded by a big Silver Maple and overarching Amur Honeysuckle.  |
| <i>Ligustrum vulgare</i>      | Common Privet | P190      | 40.080612<br>-88.205715 | 06/09/11 | Several stems about 1 foot tall growing from a small, cut stub.              | Too shaded for the plant to do well, shaded by goldenrod, Amur honeysuckle, and several big trees. | Mesic Wooded Land.   |
| <i>Ligustrum vulgare</i>      | Common Privet | P334a     | 40.081445<br>-88.202103 | 07/03/11 | Many sprouts 1½ to 2 feet tall growing from a stub.                          | Vigorous.  | At the very edge of the mud bank on the E side of the creek, next to what appears to be a small, dead willow.                                      |
| <i>Ligustrum vulgare</i>      | Common Privet | P507      | 40.079019<br>-88.208264 | 07/26/11 | A seedling 10 inches tall.   | Healthy.   | Mesic Wooded Land, beneath Amur Honeysuckles and a walnut, hidden by violets, wild rye, goldenrod, stickseed, and black snake-root.                |
| <i>Ligustrum vulgare</i>      | Common Privet | P523      | 40.080451<br>-88.205418 | 07/29/11 | A clump of dozens of small sprouts growing from cut stems, 1 to 3 feet tall. | Vigorous.  | Open Mesic Wooded Land, among goldenrods.  |



**Table 5. Inventory of invasive plants** *continued.*

| Scientific name          | Common name          | GPS point | Latitude Longitude      | Date     | Number, size, and extent  | Vigor and stage of growth   | Location and habitat  |
|--------------------------|----------------------|-----------|-------------------------|----------|---|---|---|
| <i>Ligustrum vulgare</i> | Common Privet        | P734      | 40.080409<br>-88.205611 | 09/03/11 | Two plants: (1) About a dozen sprouts up to 2½ feet tall growing from small stubs. (2) Two 2-foot sprouts and a few smaller ones growing from small, clipped stems. | Moderately vigorous.  | Plant no. 1 is at point P734 in Mesic Wooded Land amid 3- to 4-foot Amur Honeysuckle sprouts, about 12 feet E of a four-trunked Wild Black Cherry. Plant no. 2 is about 15 feet E and a little N of plant no. 1; it is about 6 feet S of the lawn, about 5 feet E of an Autumn Olive and 12 feet W of a triple-trunked Wild Black Cherry; it is overtopped by goldenrod and Amur Honeysuckle. |
| <i>Ligustrum vulgare</i> | Common Privet        | P736      | 40.080415<br>-88.205515 | 09/03/11 | Several sprouts up to 2½ feet tall growing from a cut stump.  | Moderately vigorous.  | Mesic Wooded Land, amid a thin cover of taller Amur Honeysuckle sprouts, about 8 feet E of a double-trunked Wild Black Cherry.  |
| <i>Ligustrum vulgare</i> | Common Privet        | P896      | 40.080408<br>-88.206195 | 10/17/11 | Three sprouts up to 3 feet tall, and several smaller sprouts growing from cut stems.  | Moderately vigorous.  | Mesic Wooded Land, about 5 feet S of the lawn.  |
| <i>Lonicera japonica</i> | Japanese Honeysuckle | P043      | 40.080378<br>-88.205397 | 05/02/11 | A patch extending about 170 feet along the Wildflower Walk, covering about 0.15 acre. The densest part of the patch (at P043), is about 20 feet across.             | Very dense and vigorous at P043; the vines are scattered and less dense in the rest of the patch. | P043 marks the densest part of an infestation of Japanese Honeysuckle in Mesic Wooded Land on the S side of the Wildflower Walk. A map outlining the entire patch was submitted to the Park District as a product separate from this report. There is also a narrow, discontinuous fringe of Japanese Honeysuckle on the N side of the walk.  |
| <i>Lonicera japonica</i> | Japanese Honeysuckle | P132      | 40.080452<br>-88.206434 | 05/24/11 | A patch spreading across an area 10 feet wide.  | Thin.   | Beneath a Silver Maple in Mesic Wooded Land.  |
| <i>Lonicera japonica</i> | Japanese Honeysuckle | P280      | 40.080756<br>-88.202610 | 06/14/11 | A patch 8 to 10 feet in diameter.   | Dense, flowering, and spreading.  | Beneath Amur Honeysuckles on the S side of the creek, immediately below the dam for Beaver Pond.  |

**Table 5. Inventory of invasive plants** *continued.*

| Scientific name          | Common name           | GPS point | Latitude<br>Longitude   | Date     | Number, size, and extent  | Vigor and stage of growth  | Location and habitat  |
|--------------------------|-----------------------|-----------|-------------------------|----------|---|--|---|
| <i>Lonicera japonica</i> | Japanese Honeysuckle  | P292      | 40.079289<br>-88.203765 | 06/19/11 | A patch climbing as high as 8 feet on an Amur honeysuckle bush. | Shade-suppressed but flowering.  | Mesic Wooded Land, between flowering crab trees, overtopped by a Wild Black Cherry.   |
| <i>Lonicera tatarica</i> | Tartarian Honeysuckle | P171      | 40.078713<br>-88.208192 | 05/29/11 | A bush 10 feet tall.  | Fruiting.  | Mesic Wooded Land, on the S side of the trail.  |
| <i>Lonicera x bella</i>  | Showy Fly Honeysuckle | P052      | 40.083438<br>-88.201980 | 05/12/11 | A bush 7 feet tall.   | Vigorous and flowering.  | Mesic Meadow, on the W side of the creek.   |
| <i>Lonicera x bella</i>  | Showy Fly Honeysuckle | P064      | 40.080640<br>-88.202685 | 05/19/11 | A bush 8 feet tall.   | Flowering, but the bush is thin because of past cutting by a beaver.   | Open, brushy Mesic Wooded Land, on the SE side of a large Amur Honeysuckle, about 10 feet N of the trail.   |
| <i>Lonicera x bella</i>  | Showy Fly Honeysuckle | P130b     | 40.083483<br>-88.201950 | 06/24/11 | Several shoots up to 4 feet tall.                               | Healthy but sterile, shorter than the goldenrod that surrounds it.   | Mesic Meadow, on the W side of the creek. This 4-foot honeysuckle bush is about 17 feet N of an 8-foot honeysuckle bush at P052. The bush is also about 7 or 8 feet S and 2 or 3 feet E of a big privet at P130a. |
| <i>Lonicera x bella</i>  | Showy Fly Honeysuckle | P173      | 40.082654<br>-88.202067 | 05/30/11 | A bush 15 feet tall.  | Healthy but crowded by taller woody vegetation; fruiting.  | At the crest of the slope on the W side of the creek, on the N side of a clearing in Mesic Wooded Land, surrounded all around except on its S side by Amur Honeysuckles and trees.                                |
| <i>Lonicera x bella</i>  | Showy Fly Honeysuckle | P412      | 40.079037<br>-88.206987 | 07/08/11 | A bush 10 feet tall.  | Large-crowned and fruiting but not very healthy: partially shade-suppressed; some stem die-back; browsed by deer; disfigured by witches' brooms. | At the edge of Mesic Wooded Land.   |

**Table 5. Inventory of invasive plants** *continued.*

| Scientific name              | Common name           | GPS point | Latitude Longitude      | Date     | Number, size, and extent   | Vigor and stage of growth   | Location and habitat   |
|------------------------------|-----------------------|-----------|-------------------------|----------|--|---|--|
| <i>Lonicera x bella</i>      | Showy Fly Honeysuckle | P612      | 40.079398<br>-88.203975 | 08/07/11 | A single bush about 10 feet tall, covering an area about 10 by 20 feet with arching stems and many root sprouts.   | Fruiting.   | Open Mesic Wooded Land. This bush appears to have been part of the original planting of trees and shrubs in the Savanna Peninsula (judging from its age, location, and the other kinds of shrubs growing near it). |
| <i>Lysimachia nummularia</i> | Moneywort             | P364      | 40.077330<br>-88.206638 | 07/04/11 | A patch on both sides of the Prairie Path. On the S side of the path, it extends upstream in the ditch for 6 feet and more beyond the board dam. On the N side of the path, it extends the entire length of the ditch to Douglas Creek, and then some distance down the creek channel. | Dense and flowering in the sunniest area (S of the walk); the rest of the colony is sparser and sterile, but spreading. | In Wet Prairie and in the ditch and creek channel that drains the wetland.   |
| <i>Miscanthus sinensis</i>   | Chinese Silver Grass  | P931      | 40.080251<br>-88.205781 | 11/09/11 | A clump 1 foot across and 6 feet tall, and a clump less than 1 foot across and 4½ feet tall.   | Healthy, with many seed stalks.   | The larger clump is in Mesic Wooded Land, 41 feet south of the south edge of the Hickman Wildflower Walk. The smaller clump is 19 feet roughly E of the larger clump.  |
| <i>Miscanthus sinensis</i>   | Chinese Silver Grass  | P932      | 40.080340<br>-88.205662 | 11/09/11 | A clump 1 foot across and 7 feet tall.   | Healthy, with many seed stalks.   | Mesic Wooded Land, 30 feet south of the south edge of the Hickman Wildflower Walk.   |
| <i>Miscanthus sinensis</i>   | Chinese Silver Grass  | P933      | 40.080478<br>-88.205251 | 11/09/11 | A clump 1½ feet across and 7 feet tall.  | Healthy, with many seed stalks.   | Mesic Wooded Land, 45 feet south of the south edge of the Hickman Wildflower Walk.   |
| <i>Oenanthe sarmentosa</i>   | Pacific Water Parsley | P260      | 40.079150<br>-88.207729 | 06/14/11 | A patch 8 by 6 feet.   | Healthy and spreading, but trampled and apparently eaten by deer. Competing well with Reed Canary Grass.                | Mesic Wooded Land, on the S bank of the creek, immediately downstream from the Meadowbrook Barn Bridge.  |

**Table 5. Inventory of invasive plants** *continued.*

| Scientific name                | Common name           | GPS point | Latitude<br>Longitude   | Date     | Number, size, and extent  | Vigor and stage of growth  | Location and habitat  |
|--------------------------------|-----------------------|-----------|-------------------------|----------|---|--|---|
| <i>Oenanthe sarmentosa</i>     | Pacific Water Parsley | P533      | 40.077446<br>-88.208794 | 07/29/11 | A patch about 4 by 5 feet.  | Thin but vigorously spreading.   | In the creek channel, on the N part of the creek bed, growing on mud that was recently exposed when the creek dried up because of a prolonged rainless period.  |
| <i>Ornithogalum umbellatum</i> | Star of Bethlehem     | P206      | 40.083473<br>-88.201806 | 06/24/11 | A clump less than 1 foot across.  | Healthy, producing flowering stalks.   | Within the channel of the creek, next to the W bank, crowded by Reed Canary Grass and mostly hidden by vegetation that hangs down from the adjacent high ground (ash, grape, and honeysuckle).  |
| <i>Perilla frutescens</i>      | Beefsteak Plant       | P312      | 40.080611<br>-88.206243 | 06/29/11 | Many dozens of plants.  | A healthy population, with the most robust plants growing in optimal habitat, which is semi-shade along the border of the lawn. The abundance of this plant is limited because much of its potential habitat is mowed. | Mesic Wooded Land and the bordering lawn between the Organic Gardens and the big compost heap 170 feet E of the gardens; also on and around that heap. The plants are most abundant in the margin of the woods that borders the narrow lawn between the gardens and the compost heap. |
| <i>Phellodendron amurense</i>  | Amur Cork Tree        | P027a     | 40.076530<br>-88.200303 | 04/22/11 | A sapling little more than 1 foot tall.   | The sapling is healthy but the top was recently broken so that the stem with all of its leaves is hanging down.  | In the narrow open corridor (where one would naturally choose to walk) between the creek and the property line.   |
| <i>Phellodendron amurense</i>  | Amur Cork Tree        | P127b     | 40.080349<br>-88.205876 | 05/24/11 | A sapling 3 feet tall, in its third year of growth. Also a 1-foot sprout about 2 feet E of the sapling. | Vigorous.  | In the wildflower garden beneath a Silver Maple on the S side of the walk. The sapling is about 3 feet SE of the bittersweet vine at P127a.   |
| <i>Phellodendron amurense</i>  | Amur Cork Tree        | P134      | 40.076458<br>-88.208724 | 05/24/11 | A sapling nearly 3 feet tall.   | Thrifty.   | Mesic Wooded Land, next to a Hackberry (5 inches in diameter) on the S property line.   |

**Table 5. Inventory of invasive plants** *continued.*

| Scientific name        | Common name    | GPS point | Latitude Longitude      | Date     | Number, size, and extent   | Vigor and stage of growth   | Location and habitat   |
|------------------------|----------------|-----------|-------------------------|----------|--|---|--|
| Phellodendron amurense | Amur Cork Tree | P135      | 40.076483<br>-88.208375 | 05/24/11 | A group of four mature trees.  | The largest tree is 7 inches in diameter. The smallest tree is dying. Two trees are male; the sex of the largest tree could not be determined because no flowers were within sight.   | In the strip of Mesic Wooded Land on the S property line.  |
| Phellodendron amurense | Amur Cork Tree | P136      | 40.076489<br>-88.203586 | 05/24/11 | Along the S property line between P135 and P136 are more than a dozen cork trees, 2 to 4 feet tall. At P136 is the largest cork tree; many saplings and seedlings are beneath and around it. | The largest tree has three trunks; the largest of the trunks is about 9 to 10 inches in diameter. This tree is a female. It has a large crown in full sun; it is flowering heavily, and it may be the parent of most or perhaps all of the young cork trees in the park. The other cork trees around P136 and between P135 and P136 are too young to bloom. | In the strip of Mesic Wooded Land on the S property line.  |
| Phellodendron amurense | Amur Cork Tree | P143      | 40.082120<br>-88.202582 | 05/24/11 | A small but mature tree.   | This tree and the neighboring six cork trees are all males and incapable of producing seeds. They are probably the 'Macho' cultivar that was developed and introduced to the nursery trade by Willet Wandell. The tree at P143 is smaller and less vigorous than the neighboring six cork trees, and two-thirds of its crown has slowly died back.          | This is the northernmost cork tree of a row of seven cork trees that were planted on the W side of the brookside walk. |
| Phellodendron amurense | Amur Cork Tree | P144      | 40.082030<br>-88.202674 | 05/24/11 | A small but mature tree.   | Male (incapable of producing seeds).  | One of a row of seven cork trees that were planted along the brookside walk.   |

**Table 5. Inventory of invasive plants** *continued.*

| Scientific name        | Common name    | GPS point | Latitude Longitude      | Date     | Number, size, and extent   | Vigor and stage of growth                                    | Location and habitat  |
|------------------------|----------------|-----------|-------------------------|----------|--|--|---|
| Phellodendron amurense | Amur Cork Tree | P145      | 40.081976<br>-88.202611 | 05/24/11 | A small but mature tree.   | Male (incapable of producing seeds).                         | One of a row of seven cork trees that were planted along the brookside walk.  |
| Phellodendron amurense | Amur Cork Tree | P146      | 40.081901<br>-88.202565 | 05/24/11 | A small but mature tree.   | Male (incapable of producing seeds).                         | One of a row of seven cork trees that were planted along the brookside walk.  |
| Phellodendron amurense | Amur Cork Tree | P147      | 40.081811<br>-88.202589 | 05/24/11 | A small but mature tree.   | Male (incapable of producing seeds).                         | One of a row of seven cork trees that were planted along the brookside walk.  |
| Phellodendron amurense | Amur Cork Tree | P148      | 40.081689<br>-88.202613 | 05/24/11 | A small but mature tree.   | Male (incapable of producing seeds).                         | One of a row of seven cork trees that were planted along the brookside walk.  |
| Phellodendron amurense | Amur Cork Tree | P149      | 40.081647<br>-88.202563 | 05/24/11 | A small but mature tree.   | Male (incapable of producing seeds).                         | This is the southernmost cork tree of a row of seven cork trees that were planted on the W side of the brookside walk.                      |
| Phellodendron amurense | Amur Cork Tree | P185      | 40.077514<br>-88.208875 | 06/07/11 | A sapling 6 feet tall.   | Doing well in a sparse understory beneath a canopy of trees. | Mesic Wooded Land.  |
| Phellodendron amurense | Amur Cork Tree | P253      | 40.076482<br>-88.209007 | 06/14/11 | A seedling 1 foot tall.  | Healthy.   | Mesic Wooded Land on the S border of the park, beneath the canopy of a Hackberry. This is the westernmost cork tree along the S fence line. |
| Phellodendron amurense | Amur Cork Tree | P274      | 40.080288<br>-88.205848 | 06/14/11 | A sapling 3 feet tall.   | Healthy.   | Mesic Wooded Land.  |
| Phellodendron amurense | Amur Cork Tree | P524      | 40.080393<br>-88.205523 | 07/29/11 | Three sprouts (3, 5, and 8 feet tall), the current year's growth from cut stems.   | Vigorous.  | Mesic Wooded Land beneath the S edge of the crown of a Wild Black Cherry tree.  |
| Phellodendron amurense | Amur Cork Tree | P714      | 40.080499<br>-88.205269 | 08/25/11 | Three sprouts (2, 4, and 5 feet tall), the current year's growth from a cut stump. | Healthy.   | In open Mesic Wooded Land. The nearest tree is a cherry about 10 feet to the E and slightly S.  |

**Table 5. Inventory of invasive plants** *continued.*

| Scientific name    | Common name      | GPS point | Latitude<br>Longitude   | Date     | Number, size, and extent   | Vigor and stage of growth  | Location and habitat   |
|--------------------|------------------|-----------|-------------------------|----------|--|--|--|
| Ranunculus ficaria | Fig Buttercup    | P616      | 40.083513<br>-88.201797 | 04/07/11 | An elongated patch extending for a total of about 10 feet, but mostly concentrated in an area about half as large. | Flowering heavily.   | On the E side of the creek, beginning 6 feet S of the culvert under Windsor Road and extending downstream, growing in gravel that forms a terrace within the stream channel. |
| Rhamnus cathartica | Common Buckthorn | P068      | 40.080087<br>-88.204689 | 05/19/11 | A bush about 15 feet tall.   | Healthy.   | On the wooded edge of the creek.   |
| Rhamnus cathartica | Common Buckthorn | P071b     | 40.079560<br>-88.205086 | 05/19/11 | A bush about 15 feet tall.   | Healthy.   | In the center of a patch of day lilies in open Mesic Wooded Land.  |
| Rhamnus cathartica | Common Buckthorn | P151      | 40.076537<br>-88.200128 | 05/24/11 | A bush more than 20 feet tall.   | Male, healthy, and flowering.  | Mesic Wooded Land, on the S bank of the creek.   |
| Rhamnus cathartica | Common Buckthorn | P172      | 40.081946<br>-88.202350 | 05/30/11 | A bush 8 feet tall.  | Fruiting heavily.  | Leaning out over the creek, in Wet-mesic Wooded Land.  |
| Rhamnus cathartica | Common Buckthorn | P346      | 40.080838<br>-88.202914 | 07/03/11 | A bush about 10 feet tall.   | Fruiting, with a well developed crown.   | Mesic Wooded Land, overtopped and shaded by big trees.   |
| Rhamnus cathartica | Common Buckthorn | P441      | 40.077604<br>-88.204270 | 07/10/11 | A bush about 15 feet tall.   | A full crown on the N half, but shaded by an overtopping sycamore on the S half; fruiting heavily. | At the edge between Mesic Wooded Land and Mesic Prairie.   |
| Rhamnus cathartica | Common Buckthorn | P456      | 40.081949<br>-88.201956 | 07/13/11 | A bush about 10 feet tall.   | Healthy, fruiting.   | Growing up into the crown of a Swamp White Oak in Mesic Wooded Land.   |
| Rhamnus cathartica | Common Buckthorn | P557      | 40.082242<br>-88.202370 | 07/30/11 | A bush 10 feet tall.   | The crown is sparse because of dense shading by trees, but the bush is fruiting.                   | On the W bank of the creek, at the E end of a cleared strip, close to a very big cottonwood.   |
| Rhamnus cathartica | Common Buckthorn | P558      | 40.082307<br>-88.202408 | 07/30/11 | A bush 20 feet or more tall, with a broad crown.   | Healthy, fruiting.   | Mesic Wooded Land, on the NW side of a very big cottonwood.  |
| Rhamnus cathartica | Common Buckthorn | P570      | 40.080113<br>-88.204655 | 07/31/11 | A bush 20 feet tall.   | Fruiting and thriving even though it is suppressed in the shade of taller trees.                   | Mesic Wooded Land, on the S bank of the creek, next to a big dead cottonwood.  |

**Table 5. Inventory of invasive plants** *continued.*

| Scientific name    | Common name         | GPS point | Latitude<br>Longitude   | Date     | Number, size, and extent   | Vigor and stage of growth  | Location and habitat  |
|--------------------|---------------------|-----------|-------------------------|----------|--|--|---|
| Rhamnus cathartica | Common Buckthorn    | P573      | 40.082040<br>-88.202315 | 07/31/11 | A bush 5 feet tall. The bush would be taller except that it leans out toward the creek, and a taller, 10-foot stem is dead.  | Vigorous, fruiting.  | Wet-mesic Wooded Land.  |
| Rhamnus cathartica | Common Buckthorn    | P610      | 40.083413<br>-88.201862 | 08/07/11 | P610 is a generalized location to denote the entire unmowed area along McCullough Creek between Windsor Road and the PrairiePlay Bridge. Within this area are several buckthorn plants, described in the far right column. | All of the plants are healthy and growing well.  | A list of buckthorns in the vicinity of P610:<br>Two 5-foot plants and a 2-foot plant on the E bank of the creek, immediately downstream from the culvert.<br>One 12-foot plant on the E bank, 10 feet below the culvert.<br>One 12-foot plant on the W bank, 20 feet below the culvert.<br>One 15-foot (or taller) plant on the W bank, about two-thirds of the way from the culvert to the bridge.<br>A close, systematic search may reveal more buckthorns in this area. |
| Securigera varia   | Crown Vetch         | P017      | 40.081340<br>-88.202667 | 04/14/11 | A patch concentrated in an 8 by 20-foot area, thinly scattered beyond.   | Shade-suppressed.  | Beneath River Birches.  |
| Syringa reticulata | Japanese Tree Lilac | P321      | 40.078021<br>-88.208551 | 05/04/11 | In early May 2011, seedlings were abundant around one of the tree lilacs, but the neighboring tree lilac produced no seedlings.  | In July 2011, no live seedlings could be found. They may have all succumbed to mowing, herbiciding, and dry weather. | Timpone Ornamental Tree Grove.  |
| Typha x glauca     | Hybrid Cat-tail     | P863      | 40.083530<br>-88.201815 | 10/06/11 | A plant 39 inches tall with two small offshoots.   | Young and healthy.   | On the W bank of McCullough Creek about 15 feet downstream from the S edge of the grate on the W culvert under Windsor Road.  |
| Ulmus pumila       | Siberian Elm        | P468      | 40.082811<br>-88.199952 | 07/14/11 | A sapling 3 feet tall.   | Healthy.   | At the edge between the lawn and Mesic Meadow.  |



**Table 5. Inventory of invasive plants** *continued.*

| Scientific name | Common name       | GPS point | Latitude<br>Longitude   | Date     | Number, size, and extent   | Vigor and stage of growth       | Location and habitat  |
|-----------------|-------------------|-----------|-------------------------|----------|--|---------------------------------|---|
| Ulmus pumila    | Siberian Elm      | P874      | 40.082121<br>-88.204681 | 10/04/11 | A sapling (8 feet tall), sprouted from a small stub.   | Healthy.                        | Mesic Meadow, 7 feet W of the W edge of the walk, about 1 foot W of a shorter but bushier Callery Pear.                     |
| Vinca minor     | Common Periwinkle | P006      | 40.076459<br>-88.208970 | 04/10/11 | A patch extending E and W for roughly 20 feet in the wooded strip along the property line; it is densest in a zone that is about 5 feet wide, but it extends N for a total of more than 10 feet from the property line so that it is also in the mowed area. | Healthy but not dense.          | Wooded strip at the S edge of the park. This patch is on both sides of the property line, so it is not limited to the park. |
| Vinca minor     | Common Periwinkle | P254      | 40.076484<br>-88.208510 | 06/14/11 | A patch 4 feet in diameter.  | Dense only in the central half. | Wooded strip at the S edge of the park.   |

Appendix 4. Notes for Table 1.

| No. | Name  | Note  |
|-----|---|---|
| 1   | <b>Acer campestre</b><br>HEDGE MAPLE                          | There is one mature Hedge Maple in the Timpone Family Ornamental Tree Grove. I found two Hedge Maple seedlings in nearby mulch beds.  |
| 2   | <b>Acer ginnala</b><br>AMUR MAPLE                             | Amur Maple is often considered to be a distinct species, <i>Acer ginnala</i> – but it is also classified as a subspecies of Tartarian Maple (or Tatarian Maple), named <i>Acer tataricum</i> ssp. <i>ginnala</i> . The two Amur Maples planted in Timpone Grove are labeled <i>Acer tataricum</i> ssp. <i>ginnala</i> .   |
| 3   | <b>Acer platanoides</b><br>NORWAY MAPLE                       | Norway Maple is a strongly invasive species because it is a prolific seed-producer and among the most shade-tolerant of trees, so it can establish itself even in dense forest. However, the sole Norway Maple in Meadowbrook Park appears to be sterile: it did not flower in 2011, and there are no Norway Maple seedlings or saplings near it. This particular tree (a purple-leaved variety) is not an invasive threat.   |
| 4   | <b>Acer rubrum</b><br>RED MAPLE                               | Red Maples in Meadowbrook Park produce an abundance of seeds, but very few seedlings have become established.   |
| 5   | <b>Acer saccharum</b><br>SUGAR MAPLE                          | Sugar Maple has reproduced very sparingly at Meadowbrook.   |
| 6   | <b>Acorus calamus</b><br>ONE-VEINED SWEET FLAG                | <p>There are two kinds of calamus, quite similar in appearance: one is American, and one is Eurasian. Over the years, many botanists have considered the two kinds to be varieties of a single species, but Mohlenbrock's <i>Vascular Flora of Illinois</i> (2002) treats the two as distinct species. The recent treatment of <i>Acorus</i> in <i>Flora of North America</i> (Thompson 2000) provides persuasive evidence that there are separate American and Eurasian species.</p> <p>The calamus in Meadowbrook Park is the Eurasian species (<i>Acorus calamus</i>, or One-veined Sweet Flag), which is widely established in the wild in Illinois. The range of the native species (<i>Acorus americanus</i>) lies to the north; Kankakee County is at the southern limit of its documented range.</p> <p>A small colony of One-veined Sweet Flag grows in the outlet of the Walker Grove Wetland, on the south side of the Prairie Path where water flows into a culvert. I also found a small One-veined Sweet Flag plant east of the Organic Gardens, where it had sprouted from a discarded rootstock; this plant did not survive through the spring.</p> |
| 7   | <b>Aesculus glabra</b><br>OHIO BUCKEYE                        | Ohio Buckeye is reproducing well in the park.   |
| 8   | <b>Agrostis gigantea</b><br>REDTOP                            | Mohlenbrock (2002) described Redtop as native, but I follow Swink and Wilhelm (1994), who considered the widespread, abundant strain of Redtop to be an introduction from Europe.   |
| 9   | <b>Agrostis hyemalis</b><br>TICKLE GRASS                      | Tickle Grass is a plant of sunny, well-drained, disturbed areas with sparse vegetation. It grows thickly on a segment of the most heavily traveled deer path through the Wandell Sculpture Garden, and it is thinly scattered in the adjacent prairie restoration.  |
| 10  | <b>Alisma subcordatum</b><br>SMALL-FLOWERED<br>WATER PLANTAIN | The single Small-flowered Water Plantain in the Walker Grove Wetland produced plenty of seeds in 2011.  |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name   | Note   |
|-----|--|--|
| 11  | <b>Alliaria petiolata</b><br>GARLIC MUSTARD      | Garlic Mustard is one of the most severely invasive plants in the Midwest. It is widely distributed in Meadowbrook Park, mostly in semi-shaded areas. Some patches are dense. Ongoing control efforts probably have kept Garlic Mustard from overwhelming wooded parts of the park.  |
| 12  | <b>Allium sativum</b><br>GARLIC                  | Garlic is cultivated in both the Herb Garden and Organic Gardens, and it was grown in the Sensory Garden in past years. Garlic plants elsewhere in the park may have spread from those cultivated plants. Some of the wild-growing Garlic occurs close to the Organic Gardens, but it also grows among dense prairie vegetation south of McCullough Creek, 540 feet south and east of the Garlic plants in the Herb Garden and 450 feet south of the nearest edge of the Organic Gardens.  |
| 13  | <b>Amaranthus spinosus</b><br>SPINY PIGWEED      | I found a single Spiny Pigweed in disturbed soil close to the dairy barn. It was with three other species of <i>Amaranthus</i> : Green Pigweed, Water Hemp, and White Amaranth. These weeds – in company with Common Mallow and Flower of an Hour – may be holdovers from long ago when the site was a barnlot.  |
| 14  | <b>Amelanchier arborea</b><br>SHADBUSH           | I did not find any evidence of reproduction by Shadbush in the park. There are many <i>Amelanchier</i> seedlings, but they all appear to be progeny of Hybrid Serviceberry, <i>Amelanchier x grandiflora</i> .   |
| 15  | <b>Amorpha canescens</b><br>LEADPLANT            | I know of one Leadplant in the park, pointed out by Derek Liebert between the Freyfogle Overlook and the adjacent Prairie Path.  |
| 16  | <b>Amorpha fruticosa</b><br>FALSE INDIGO         | False Indigo was planted on both sides of a short segment of McCullough Creek. A few young False Indigos have come up in the immediate vicinity.   |
| 17  | <b>Anagallis arvensis</b><br>SCARLET PIMPERNEL   | To enjoy the beautiful little Scarlet Pimpernel, look around the left rear corner of the bench near Marker.  |
| 18  | <b>Anemone hupehensis</b><br>JAPANESE WINDFLOWER | I found one windflower plant overtopped by weeds beside the Wildflower Walk. Its leaflets have heart-shaped bases; this is a characteristic of Japanese Windflower, but because the plant is an ornamental, its parentage may include a mix of other species and varieties of anemone instead of being pure, typical <i>Anemone hupehensis</i> .   |
| 19  | <b>Anemone virginiana</b><br>TALL ANEMONE        | Tall Anemone is most frequent along the trail that extends west from the tip of the Savanna Peninsula, but I also found it in a few other, widely separated places in Meadowbrook Prairie. Tall Anemone can be difficult to spot, so it probably is more common than it appears to be.   |
| 20  | <b>Antennaria parlinii</b><br>PARLIN'S PUSSYTOES | In the lawn at Timpone Grove are two small patches of Parlin's Pussytoes. They are subspecies <i>fallax</i> , which is distinguished by having basal leaves that are densely hairy on the upper surface.<br><br>Parlin's Pusseytoes is indigenous to east-central Illinois, but it is unlikely to have spread from its native dry woodland habitat to Meadowbrook Park. Instead it probably came from seeds that were borne by the wind from the Herb Garden about 600 feet away. In the Herb Garden is a patch of pusseytoes labeled <i>Antennaria dioica</i> , which is a Eurasian species that is cultivated as a groundcover. The pusseytoes plants in the Herb Garden appear to be identical to the ones in the lawn, and they match the description of <i>Antennaria parlinii</i> ssp. <i>fallax</i> instead of <i>Antennaria dioica</i> as given in <i>Flora of North America</i> (Bayer 2006). |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name   | Note   |
|-----|--|--|
| 21  | <b>Apocynum sibiricum</b><br>PRAIRIE INDIAN HEMP       | I found Prairie Indiana Hemp in only one part of the park, less than an acre lying north and west of Marker. There it occurs with a similar and much more common species, Common Dogbane ( <i>Apocynum cannabinum</i> , also known as Indian Hemp). Although Prairie Indian Hemp and Common Dogbane usually can be distinguished by the shape of their leaves, some of the plants at Meadowbrook have leaves that appear intermediate between the two species. Prairie Indian Hemp and Common Dogbane can be more reliably separated on the basis of their seed pods and seeds, but none of the plants in Meadowbrook Park produced pods in 2011. Nevertheless, several plants in the prairie near Marker were clearly identifiable as Prairie Indian Hemp on the basis of their leaves.                         |
| 22  | <b>Aquilegia canadensis</b><br>WILD COLUMBINE          | Wild Columbine is on the Park District's earlier plant lists for both the Hickman Wildflower Walk and Meadowbrook Prairie. It is easy to find columbine plants along the Wildflower Walk, but I did not find any in the prairie restoration areas.   |
| 23  | <b>Arctium minus</b><br>BURDOCK                        | Burdock is a prolific pest. The Park District staff is keeping it under control.   |
| 24  | <b>Arenaria serpyllifolia</b><br>THYME-LEAVED SANDWORT | The tiny Thyme-leaved Sandwort is most common near the sewage pump station, especially in the grassy gravel driveway south of the chain-link fence.  |
| 25  | <b>Asclepias verticillata</b><br>WHORLED MILKWEED      | The only Whorled Milkweed that I noted in the park is a small, stunted colony at the very edge of a mowed path through prairie vegetation.   |
| 26  | <b>Aster cordifolius</b><br>BLUE HEART-LEAVED ASTER    | Blue Heart-leaved Aster can be found along the western 200 feet of the Hickman Wildflower Walk as well as close to the Forbes Bridge and at a few other points in the general vicinity. The plants have narrowly winged leafstalks; none of them has the broadly winged leafstalks that are characteristic of a quite similar blue-flowered species, Arrow-leaved Aster ( <i>Aster sagittifolius</i> ). The one aster plant that I located with broadly winged leafstalks is a White Heart-leaved Aster; it is midway along the Wildflower Walk on the south side. Beside the White Heart-leaved Aster is a Sky-Blue Aster and an Aromatic Aster. Several more Sky-Blue Asters can be found on both sides of the Wildflower Walk. The other aster species along this path are Frost Aster and New England Aster. |
| 27  | <b>Aster ericoides</b><br>HEATH ASTER                  | I found single stems or small clumps of Heath Aster at six widely separated points in the prairie restoration areas. Most likely there are several more Heath Asters in the park but they are more or less hidden among taller prairie plants by the time they come into bloom at the end of summer. The tall, dense grass in Meadowbrook Prairie does not provide good habitat for Heath Aster, but plenty of spots with less robust vegetation appear to be well suited for the species.   |
| 28  | <b>Aster lanceolatus</b><br>PANICLED ASTER             | This is the most common kind of aster in Meadowbrook Park. It usually has white ray flowers ("petals"), but a few of them in the park have lavender rays. In her monograph about Illinois asters, Jones (1989:161) stated that the ray flowers of Panicled Aster are white or rarely pink, and she said that there is good evidence that this species hybridizes with Smooth Blue Aster. However, Yatskievych (2006:294) observed that Panicled Aster can have white, pink, lavender, or bluish flowers. The lavender-flowered plants at Meadowbrook do not appear to be hybrids.  |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name  | Note   |
|-----|---|--|
| 29  | <b>Aster lateriflorus</b><br>SIDE-FLOWERED ASTER    | Although Side-Flowered Aster is most often a denizen of wooded habitats, the sole plant that I found at Meadowbrook Park was in the prairie restoration close to the east fence.   |
| 30  | <b>Aster praealtus</b><br>WILLOW ASTER              | I know of only one occurrence of Willow Aster in Meadowbrook Park. It consists of a fairly robust, multi-stemmed clump and a broad scattering of smaller outlying stems.   |
| 31  | <b>Aster urophyllus</b><br>WHITE HEART-LEAVED ASTER | I found one stem of White Heart-leaved Aster along the Wildflower Walk (see Note 26).  |
| 32  | <b>Astragalus canadensis</b><br>CANADA MILK VETCH   | I found only one Canada Milk Vetch plant in Walker Grove. A few years ago, Bob Vaiden photographed a Canada Milk Vetch blooming in the prairie restoration on the east side of the Savanna Peninsula.  |
| 33  | <b>Avena sativa</b><br>OATS                         | Oats came up in an area along McCullough Creek where trees and shrubs were cut away last year. They must have sprouted from seed that was mixed with Wheat that was sown as a cover crop after the woody vegetation was cut. Although the Oats produced seeds in 2011, it is not likely to persist in the area for more than a year or two.  |
| 34  | <b>Belamcanda chinensis</b><br>BLACKBERRY LILY      | I found a single Blackberry Lily in the study area. It probably spread from ones 940 feet away in the Sensory Garden.  |
| 35  | <b>Betula nigra</b><br>RIVER BIRCH                  | I found no evidence of reproduction by any of the dozens of River Birches that were planted in the park, but scores of River Birch seedlings and small saplings line a section of the path that runs along the south edge of the park. The parent is a big tree standing a stone's throw away beside the lake in Yankee Ridge.   |
| 36  | <b>Bidens aristosa</b><br>BEARDED BEGGAR-TICKS      | <p>I found a single Bearded Beggar-ticks plant blooming in the stream channel 45 feet upstream from the Timpone Grove Bridge. In the summer of 2011, there was an exceptionally diverse assemblage of Beggar-ticks (<i>Bidens</i> species) near this bridge. Within 58 feet upstream from the bridge were four species: <i>Bidens aristosa</i>, <i>B. cernua</i>, <i>B. frondosa</i>, and <i>B. polylepis</i>. A fifth species, <i>B. connata</i>, grew beneath the bridge and farther downstream along with <i>B. cernua</i> and <i>B. frondosa</i>.</p> <p>Eleven feet downstream from the bridge, at the edge of a patch of <i>B. frondosa</i>, was a single plant that appeared to be a hybrid between <i>B. frondosa</i> and <i>B. cernua</i>. The flowers and leaves on this plant were intermediate in form between those of <i>B. frondosa</i> and <i>B. cernua</i>. Flowering heads on the supposed hybrid plant produced fruiting bodies that are typical of <i>Bidens</i> (<i>i.e.</i> awned and barbed achenes or "seeds"), but the achenes never filled out and developed fully, which is evidence that the plant was a sterile hybrid.</p> |
| 37  | <b>Bidens cernua</b><br>NODDING BUR MARIGOLD        | Nodding Bur Marigold is on the planting list for the Walker Grove Wetland, but I did not find it there. This native annual is more or less thinly scattered along the length of McCullough Creek, where it appears to have established itself naturally.   |
| 38  | <b>Bidens polylepis</b><br>SWAMP MARIGOLD           | When Swamp Marigold blooms toward the end of summer, a solid patch of it turns part of the Walker Grove Wetland brilliant yellow.  |
| 39  | <b>Boehmeria cylindrica</b><br>FALSE NETTLE         | False Nettle and Clearweed are almost always found together in moist, shady woods. Clearweed is abundant in much of the park, so I expected False Nettle   |

Appendix 4. Notes for Table 1 *continued.*

| No. | Name  | Note  |
|-----|---|---|
|     |   | to be common too – but I found only four small patches of it beside McCullough Creek. The largest was on the dam at Beaver Pond.  |
| 40  | <b>Boltonia asteroides</b><br>FALSE ASTER           | One big False Aster plant bloomed in the Walker Grove Wetland in the late summer of 2011.   |
| 41  | <b>Bothriochloa ischaemum</b><br>TURKESTAN BLUESTEM | <p>I found a single clump of Turkestan Bluestem in a thinly wooded area beside McCullough Creek. Although the plant was somewhat shade-suppressed, it produced dozens of flowering stems.</p> <p>The native range of Turkestan Bluestem extends from Portugal to Japan and from Siberia to India. I am not aware of any previous reports of Turkestan Bluestem growing in the wild in Illinois or any neighboring state. The plant at Meadowbrook is the typical variety of Turkestan Bluestem (var. <i>ischaemum</i>); a different variety (<i>songarica</i>) was introduced as a forage crop in Texas a few decades ago. That variety, now known as King Ranch Bluestem or K.R. Bluestem, has spread throughout the southeastern United States and is now listed as an invasive species in Texas.</p> <p>How did Turkestan Bluestem arrive at Meadowbrook Park? Although it is in a partially wooded part of the park, it is growing with Side-oats Grama, a prairie grass that must have spread from the Meadowbrook Prairie restoration. Turkestan Bluestem could have been introduced as a contaminant in prairie seed that was planted at Meadowbrook; but if so, I would expect to find it in the prairie restoration areas. The plant at Meadowbrook grows where the high-water mark might be when McCullough Creek is in full flood; perhaps it came from a seed that washed down the creek.</p> <p>Turkestan Bluestem may not prove to be a widespread invasive problem in the humid climate of Illinois because it seems unlikely to compete well with dense herbaceous vegetation. A related species, Silver Beardgrass (<i>Bothriochloa saccharoides</i>) has become fairly common in Illinois since I found the second record of it in the state in 1969. In recent years, Silver Beardgrass has often been planted along highways, but it is not a strong competitor and has not become an invasive species.</p> |
| 42  | <b>Botrychium dissectum</b><br>BRONZE FERN          | <p>This fern typically sends up a frond in the autumn that may remain alive through the winter. I found a single, newly emerged Bronze Fern (three inches tall) on October 17, 2011. It was along the Wildflower Walk about 4 feet south of the pavement in the zone that has been most heavily planted with woodland wildflowers. Bronze Ferns and their relatives (Grape Ferns) are difficult to transplant successfully, so the plant at Meadowbrook may have spread there naturally instead of being planted. The nearest population of Bronze Fern in a native habitat may be at Busey Woods, but idle parts of Yankee Ridge and the Illini Forest Plantations (west of Race Street) might also harbor the species.</p> <p>The plant by the Wildflower Walk is the blunt-lobed variety <i>obliquum</i>, not the typical (but far less common) cut-leaved variety <i>dissectum</i>. To help distinguish the blunt-lobed variety of Bronze Fern from the cut-leaved variety, it is sometimes called Coarse-lobed Grape Fern.</p>   |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name  | Note   |
|-----|---|--|
| 43  | <b>Bouteloua curtipendula</b><br>SIDE-OATS GRAMA    | Side-oats grama is a short grass of dry prairies. It is scarce in Meadowbrook Prairie because it does not compete well against tall, thickly growing grasses; it is more common in the park's lawns and sparsely vegetated areas along the creeks.   |
| 44  | <b>Bromus inermis</b><br>SMOOTH BROME               | Smooth Brome is a severe invader of prairies, especially farther north. Although it is common in the park's mowed meadows, it is not a problem in the prairie restoration areas.   |
| 45  | <b>Callicarpa dichotoma</b><br>PURPLE BEAUTYBERRY   | Beautyberry bushes produce hundreds of small fruits, and their seeds are spread by birds. I found a single small Purple Beautyberry in the thinly wooded area south of the Wildflower Walk. There are no beautyberries elsewhere in Meadowbrook Park or at Clark-Lindsey Village, so this bush must have come from a seed carried from somewhere farther afield. Basinger (2001) made the first report of this species growing in the wild in Illinois, at Carbondale.   |
| 46  | <b>Callirhoë digitata</b><br>FRINGED POPPY MALLOW   | Fringed Poppy Mallow is indigenous to the western United States. It probably was brought in as part of the prairie restoration, but it appears to be dying out because it cannot compete with lush tall-grass prairie vegetation.  |
| 47  | <b>Caltha palustris</b><br>MARSH MARIGOLD           | A colony of roughly 40 Marsh Marigolds bloomed in the Walker Grove Wetland in April of 2011.   |
| 48  | <b>Camassia scilloides</b><br>WILD HYACINTH         | I found only two Wild Hyacinth plants, both while they were in bloom. One was at the edge of the woods on the south border of the Organic Gardens. The other was in a section of prairie where many hyacinths have been seen in past years. That part of Meadowbrook Prairie had not been burned since the last growing season; if it had been burned, many more hyacinths might have been spotted because they would have been flowering vigorously and highly visible – not suppressed and hidden by a thatch of dead herbage. |
| 49  | <b>Carex blanda</b><br>COMMON WOOD SEDGE            | Common Wood Sedge the most common kind of sedge in Meadowbrook Park.   |
| 50  | <b>Carex davisii</b><br>DAVIS'S SEDGE               | A single Davis's Sedge fruited heavily beside McCullough Creek in the summer of 2011.  |
| 51  | <b>Carex gravida</b><br>LONG-AWNED BRACTED SEDGE    | Long-awned Bracted Sedge may be more common than I found. It can be difficult to spot amid prairie grass.  |
| 52  | <b>Carex grisea</b><br>WOOD GRAY SEDGE              | Wood Gray Sedge is the second most common sedge in the park.   |
| 53  | <b>Carex hystericina</b><br>PORCUPINE SEDGE         | There are a few dozen Porcupine Sedge plants in the Walker Grove Wetland.  |
| 54  | <b>Carex jamesii</b><br>James's Sedge               | This sedge is named for Edwin James, who discovered it as a species previously unknown to science. Dr. James led the first historically documented ascent of Pike's Peak in 1820. <i>Carex jamesii</i> is also known as Ice-cream Cone Sedge on account of the shape of the sac that encloses each seed.   |
| 55  | <b>Carex laeviconica</b><br>LONG-TOOTHED LAKE SEDGE | Long-toothed Lake Sedge forms a small but very thick stand in the Walker Grove Wetland.  |
| 56  | <b>Carex pellita</b><br>BROAD-LEAVED WOOLLY SEDGE   | Broad-leaved Woolly Sedge grows next to Long-toothed Lake Sedge, and it forms a similarly dense patch.   |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name   | Note  |
|-----|--|---|
| 57  | <b>Carpinus caroliniana</b><br>MUSCLEWOOD                | Musclewoods that were planted in Meadowbrook Park do not have the form of a wild-growing tree. They must be a cultivated variety that was selected and propagated for its dense, symmetrical crown.   |
| 58  | <b>Carya illinoensis</b><br>PECAN                        | There is a single Pecan sapling in the prairie restoration east of the Savanna Peninsula. It consists of two sprouts, the largest of which is 4½ feet tall, so it is hidden by prairie grass by the end of summer. The nearest known mature Pecan tree is southwest of the sapling, a few feet south of the park. Did a crow or jay pluck a nut from that tree, fly northeast for 1,930 feet, and drop it in the prairie?   |
| 59  | <b>Carya ovalis</b><br>SWEET PIGNUT HICKORY              | One Sweet Pignut Hickory occurs in Meadowbrook Park on the east side of McCullough Creek. Its leaves and buds are unusually large (about twice as long and wide as usual), and its twigs are abnormally thick. However, the shape and minute surface appearance (hairs, microscopic scales, etc.) of the leaves, buds, twigs, and nuts are typical of Sweet Pignut Hickory.   |
| 60  | <b>Carya ovata</b><br>SHAGBARK HICKORY                   | Meadowbrook Park has a one Shagbark Hickory tree, standing about 250 feet south of the park's sole Sweet Pignut Hickory. The leaves, buds, and twigs on this tree are typical of Shagbark Hickory, but the trunk has not yet developed shaggy bark. Nuts commonly drop from this tree before they are well developed, perhaps because the tree is not yet fully mature, but a single seedling beneath the tree shows that it can produce viable nuts.   |
| 61  | <b>Celastrus orbiculatus</b><br>ROUND-LEAVED BITTERSWEET | The exotic Round-leaved Bittersweet can be difficult to distinguish from our native bittersweet ( <i>Celastrus scandens</i> ) when it lacks flowers or fruits and especially if the plant is young. The leaves of the two species are usually distinctively shaped, but they can be quite similar on immature plants and sterile shoots, making it difficult or impossible to determine the species for certain. I carefully examined every bittersweet vine that I found in the park, and I think that it is safe to conclude that they all are the non-native <i>Celastrus orbiculatus</i> . My reasoning is as follows. (1) All of the mature, flowering and fruiting plants that I found in the park are obviously Round-leaved Bittersweet. (2) All of the young bittersweets that I found were not far from a mature plant that could be identified as Round-leaved Bittersweet. (3) None of the bittersweet vines in the park bears leaves that have the characteristic shape of the native species. |
| 62  | <b>Cercis canadensis</b><br>REDBUD                       | Redbud has spread very sparingly into untended parts of the park.   |
| 63  | <b>Chamaesyce prostrata</b><br>GREEN CREEPING SPURGE     | <p>Green Creeping Spurge is a tropical species that began to spread across Illinois in recent decades. Mohlenbrock (1985) reported a DuPage County collection as the first report of the species from Illinois, and he added a Cook County record in <i>Vascular Flora of Illinois</i> (2002). At the herbarium of the Illinois Natural History Survey, I recently examined a specimen of Green Creeping Spurge that was collected in St. Clair County in 1950; this collection has never been recognized in published reports of the state's flora.</p> <p>Green Creeping Spurge is a small, mat-forming annual – quite similar to Spotted Spurge – but the two species can clearly be distinguished under magnification while they are in full bloom or fruiting. With practice, it is often possible</p>   |



Appendix 4. Notes for Table 1 *continued*.

| No. | Name  | Note  |
|-----|---|---|
|     |   | <p>to tell Green Creeping Spurge from Spotted Spurge by its superficial appearance without even bending down to look closely.</p> <p>I found that Green Creeping Spurge is fairly common in lawns and areas with bare soil in Meadowbrook Park, including the banks of McCullough Creek. There are no specimens of Green Creeping Spurge from central Illinois in the herbaria of the University of Illinois or Illinois Natural History Survey, but the species is likely to have been overlooked because it is so small and similar to the ubiquitous Spotted Spurge. After finding Green Creeping Spurge in Meadowbrook Park, I looked for it elsewhere in Urbana and Champaign, and found it at about half the places that I checked.</p> |
| 64  | <b>Cirsium arvense</b><br>CANADA THISTLE                  | <p>Colonies of Canada Thistle are widely scattered in Meadowbrook Park. This species can be a bad weed in prairie restorations. The bare soil of burned prairie provides an ideal bed for its windblown seeds.</p>  |
| 65  | <b>Cleome hassleriana</b><br>SPIDER FLOWER                | <p>Spider Flower has spread a short distance from the Organic Gardens. I also found a single plant on the bank of McCullough Creek near the PrairiePlay Bridge, where it presumably grew from a seed that washed downstream from a flower garden north of Windsor Road.</p>   |
| 66  | <b>Conium maculatum</b><br>POISON HEMLOCK                 | <p>Poison Hemlock occurs in Meadowbrook Park as scattered colonies and individuals. It is most abundant in partial shade along the banks of McCullough Creek, but it also thrives in full sun. Poison Hemlock would take over sections of the park if it were allowed to spread freely.</p>   |
| 67  | <b>Convallaria majalis</b><br>LILY OF THE VALLEY          | <p>A tiny pair of Lily of the Valley plants were in the lawn near the PrairiePlay Bridge in early May of 2011, but I could not find them again after the area was mowed. John Hilty once photographed Lily of the Valley near the Wildflower Walk, but it no longer appears to be there.</p>  |
| 68  | <b>Coreopsis tinctoria</b><br>GOLDEN COREOPSIS            | <p>The mixture of seeds that is provided by commercial prairie restoration businesses often includes a few bright-flowered, short-lived, non-native species that are intended to make a flowering show in the first years after planting, before the native species begin to flower much. Golden Coreopsis may be one such species at Meadowbrook. I found a single specimen of this denizen of the Great Plains at the edge of a path through Meadowbrook Prairie.</p>   |
| 69  | <b>Cornus alternifolia</b><br>ALTERNATE-LEAVED<br>DOGWOOD | <p>John Hilty told me where to find a small Alternate-leaved Dogwood that had been planted in the woods along the walk north of the Timpone Grove Bridge. The shrub appears to have died in 2011, probably because of the hot and dry summer.</p>   |
| 70  | <b>Cornus amomum</b><br>SWAMP DOGWOOD                     | <p>The blue berries of Swamp Dogwoods at Meadowbrook are so heavily favored by birds that very few of them ripen fully before they are eaten.</p>   |
| 71  | <b>Cornus drummondii</b><br>ROUGH-LEAVED DOGWOOD          | <p>Although Rough-leaved Dogwood is a native species, it is one of the most invasive shrubs in prairie openings on wooded bluffs along the Illinois and Mississippi Rivers. Rough-leaved Dogwood is spreading at Meadowbrook Park, but it has not become a significant impediment to restoring prairie vegetation.</p>  |
| 72  | <b>Cornus florida</b><br>FLOWERING DOGWOOD                | <p>I found no mature Flowering Dogwoods in the wild parts of Meadowbrook Park. A few Flowering Dogwoods have been planted in the lawns, and it is possible to find their seedlings in nearby mulch beds. Most of the seedlings</p>  |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name  | Note  |
|-----|---|---|
|     |   | were heavily infected by anthracnose in the spring of 2011, and they appeared unlikely to survive.  |
| 73  | <b>Cotinus coggygia</b><br>EUROPEAN SMOKE TREE      | I found several seedling smoke trees in the mulch around ones that were planted in the Timpone Family Ornamental Tree Grove.  |
| 74  | <b>Crataegus crus-galli</b><br>COCK'S SPUR THORN    | Timpone Grove has a group of five Cock's Spur Thorns. They are a thornless variety. The only reproduction by this species that I noted in the park was a single seedling in the mulch beneath one of the five mature trees.   |
| 75  | <b>Crataegus mollis</b><br>DOWNY HAWTHORN           | Meadowbrook Park has one big, old Downy Hawthorn between Douglas Creek and the Prairie Path on the north side of Walker Grove. I found a single seedling beneath the tree.  |
| 76  | <b>Crataegus succulenta</b><br>LONG-SPINED HAWTHORN | Long-spined Hawthorns that were planted in Meadowbrook Park are spreading by root sprouts. I also found three seedlings that may be Long-spined Hawthorns scattered in the park, far from any mature hawthorns.   |
| 77  | <b>Cucurbita pepo</b><br>FIELD PUMPKIN              | <p>I found a Field Pumpkin vine growing without cultivation near the Organic Gardens; it must have spread from a garden plot or compost heap. Another vine in the channel of McCullough Creek near Windsor Road flowered and produced a pumpkin; that plant probably grew from a seed that washed from a home north of the park.</p> <p>The common Field Pumpkin or Jack-o-Lantern Pumpkin is classified as <i>Cucurbita pepo</i> var. <i>pepo</i>. Many kinds of cultivated squashes are also classified as this species, but they are a different variety (<i>Cucurbita pepo</i> var. <i>ovifera</i>), known as the Yellow-flowered Gourd or Pear Gourd.</p> <p>A volume of the <i>Illustrated Flora of Illinois</i> by Mohlenbrock (1978) reports Yellow-flowered Gourd (var. <i>ovifera</i>) from seven Illinois counties, but it does not have any records for Field Pumpkin (var. <i>pepo</i>) in the state. Mohlenbrock's newer <i>Vascular Flora of Illinois</i> (2002) describes variety <i>ovifera</i> as scattered in Illinois, but it does not list variety <i>pepo</i>. Kopal (2004) reported variety <i>pepo</i> as new to the state's flora based on a few plants growing on a dredge spoil pile in Cook County.</p> |
| 78  | <b>Dalea candida</b><br>WHITE PRAIRIE CLOVER        | I saw White Prairie Clover at only two points in the park, about 560 feet apart. Most likely there are several more White Prairie Clovers in the general vicinity of those plants.  |
| 79  | <b>Dalea purpurea</b><br>PURPLE PRAIRIE CLOVER      | Purple Prairie Clover is more common and widespread than White Prairie Clover in Meadowbrook Prairie, but both species are far less abundant than they normally would be in a natural prairie.  |
| 80  | <b>Daucus carota</b><br>WILD CARROT                 | Wild Carrot is an invasive species, but it does not appear to be a problem in Meadowbrook Park – perhaps because of the Park District's control measures.   |
| 81  | <b>Digitalis lanata</b><br>Grecian Foxglove         | Grecian Foxglove is a handsome garden perennial. I found three flowering stems amid a dense stand of goldenrod 180 feet east of the Organic Gardens. The foxglove plants do not appear to have been planted; although they may originated as an escape from the gardens, they apparently have coexisted with the surrounding goldenrods for several years. I know of no published report of Grecian Foxglove growing without cultivation in Illinois.   |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name  | Note   |
|-----|---|--|
| 82  | <b>Digitaria sanguinalis</b><br>COMMON CRABGRASS                    | Both Smooth Crabgrass and Common Crabgrass are common in Meadowbrook Park, but Common Crabgrass is decidedly more numerous.  |
| 83  | <b>Diospyros virginiana</b><br>PERSIMMON                            | Persimmon trees that were planted in the park are reproducing fairly well.   |
| 84  | <b>Eclipta prostrata</b><br>YERBA DE TAJO                           | I found a single small Yerba de Tajo beside the footpath that leads to the dam at Beaver Pond.   |
| 85  | <b>Elaeagnus umbellata</b><br>AUTUMN OLIVE                          | From the standpoint of vegetation management, Autumn Olive is much the same as Common Buckthorn. That is, both species are among the most invasive of shrubs, and they are too common in Meadowbrook Park for all of them to be individually enumerated, but control measures have kept them from dominating any part of the park.   |
| 86  | <b>Eriophila verna</b><br>VERNAL WHITLOW GRASS                      | Vernal Whitlow Grass is the tiniest and earliest of spring flowers. It grows in the grassy gravel driveway on the south side of the sewage pump station.   |
| 87  | <b>Euonymus yedoensis</b><br>JAPANESE SPINDLE TREE                  | The single Japanese Spindle Tree planted in the park has spread a little by root suckers, but it does not appear to have dispersed and reproduced by seed.   |
| 88  | <b>Eupatorium perfoliatum</b><br>COMMON BONESET                     | I found one small stem of Common Boneset, well hidden by tall prairie grasses near Marker.   |
| 89  | <b>Euthamia gymnospermoides</b><br>VISCID GRASS-LEAVED<br>GOLDENROD | I found only one Viscid Grass-leaved Goldenrod plant at Meadowbrook, growing with the common Hairy Grass-leaved Goldenrod. The two species are superficially quite similar, but I distinguished them by the following traits:<br><br>Viscid Grass-leaved Goldenrod.—Flower heads with 16 to 18 florets (in the heads that I examined under a dissecting microscope); stems essentially hairless; leaves up to 4 mm broad; the largest leaves with a prominent midvein and two obscure lateral veins (visible under 10-power magnification); stems and leaves with relatively conspicuous resin dots.<br><br>Hairy Grass-leaved Goldenrod.—Flower heads with an average of about 20 florets (ranging from 19 to 25 florets in the heads that I dissected); stems densely short-hairy; leaves up to 10 mm broad; the largest leaves with a prominent midvein plus two fairly prominent lateral veins and two obscure marginal veins (visible under 10-power magnification); stems and leaves with relatively inconspicuous resin dots. |
| 90  | <b>Festuca arundinacea</b><br>TALL FESCUE                           | Tall Fescue can invade native grassland habitats, especially farther south. It is common in mowed parts of the park but not in the prairie restoration areas.  |
| 91  | <b>Filipendula rubra</b><br>QUEEN OF THE PRAIRIE                    | I found only one patch of Queen of the Prairie in the park. Its basal leaves were conspicuous in the early spring, but the plants did not flower. I could not find them later in the spring after prairie grass had grown up over them even with the aid of a location previously recorded by a GPS device. Queen of the Prairie is on the planting list for the Walker Grove Wetland, but I did not find it there.  |
| 92  | <b>Gentiana alba</b><br>PALE GENTIAN                                | Although Pale Gentian is not a common member of the prairie flora, it is plentiful in Meadowbrook Prairie. It is similarly abundant in many other prairie restorations.  |
| 93  | <b>Gentiana andrewsii</b><br>BOTTLE GENTIAN                         | One of the easiest places to see Bottle Gentians is in the edge of the prairie restoration on the east side of Marker.   |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name   | Note  |
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| 94  | <b>Gentiana x pallidocyanea</b><br>HYBRID CLOSED GENTIAN | Hybrid Closed Gentian is a cross between Cream Gentian and Bottle Gentian. It is common in the middle of the prairie restoration west of the Savanna Peninsula, and it occurs very sparingly at a few other spots in the park.  |
| 95  | <b>Ginkgo biloba</b><br>GINKGO                           | <p>I found a cluster of three Ginkgo seedlings beneath a Sycamore on July 10, 2011. The seed cases from which they sprouted were still present. Ginkgo is a primitive species, not closely related to any other plant on Earth – and it does not actually produce fruits; instead it produces fleshy, fruit-like seeds, which are so ill-smelling that people avoid planting female, seed-bearing trees. There are no mature Ginkgo trees in Meadowbrook Park; evidently a racoon or other animal fed on seeds from a Ginkgo somewhere in the neighborhood and ended up depositing those seeds in the park. The nearest seed-bearing Ginkgo tree may be at Clark-Lindsey Village, 2,260 feet from the three seedlings.</p> <p>Mohlenbrock did not list Ginkgo in <i>Vascular Flora of Illinois</i> (2002). Basinger’s 2001 report of Ginkgo seedlings growing near planted trees at two locations in far southern Illinois must have been published too late to be included in Mohlenbrock’s flora. The herbarium of the Illinois Natural History Survey includes a pair of seedlings that were collected in 2007 from a flower bed near a large Ginkgo in Charleston.</p> <p>Evidently Ginkgos can sprout up far from a parent tree (as at Meadowbrook) but they seldom if ever survive long. The chapter on <i>Ginkgo biloba</i> by Whetstone (1993) in <i>Flora of North America</i> states, “Seedlings or saplings of ginkgo are very rarely found in the vicinity of planted trees and in fencerows and woods (undocumented reports from Kentucky, New Jersey, New York, Ohio, Pennsylvania, and Virginia), hence the inclusion of the species in the flora. Nevertheless, the species is doubtfully naturalized in North America despite about two centuries of cultivation here.” I periodically revisited Meadowbrook’s cluster of Ginkgos, and on October 15 found that the entire leafy tip was gone from two of the seedlings, apparently eaten by a deer. When last visited on December 10, all three plants had been clipped off within an inch of the ground, probably by a rabbit or other small mammal. The seedlings may not be able to re-sprout in 2012.</p> |
| 96  | <b>Glechoma hederacea</b><br>CREEPING CHARLIE            | Creeping Charlie is a pernicious weed in moist, shaded habitats. Most likely it has already insinuated itself into Meadowbrook Park as much as it ever will, and I do not see a compelling reason or practical means to reduce its presence.  |
| 97  | <b>Glycine max</b><br>SOYBEAN                            | I found a single Soybean seedling in a spot of bare soil in the lawn near the dairy barn.   |
| 98  | <b>Helianthus annuus</b><br>ANNUAL SUNFLOWER             | The Annual Sunflowers in Meadowbrook Park are the progeny of one or more cultivated strains, and they do not closely resemble the wild, ancestral type. I found them near the compost heaps, where they must have spread from cultivated plants. Most of these escaped plants were eliminated by mowing early in the spring.  |
| 99  | <b>Helianthus tuberosus</b><br>JERUSALEM ARTICHOKE       | I found one small Jerusalem Artichoke plant near the Organic Gardens, from which it almost certainly spread. The plant died in the early spring.  |
| 100 | <b>Helianthus x luxurians</b><br>LUXURIANT SUNFLOWER     | Luxuriant Sunflower is thought to be a hybrid between Giant Sunflower and Saw-toothed Sunflower.  |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name  | Note   |
|-----|---|--|
| 101 | <b>Hibiscus moscheutos</b><br>SWAMP ROSE MALLOW       | There is a single Swamp Rose Mallow in the Walker Grove Wetland. Although small, it is old enough to flower. I found one Swamp Rose Mallow seedling along McCullough Creek.  |
| 102 | <b>Hordeum pusillum</b><br>LITTLE BARLEY              | Little Barley is a native annual grass. It came up in a weedy mowed area near Race Street in the spring.   |
| 103 | <b>Humulus lupulus</b><br>HOPS                        | Both native and Eurasian varieties of Hops occur in Illinois. The plants at Meadowbrook are one of the native varieties.   |
| 104 | <b>Hypericum punctatum</b><br>SPOTTED ST. JOHN'S WORT | The only Spotted St. John's Wort that I know of in the park is in suboptimal habitat, at the wooded edge of a lawn where it is too shady and the plant is in jeopardy of being mowed.  |
| 105 | <b>Hypericum pyramidatum</b><br>GIANT ST. JOHN'S WORT | A spectacular patch of Giant St. John's Wort in Meadowbrook Prairie must have been planted. There are also several smaller patches and widely scattered individual plants, at least some of which must have established naturally from seed produced by the big patch.   |
| 106 | <b>Ilex verticillata</b><br>WINTERBERRY HOLLY         | I found four Winterberry Holly seedlings amid dense honeysuckle brush and goldenrod in less than an acre on the north side of the Hickman Wildflower Walk. Most likely these plants came from seeds that birds spread from hollies at Clark-Lindsey Village.   |
| 107 | <b>Ipomoea pandurata</b><br>WILD SWEET POTATO         | Meadowbrook Park has plenty of habitat that appears to be ideal for Wild Sweet Potato, but I found only one vigorous patch, which had at least 13 stems.   |
| 108 | <b>Juglans cinerea</b><br>BUTTERNUT                   | Several Butternuts were among the first trees planted along McCullough Creek after Meadowbrook Park was established. The trees have matured, but some of them have died and the rest are either declining or near death because of a fungal disease that causes fatal trunk cankers and crown die-back.  |
| 109 | <b>Leersia oryzoides</b><br>RICE CUT GRASS            | Three small colonies of Rice Cut Grass occur on the banks of McCullough Creek. I did not find it in the Walker Grove Wetland, where it was planted. This coarse native species is fairly robust; perhaps it could be encouraged to spread at the expense of Reed Canary Grass. It is a "sawgrass," though: its silica-impregnated, microscopically serrated leaf sheaths and blades can readily lacerate flesh.  |
| 110 | <b>Lemna minor</b><br>LESSER DUCKWEED                 | Lesser Duckweed carpets much of the water surface in McCullough Creek by midsummer, especially where the tiny floating fronds accumulate behind beaver dams.   |
| 111 | <b>Leucospora multifida</b><br>OBE-WAN-CONOBEA        | <i>Leucospora multifida</i> (or <i>Conobea multifida</i> ) is a wee wetland annual. It is so little known that it has no widely used common names other than Narrow-leaf Pale-seed and Conobea, both of which were coined from the plant's scientific names. In the 1994 edition of <i>Plants of the Chicago Region</i> , Floyd Swink introduced the name Obe-wan-conobea (a play on Obi-Wan Kenobi, a character in Star Wars). Reportedly the publisher of <i>Plants of the Chicago Region</i> was dismayed when the pun was made known too late to remove it from the book – and now Obe-wan-conobea is a well established name on the World Wide Web. |
| 112 | <b>Linum medium</b><br>WILD FLAX                      | I found only one Wild Flax plant in Meadowbrook Prairie. This small, slender species can be hard to spot unless it is in flower.   |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name   | Note   |
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| 113 | <b>Liparis liliifolia</b><br>TWAYBLADE ORCHID                            | On June 22, 2011, Barbara White and I came across a patch of 12 Twayblade Orchids in Meadowbrook Park. Two of the plants bore flowering stalks, and one of them still had a seed stalk from last year. All of the flowers dropped off the stalks (or perhaps they were stripped off by an animal) soon after they developed and before they could produce seeds.   |
| 114 | <b>Liquidambar styraciflua</b><br>SWEETGUM                               | Sweetgum saplings in and near Walker Grove must be progeny of mature trees on the west side of Race Street in the Illini Forest Plantations.   |
| 115 | <b>Liriodendron tulipifera</b><br>TULIPTREE                              | Many seedling and sapling Tuliptrees have grown from seeds produced by trees west of Race Street in the Illini Forest Plantations. A few young Tuliptrees occur in the interior of the park.   |
| 116 | <b>Lonicera maackii</b><br>AMUR HONEYSUCKLE                              | <i>Plants of the Chicago Region</i> says of Amur Honeysuckle, “It would be difficult to exaggerate the weedy potential of this shrub.” That potential has been realized at Meadowbrook Park. In wooded sections, Amur Honeysuckle forms a dense, practically impenetrable understory, and almost no other plant grows in its shade. Amur Honeysuckle is quite capable of invading grassy areas, and it would take over the entire property if allowed.                             |
| 117 | <b>Lonicera x bella</b><br>SHOWY FLY HONEYSUCKLE<br>“Bell’s Honeysuckle” | <i>Lonicera x bella</i> is a hybrid between Tartarian Honeysuckle ( <i>Lonicera tatarica</i> ) and Morrow’s Honeysuckle ( <i>Lonicera morrowii</i> ). The “bella” in <i>Lonicera x bella</i> is Latin for “beautiful” or “handsome.” Evidently someone assumed that <i>bella</i> relates to a person named Bell and consequently translated <i>Lonicera x bella</i> as Bell’s Honeysuckle. The new name has proliferated via the Internet.   |
| 118 | <b>Ludwigia peploides</b><br>CREEPING PRIMROSE WILLOW                    | A single Creeping Primrose Willow on the shore of Beaver Pond disappeared soon after I found it.   |
| 119 | <b>Lychnis coronaria</b><br>ROSE CHAMPION                                | Rose Champion is cultivated in the Herb Garden. I found a seedling about 780 feet away, in the lawn close to a bench along the Wildflower Walk.  |
| 120 | <b>Malus baccata</b><br>SIBERIAN CRAB                                    | Siberian Crab is an invasive species, but it is not as big a problem as Japanese Crab (see Note 123).  |
| 121 | <b>Malus ioensis</b><br>IOWA CRAB  | The one mature Iowa Crab tree in Meadowbrook Park is an ornamental variety, probably Bechtel’s Crabapple or Klem’s Improved Bechtel Crabapple. The tree bears hardly any fruit because it is a showy “double-flowered” variety, in which most of the stamens are replaced by extra petals – but I found a single seedling beneath it. A second Iowa Crab, beside the PrairiePlay Bridge, was cut down recently, but it subsequently produced many vigorous sprouts from its roots. |
| 122 | <b>Malus prunifolia</b><br>PLUM-LEAVED CRAB                              | Meadowbrook Park had one big, old Plum-leaved Crab, but it was cut down in the summer of 2011. I found one seedling near it, which did not survive through the growing season. Although Plum-leaved Crab is on some lists of invasive plants, it is not a problem at Meadowbrook.  |
| 123 | <b>Malus sieboldii</b><br>JAPANESE CRAB                                  | Japanese Crab and Siberian Crab are the two most invasive crab species in Meadowbrook Park, and Japanese Crab is the worst. Counting both planted and wild trees, I estimate that there are roughly 10 to 15 times as many mature Japanese Crabs as Siberian Crabs. There are thousands of times more Japanese crab seedlings than Siberian crab seedlings, and Japanese crab saplings are perhaps 50 times more common than Siberian crab saplings.                               |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name  | Note   |
|-----|---|--|
|     |   | <p>In May of 2011, I chose an average, representative spot near the big Japanese Crabs along the Wildflower Walk and counted 92 crab seedlings in a square foot. Most of the seedlings died as the growing season progressed, and only a few might survive to the sapling stage, but Japanese Crab obviously can dominate the vegetation if left uncontrolled.</p> <p>Various species of apples and crabs (the genus <i>Malus</i>) have been hybridized and selected to produce scores of ornamental varieties, resulting in confusion about their identification and naming. For instance, Zumi Crab is variously considered to be a distinct species, or the same as Japanese Crab, or a variety of Japanese Crab, or a form of Siberian Crab, or a hybrid between Japanese Crab and Siberian Crab. The origin of many horticultural varieties and crosses is so mixed or uncertain that nursery growers often do not attempt to name the parents, simply calling them “<i>Malus</i> species” – as can be seen on some of the tree labels in Timpone Grove.</p>  |
| 124 | <p><b>Malus x soulardii</b><br/>SOULARD CRAB</p>            | <p>Soulard Crab is thought to be a hybrid between Iowa Crab and Domestic Apple. At least one of the Japanese Crab trees in the prairie restoration at Meadowbrook was produced in a nursery by grafting a Japanese Crab scion onto the rootstock of a Soulard Crab. After this tree was planted in the park, the rootstock sprouted three vigorous stems of Soulard Crab that grew up through the crown of the Japanese Crab. This Soulard Crab fruited beautifully in 2011.</p>   |
| 125 | <p><b>Melilotus albus</b><br/>WHITE SWEET CLOVER</p>        | <p>The influential U.S.D.A. PLANTS Database on the Internet treats White Sweet Clover as the same species as Yellow Sweet Clover. However, these two kinds of sweet clover differ substantially in terms of their appearance, life history, and ecology. For one thing, White Sweet Clover is a much more robust invasive in prairies.</p>   |
| 126 | <p><b>Melilotus officinalis</b><br/>YELLOW SWEET CLOVER</p> | <p>Yellow Sweet Clover is not common at Meadowbrook; it is occasional in sunny, well-drained situations.</p>   |
| 127 | <p><b>Menispermum canadensis</b><br/>MOONSEED</p>           | <p>I found only one Moonseed vine along McCullough Creek, but it was not to be found again a few weeks later.</p>  |
| 128 | <p><b>Miscanthus sinensis</b><br/>CHINESE SILVER GRASS</p>  | <p>Chinese Silver Grass is listed in <i>Invasive Plants of East Central Illinois</i>. A hybrid between Amur Silver Grass (<i>Miscanthus sacchariflorus</i>) and Chinese Silver Grass, known as Giant Miscanthus (<i>Miscanthus x giganteus</i>), is being developed and tested as a potential biofuel crop at the University of Illinois. Reportedly Giant Miscanthus does not produce fertile seeds; nevertheless there is concern that it may become an invasive species.</p> <p>Four clumps of Chinese Silver Grass form an irregular line along a 170-foot section of the Hickman Wildflower Walk. Rather than spreading there on their own, they look like they were planted as a backdrop for wildflowers alongside the walk. Chinese Silver Grass is grown in the Sensory Garden, but those plants are a distinctly different cultivar than the ones along the Wildflower Walk, so they did not spread from the Sensory Garden to the Wildflower Walk. If <i>Miscanthus</i> invades Meadowbrook Park, it probably will first appear in an open habitat near the edge of the park rather than in the wooded interior by the Wildflower Walk.</p> |

Appendix 4. Notes for Table 1 *continued.*

| No. | Name  | Note  |
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| 129 | <b>Morus alba</b><br>WHITE MULBERRY                 | <p>White Mulberry, a weedy Asian species, is abundant throughout much of the United States. White Mulberry usually has dark purple or reddish fruits, so it is routinely misidentified as the native Red Mulberry (<i>Morus rubra</i>) – even by botanists and foresters. One of the White Mulberry trees in Meadowbrook Park produces white fruits, but the others are purple-fruited.</p> <p>Beside McCullough Creek within 10 feet of the west culvert under Windsor Road is a White Mulberry that has “skeletonized” leaves: the sinuses of each leaf are so large that the blade is reduced to narrow strips of green tissue bordering the main veins. Plants such as these are named <i>Morus alba</i> forma <i>skeletoniana</i>.</p>   |
| 130 | <b>Oenanthe sarmentosa</b><br>PACIFIC WATER PARSLEY | <p>John Hilty discovered Pacific Water Parsley along McCullough Creek several years ago. The native range of this species extends along the Pacific coastal drainages from Alaska to California. According to records of the Biota of North America Project and Wikipedia on the Internet, Pacific Water Parsley has been found growing in the wild outside its natural range in three places in America: near Omaha, near Chicago, and in Meadowbrook Park.</p> <p>Pacific Water Parsley is sold by garden stores, and it may eventually become a nightmare weed in wetlands in the eastern United States, but it does not appear to be doing well at Meadowbrook Park. In 2011 water parsley was limited to a few plants in the creek bed downstream from the Timpone Grove Bridge plus a larger patch on the creek bank immediately downstream from the Meadowbrook Barn Bridge. The larger patch declined as the summer progressed because it was heavily grazed by animals, it was crowded by Reed Canary Grass, and it suffered from drought.</p> |
| 131 | <b>Pastinaca sativa</b><br>WILD PARSNIP             | <p>If Wild Parsnip is not controlled, it can become abundant in prairies and meadows. Its sap causes a blistering skin rash.</p>  |
| 132 | <b>Pedicularis lanceolata</b><br>SWAMP WOOD BETONY  | <p>Bill Handel showed me a single Swamp Wood Betony in the prairie restoration near Marker. It flowered in 2011.</p>  |
| 133 | <b>Perideridia americana</b><br>THICKET PARSLEY     | <p>I found one Thicket Parsley flowering where Amur Honeysuckle was cleared from the woods beside the Sculpture Garden Path in 2010. John Hilty photographed this species some years ago at another spot, along the south margin of the woods that extends west from the Savanna Peninsula.</p>   |
| 134 | <b>Perilla frutescens</b><br>BEEFSTEAK PLANT        | <p>Beefsteak Plant is cultivated in the Organic Gardens; it must have spread from there to the area around and near the compost heaps.</p>  |
| 135 | <b>Phalaris arundinacea</b><br>REED CANARY GRASS    | <p>Reed Canary Grass is the only plant species that grows well in all nine of the park’s habitats. It forms dense patches that exclude all other plants. If not killed back, it would continue to take over parts of Meadowbrook Prairie and sunny openings in the woods.</p>   |
| 136 | <b>Physostegia virginiana</b><br>OBEDIENT PLANT     | <p>Obedient Plant is on the planting list for Walker Grove, but it is scarce there. A quite similar species, Showy False Dragonhead (<i>Physostegia speciosa</i>), is far more common in Walker Grove. Showy False Dragonhead is smaller than Obedient Plant, and finishes blooming before Obedient Plant begins to come into flower.</p>   |



Appendix 4. Notes for Table 1 *continued*.

| No. | Name   | Note   |
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| 137 | <b>Pinus strobus</b><br>WHITE PINE                         | White Pines have been planted on the north side of the Wildflower Walk as well as beside Timpone Grove and on private property immediately south of the park. The pines are mature enough to produce seed cones, but I found only one seedling, less than an inch tall. It was beneath goldenrods and prairie grasses about 90 feet north of a White Pine grove in Yankee Ridge.   |
| 138 | <b>Poa pratensis</b><br>KENTUCKY BLUEGRASS                 | Kentucky Bluegrass is exceedingly variable in its appearance at Meadowbrook Park. Part of the variability comes from the many different cultivated strains that have been developed – but the appearance of this grass also depends on its habitat, its stage of growth, the weather, and how it has been treated (mowed, trampled, newly seeded, etc.).   |
| 139 | <b>Polygonum erectum</b><br>ERECT KNOTWEED                 | Erect Knotweed is a native annual. At Meadowbrook Park, it occurs in its most characteristic natural habitat, muddy creek banks. The plant grows on the shore of Beaver Pond near the dam and at scattered points farther upstream.  |
| 140 | <b>Potamogeton nodosus</b><br>LONG-LEAVED PONDWEED         | <p>I found one little pondweed rooted near the shore of Beaver Pond. The plant went under water every time the creek rose after a rain, but it was repeatedly exposed when the water receded and left a mud flat. Pondweeds normally grow under water and at the water’s surface (either rooted or free-floating), and they do not fare well if stranded on mud and exposed to air, so the plant at Meadowbrook never grew big or developed a flowering stem.</p> <p>It can be difficult or impossible to identify some species of <i>Potamogeton</i> from immature specimens. John Hilty suggested that the plant at Meadowbrook might be Long-leaved Pondweed, which he has found to be the most common species of pondweed in Urbana and Champaign. At Lake Vermilion, John and I examined large Long-leaved Pondweed plants that were in shallow water as well as small ones on mud flats; the small plants appeared to be identical to the pondweed in Meadowbrook Park. I compared a sample of the Meadowbrook plant with large collections of many species of pondweed in the herbaria of the Illinois Natural History Survey and the University of Illinois; the Meadowbrook specimen was indistinguishable from Long-leaved Pondweed, and it was unlike any other species in the herbaria. The only mature pondweed that I know near Meadowbrook Park is a colony of Long-leaved Pondweed in a ditch beside Windsor Road, 2.1 miles west of the plant at Meadowbrook Park. Based on this evidence, I concluded that the pondweed in Beaver Pond was <i>Potamogeton nodosus</i>, the Long-leaved Pondweed.</p> |
| 141 | <b>Prunus avium</b><br>SWEET CHERRY                        | There is a group of three mature Sweet Cherry trees immediately south of the park boundary in Yankee Ridge. I found two Sweet Cherry seedlings nearby in the semi-shaded zone between the prairie restoration and the thinly wooded border of the park.  |
| 142 | <b>Pyrus calleryana</b><br>CALLERY PEAR<br>“Bradford Pear” | <p>Callery Pear is well on its way to being one of the worst invasive trees in Illinois (see White <i>et al.</i> 2005). It is thriving in Meadowbrook Park.</p> <p>The first ornamental variety of Callery Pear to be promoted by the nursery trade, Bradford Pear, was by far the most commonly planted variety until it fell out of favor because of its weak branching structure. Even though wild-growing Callery Pears do not have the traits that characterize the Bradford variety, they are commonly called Bradford Pears.</p>  |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name  | Note  |
|-----|---|---|
| 143 | <b>Quercus alba</b><br>WHITE OAK              | There are a few mature White Oaks in the park, but I found only one seedling and no saplings.   |
| 144 | <b>Quercus coccinea</b><br>SCARLET OAK        | I identified only one Scarlet oak in Meadowbrook Park. Immature Scarlet Oaks and Pin Oaks can be difficult to distinguish from each other because they lack acorns, their leaves are similar to each other, and their leaves are not shaped like typical, well-developed leaves on mature trees. However, the buds of the two species are distinctly different even on young trees. Although the autumnal coloration of Pin Oaks typically tends toward dull orange, several of the more recently planted Pin Oaks in the park are cultivated selections with bright red autumn leaves that are reminiscent of Scarlet Oak.   |
| 145 | <b>Quercus macrocarpa</b><br>BURR OAK         | Burr Oak is reproducing sparingly in the park. Seedlings are uncommon and widely scattered, and saplings are very scarce.   |
| 146 | <b>Quercus muhlenbergii</b><br>CHINQUAPIN OAK | Meadowbrook Park has two Chinquapin Oaks, one near the northeast corner of Walker Grove, and the other near the southwest corner. The foliage on these two trees was atypical in 2011: most of the leaves were unusually broad (similar to Swamp White Oak leaves), and many leaves were stunted, misshapen, and discolored (pale or reddish). The previous year's leaves lying on the ground were normally shaped. Most likely the odd crop of leaves resulted from injury and stress that the trees received when the surrounding prairie vegetation was burned.  |
| 147 | <b>Quercus prinus</b><br>ROCK CHESTNUT OAK    | The single Rock Chestnut Oak at Meadowbrook produced plenty of acorns in past years but none in 2011. The only reproduction noted from this tree is a single seedling next to it. The seedling is the product of fertilization by pollen from a White Oak, producing a hybrid known as Saul's Oak, <i>Quercus x saulii</i> .  |
| 148 | <b>Quercus rubra</b><br>RED OAK               | Red Oak is reproducing very sparingly in the park. Seedlings and small saplings are scarce and widely scattered.  |
| 149 | <b>Quercus x saulii</b><br>SAUL'S OAK         | Saul's Oak is a hybrid between Rock Chestnut Oak and White Oak. A single seedling Saul's Oak grows 6½ feet southeast of the trunk of the sole Rock Chestnut Oak in the park.  |
| 150 | <b>Ranunculus ficaria</b><br>FIG BUTTERCUP    | <p>On the first day of surveying Meadowbrook's flora (April 7, 2011), I found three species in bloom: Daffodil, Siberian Squill, and Fig Buttercup. The buttercup colony was beside McCullough Creek at Windsor Road. Mike Davis killed those plants before they could set seed. If allowed to spread, Fig Buttercup could carpet acres of floodplain within a few growing seasons – as it has done at many places in the eastern United States in recent years.</p> <p>A fact sheet from the National Park Service by Sweringen (2010) sums up the threat: “Fig buttercup is a vigorously growing vernal plant that forms large, dense patches in floodplain forests and some upland sites, displacing many native plant species, especially those with the similar spring-flowering life cycle. . . . Because fig buttercup emerges well in advance of the native species, it has a developmental advantage which allows it to establish and overtake areas rapidly.”</p> <p>For more information and a photo of a heavy infestation of Fig Buttercup, see &lt;<a href="http://www.nps.gov/plants/alien/fact/rafi1.htm">http://www.nps.gov/plants/alien/fact/rafi1.htm</a>&gt;.</p> |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name   | Note  |
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| 151 | <b>Rhamnus cathartica</b><br>Common Buckthorn          | Common Buckthorn is one of the worst invasive plants in Illinois, especially north of Interstate 80. It is so common in Meadowbrook Park that it would be impractical to locate every plant, but nowhere is it dominant in the park. The densest aggregation and the largest individual bushes are described in Table 5.  |
| 152 | <b>Rhus hirta</b><br>STAGHORN SUMAC                    | Most of the Staghorn Sumacs in Meadowbrook Park are the typical form, but a cut-leaf form occurs on the east side of McCullough Creek in a strip extending for about 200 feet downstream from the PrairiePlay Bridge. This plant is referable to forma <i>laciniata</i> , although the nursery trade often confounds this form with forma <i>dissecta</i> or considers the two forms to be synonymous.  |
| 153 | <b>Ribes cynosbati</b><br>PRICKLY GOOSEBERRY           | Evidently the only Prickly Gooseberry at Meadowbrook is 13½ feet above the ground in the crotch of the biggest tree in the park, a cottonwood (4 feet in diameter) along Douglas Creek about 160 feet south and east of Marker. The little bush flowered in 2011 but did not produce any berries.   |
| 154 | <b>Rosa multiflora</b><br>MULTIFLORA ROSE              | Multiflora Rose occurs generally throughout the park, but nowhere is it dominant. It was once the most pestiferous of invasives, but rose rosette disease now keeps it from thriving. Multiflora Rose is likely to be less and less of an invasive problem in the future.   |
| 155 | <b>Rubus ulmifolius</b><br>ELM-LEAVED BLACKBERRY       | Elm-leaved Blackberry is a cultivated plant that is distributed worldwide. According to various Web sites, the species is a seriously invasive plant pest in Chile and Argentina, and it has been found growing as an escape in New Jersey, California, Oregon, and Nevada. I have not found any reports of Elm-leaved Blackberry growing in the wild in Illinois. The plant in Meadowbrook Park is a thornless variety. It flowered well and produced several berries in 2011.   |
| 156 | <b>Rudbeckia hirta</b><br>BLACK-EYED SUSAN             | On the 2002 Meadowbrook Prairie Plant List, Black-eyed Susan appears under the name <i>Rudbeckia serotina</i> , which is now usually classified as <i>Rudbeckia hirta</i> var. <i>pulcherrima</i> .   |
| 157 | <b>Rudbeckia sullivantii</b><br>SULLIVANT'S CONEFLOWER | John Hilty told me where to find Sullivant's Coneflower in Walker Grove. It grows in the same general area as Tall Sunflower and Luxuriant Sunflower. All three species appeared there at about the same time according to John, so they probably were planted together.  |
| 158 | <b>Sagittaria latifolia</b><br>COMMON ARROWHEAD        | Several arrowhead plants came up in the wettest part of the Walker Grove Wetland in the spring of 2011, but they died back without flowering, probably because the wetland dried up before they could flower. Without flowers and fruits, I was not able to confirm the species. However, the planting list for the Walker Grove Wetland includes <i>Sagittaria latifolia</i> , and I saw no reason to think that it was some other species on the basis of its leaves, so it is listed here as <i>Sagittaria latifolia</i> , Common Arrowhead.   |
| 159 | <b>Salix alba</b><br>GOLDEN WEEPING WILLOW             | A massive weeping willow stands along Douglas Creek, with a smaller one next to it. Bright yellow, drooping branches help identify them as Golden Weeping Willows. The classification and nomenclature of this tree are clouded. Mohlenbrock (2002) classified it as a variety of White Willow, assigning it the name <i>Salix alba</i> var. <i>vitellina</i> . Golden Weeping Willow has leaves that are nearly hairless on the lower surface and twigs that are bright yellow; in contrast, typical White Willow has leaves that are silky-hairy beneath and twigs that are greenish yellow or brownish. In his detailed treatment of willows in the <i>Illustrated Flora</i> series, Mohlenbrock (1980) gave a different view of the |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name  | Note   |
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|     |   | <p>Golden Weeping Willow's origin, "There is a suspicion that this taxon may be a hybrid between <i>S. alba</i> and <i>S. fragilis</i>."</p> <p>Expressing a similar viewpoint, Dirr (1990) described the Golden Weeping Willow as a cultivated variety of White Willow, named <i>Salix alba</i> 'Tristis.' He further stated that Golden Weeping Willow is "an enigmatic species with confusing botanical background," and he noted that it is "sometimes listed as <i>S. vitellina</i> var. <i>pendula</i> and <i>Salix alba</i> 'Niobe' in the trade."</p> <p>Swink and Wilhelm (1994) admitted that "the taxonomy of Weeping Willows is extremely confounding," and they considered the golden-stemmed weeping willows to be best classified as a kind of Hybrid Crack Willow (<i>Salix x atro-rubens</i>), which is a cross between White Willow and Crack Willow (<i>Salix alba</i> x <i>Salix fragilis</i>). Swink and Wilhelm concluded, "Even the pendulous, yellow-branched willow cultivated locally as the Weeping Willow, and often called <i>S. alba</i> var. <i>vitellina</i> (L.) Stokes, appears to be of hybrid origin between <i>S. alba</i> and <i>S. fragilis</i>."</p> |
| 160 | <p><b>Salvia azurea</b><br/>Wild Blue Sage</p>                        | <p>Wild Blue Sage grows along the Prairie Path between the Freyfogle Overlook and the bridge near Marker, but I could not spot it until Susan Kemnetz described exactly where to find one in bloom. Apparently the summer of 2011 was so dry that Wild Blue Sage almost failed to flower at Meadowbrook.</p>   |
| 161 | <p><b>Sassafras albidum</b><br/>SASSAFRAS</p>                         | <p>Two Sassafras seedlings sprouted in mulch around a big Red Oak north of Timpone Family Ornamental Tree Grove in 2011. They may have come from seed produced by a mature Sassafras located 280 feet away in Timpone Grove; that Sassafras flowered in 2011 but did not produce any fruit. I also found a sapling Sassafras among prairie vegetation 830 feet south and east of the Sassafras in Timpone Grove.</p>   |
| 162 | <p><b>Schoenoplectus tabernaemontani</b><br/>SOFT-STEMMED BULRUSH</p> | <p>Soft-stemmed Bulrush is common in the Walker Grove Wetland, where it most likely was planted. A small but robust colony also occurs on the shore of Beaver Pond, where it may have spread on its own.</p>   |
| 163 | <p><b>Setaria faberi</b><br/>GIANT FOXTAIL</p>                        | <p>Here is how <i>Invasive Plants of East Central Illinois</i> characterizes Giant Foxtail: "Abundant in early prairie plantings. Becomes less common as perennial prairie plants take hold." That scenario has played out at Meadowbrook Park.</p>  |
| 164 | <p><b>Silene antirrhina</b><br/>SLEEPY CATCHFLY</p>                   | <p>Sleepy Catchfly is a very inconspicuous annual. It grows beneath the northeast corner of the Freyfogle Overlook.</p>  |
| 165 | <p><b>Silene regia</b><br/>ROYAL CATCHFLY</p>                         | <p>Royal Catchfly is a very conspicuous perennial. Its eye-catching red flowers can be spotted from the Freyfogle Overlook and at a few other places in Meadowbrook Prairie.</p>   |
| 166 | <p><b>Silphium laciniatum</b><br/>COMPASS PLANT</p>                   | <p>Compass Plant and Prairie Dock occasionally hybridize, producing a plant that has leaves, stems, and flowers that are intermediate between the two parent species. Young Compass Plants often have leaves with unusually shallow sinuses; such plants are sometimes mistaken for hybrids – but mature, flowering specimens of the hybrid and the parent species are quite distinct from each other. This hybrid is not the same as <i>Silphium x pinnatifidum</i>, which some botanists have considered to be the product of hybridization between Compass Plant and Prairie Dock; Molano-Flores (2004) discussed the confusion about the identity of <i>Silphium x pinnatifidum</i>.</p>   |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name  | Note   |
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|     |   | I found three obvious hybrids between Compass Plant and Prairie Dock in the park. The easiest one to find is at GPS coordinates 40.079111 degrees North, 88.200951 degrees West, which is 71 feet from the northwest corner of the Freyfogle Overlook at a bearing of North 17 degrees West (measured from magnetic North).  |
| 167 | <b>Solidago altissima</b><br>TALL GOLDENROD<br>“Canada Goldenrod” | <p>Even though Tall Goldenrod is an indigenous species, it acts like an exotic invasive. Big, dense patches of Tall Goldenrod are substantial impediments to establishing prairie vegetation in front of the Freyfogle Overlook and in parts of the Wandell Sculpture Garden and Walker Grove.</p> <p>Mohlenbrock’s <i>Vascular Flora of Illinois</i> (2002) distinguishes two quite similar, weedy species of goldenrod: Tall Goldenrod (<i>Solidago altissima</i>) and Canada Goldenrod (<i>Solidago canadensis</i>). The superabundant goldenrod in Meadowbrook Park is Tall Goldenrod. I did not find any Canada Goldenrod in the park.</p> <p>Some botanical manuals treat the these two kinds of goldenrod as a single species. For instance, in <i>Flora of Illinois</i>, Jones (1963) listed <i>Solidago altissima</i> as the “correct” species (calling it Tall Goldenrod), and he treated <i>Solidago canadensis</i> as a synonym of <i>Solidago altissima</i>. On the other hand, in <i>Guide to the Vascular Flora of Illinois</i>, Mohlenbrock (1986) listed <i>Solidago canadensis</i> as the “correct” species (calling it Tall Goldenrod), and he treated <i>Solidago altissima</i> as a synonym of <i>Solidago canadensis</i>. The 2002 Meadowbrook Prairie Plant List includes Canada Goldenrod (<i>Solidago canadensis</i>); the plant on that list is the same as the predominant goldenrod in the park today, regardless of the name applied to it.</p> |
| 168 | <b>Solidago missouriensis</b><br>MISSOURI GOLDENROD               | I found one clump of Missouri Goldenrod in Meadowbrook Prairie. It had 19 flowering stems.   |
| 169 | <b>Solidago nemoralis</b><br>GRAY GOLDENROD                       | Gray Goldenrod (or Old-field Goldenrod) is most abundant on the crest of the broad ridge that extends west from the Freyfogle Overlook, where highly eroded, clayey soil provides ideal habitat. A few other Gray Goldenrods can be found in the park, especially in Walker Grove, where it was planted.   |
| 170 | <b>Solidago speciosa</b><br>SHOWY GOLDENROD                       | Showy Goldenrod is on the Park District’s species list for the Hickman Wildflower Walk, but I did not find it there. It occurs at several places in Meadowbrook Prairie, often associated with Gray Goldenrod.   |
| 171 | <b>Spartina pectinata</b><br>PRAIRIE CORD GRASS                   | Prairie Cord Grass is not only a dominant native species in wet prairie areas – it is tough enough to hold out in ditches and fencerows. Because Prairie Cord Grass can survive in an agricultural landscape, it may have been present along McCullough Creek when the park was established. If so, it would be one of the few plants of the original prairie that has persisted on the tract to the present day. Prairie Cord Grass has also been planted at Meadowbrook as part of restoration efforts.  |
| 172 | <b>Spiranthes ovalis</b><br>OCTOBER LADIES’ TRESSES               | Bob Vaiden discovered a colony of this orchid beside a trail through young, brushy woods in Meadowbrook Park. On September 22, 2011, Barbara White and I counted 12 flowering stems. On October 31 only one stalk with seed capsules remained, and on November 18 it was gone.   |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name   | Note  |
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|     |  | <p>The plants at Meadowbrook Park are variety <i>erostellata</i>, which has an unusual flower structure that causes the plant to self-fertilize with its own pollen rather than transferring pollen to another plant.</p> <p>October Ladies' Tresses was once very little known throughout its range. Ames (1906) called it "one of the rarest of the <i>Spiranthes</i> species." In his monograph about Illinois orchids, Sheviak (1974) reported that October Ladies' Tresses had been collected in Illinois only four times before 1950. Noting that the species had been found at least 14 more times between 1950 and 1974, Sheviak emphasized, "Most significantly, most of the new collections have been made in disturbed sites. . . . <i>Spiranthes ovalis</i> has become a plant of old fields and abandoned wooded pastures, where it occurs with greater frequency than it ever did in its primeval moist woodland habitat."</p> <p>In his book about orchids of Indiana, Homoya (1993) reported that October Ladies' Tresses had been found in 16 counties, and he described circumstances similar to the orchid's history in Illinois: "In the first half of this century the orchid was an extremely rare plant in Indiana, and although the difficulty in spotting it can account in part for the lack of early records, more likely it probably was not as common then as now. . . . The reason for the spread of <i>S. ovalis</i> var. <i>erostellata</i> is unclear, but it may be that we are observing the movement of a disturbance-adapted ecotype into Indiana." Several other orchid species – including Twayblade Orchid – have similarly increased in numbers and spread into disturbed habitats and abandoned farmland in recent decades.</p> |
| 173 | <p><b>Syringa reticulata</b><br/>JAPANESE TREE LILAC</p> | <p>During the spring of 2011, many seedlings of Japanese Tree Lilac came up in the lawn around one of the three tree lilacs in the Timpone Family Ornamental Tree Grove. There were no seedlings near the other two tree lilacs even though all three plants produced seed pods in 2010. All of the seedlings had disappeared by early summer, perhaps killed by mowing, herbiciding, and lack of rain.</p>   |
| 174 | <p><b>Taxodium distichum</b><br/>BALD CYPRESS</p>        | <p>After water in Beaver Pond receded during the exceptionally dry month of July 2011, I found nine Bald Cypress seedlings along a 60-foot section of the pond. The seedlings had sprouted on newly exposed mud banks and floating organic debris that accumulated against a tangle of logs and sticks. The little cypresses probably came from seeds borne by trees along Vine Street in the first two blocks north of Windsor Road. Those seeds could easily wash into the storm sewer that is the source of McCullough Creek. There are also cone-bearing Bald Cypresses behind the PrairiePlay Pavilion, but their seeds are not likely to reach the creek.</p> <p>Over the years, cypresses probably have sprouted repeatedly along McCullough Creek – only to be drowned by subsequent high water. A young Bald Cypress can survive inundation only if it grows so tall that its top is never completely submerged by water for long periods during the growing season.</p>   |
| 175 | <p><b>Thaspium trifoliatum</b><br/>MEADOW PARSNIP</p>    | <p>Meadow Parsnip or <i>Thaspium trifoliatum</i> is a native species. It is on the 2002 Meadowbrook Prairie Plant List, but it is categorized there as an invasive and exotic – so the listing appears to be based on a misnaming of Wild Parsnip (<i>Pastinaca sativa</i>), which is a common weed.</p>  |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name   | Note  |
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| 176 | <b>Triticum aestivum</b><br>WHEAT                    | Wheat was planted as a cover crop in an area where trees and shrubs were removed along McCullough Creek in 2010. The plants produced seeds in 2011, but they are not likely to persist for more than a year. In addition, small clumps of Wheat flowered on mud exposed in the creek bed a substantial distance upstream from the area where it was sown by the Park District; these plants appear to have grown from seed heads that washed in from somewhere farther upstream.  |
| 177 | <b>Tsuga canadensis</b><br>EASTERN HEMLOCK           | In the woods east of the Organic Gardens is a group of small hemlocks. Four are faring well, two are dead, and one is nearly dead (probably from too much shade from larger trees and shrubs).  |
| 178 | <b>Typha x glauca</b><br>HYBRID CAT-TAIL             | <p>I found a single cat-tail on the west bank of McCullough Creek about 15 feet downstream from the south edge of the grate on the west culvert under Windsor Road. The plant was small (39 inches tall at the end of the growing season, with two very small basal offshoots), and it appeared to have been newly established there in 2011. The plant was mostly eaten in October – probably by a beaver or muskrat – but enough of the rootstock and growing points survived that it probably can come back up in the spring.</p> <p>Cat-tail species are best identified by examining their flower heads or seed heads, but this plant had neither. I did, however, find a patch of cat-tails with seed heads in the ditch along Windsor Road 4,080 feet west of the plant in the park. After consulting several publications, including articles by Hotchkiss and Dozier (1949) and Smith (1967), I determined that those plants were Hybrid Cat-tails (<i>Typha x glauca</i>), which is a cross between the exotic Narrow-leaved Cat-tail (<i>Typha angustifolia</i>) and native Broad-leaved Cat-tail (<i>Typha latifolia</i>). Leaves on the cat-tail in Meadowbrook Park were the same as the ones in the Windsor Road ditch in terms of four diagnostic traits: their width (up to 11 millimeters), their cross-sectional shape, the presence of obvious mucilage glands, and the shape of the summit of the sheath. Consequently I decided that the plant in the park was also <i>Typha x glauca</i>.</p> <p>Some researchers (<i>e.g.</i> Selbo and Snow 2004) have found that <i>Typha x glauca</i> rarely if ever produces fertile seeds; if so, it must be repeatedly created by interbreeding of Narrow-leaved Cat-tail and Broad-leaved Cat-tail. Other studies (<i>e.g.</i> Smith 1967) state that the hybrid sometimes produces plenty of fertile seeds. It seems far more likely that the plant in Meadowbrook Park sprouted from a seed produced by a Hybrid Cat-tail plant rather than being the first-generation product of a cross between the two parent species. The hybrid spreads aggressively by rootstocks, and it is becoming the predominant cat-tail around the south end of Lake Michigan and in other regions.</p> |
| 179 | <b>Ulmus pumila</b><br>SIBERIAN ELM<br>“Chinese Elm” | Siberian Elm was a very popular choice for planting as a shade tree in the 1950s and ’60s after Dutch elm disease devastated American Elms. Many people know <i>Ulmus pumila</i> as Chinese Elm because it was sometimes sold under that name rather than Siberian Elm during the Cold War, but a different species ( <i>Ulmus parvifolia</i> ) is more properly referred to as Chinese Elm.  |
| 180 | <b>Ulmus rubra</b><br>SLIPPERY ELM                   | The only Slippery Elm found in the park is a sapling in the prairie that was cut off and subsequently re-sprouted.  |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name  | Note  |
|-----|---|---|
| 181 | <b>Vernonia arkansana</b><br>OZARK IRONWEED             | <p>Ozark Ironweed is indigenous to Missouri, Arkansas, Kansas, and Oklahoma – so a 1957 announcement by G.N. Jones raised eyebrows of Illinois botanists: in the summer of 1955, Ozark Ironweed was discovered for the first time in the state within a few miles of Champaign. About a dozen plants occupied a narrow strip between a road and a cornfield: “Here they appear to be making their last stand. These plants are almost certainly native. That they might have been planted in that place is out of the question, and there is no sign that they are adventive.” As Dr. Jones predicted, the colony was lost, and Ozark Ironweed was not known to be growing outside of cultivation in Illinois until John Hilty detected it in Meadowbrook Park in 2005.</p> <p>The location of Ozark Ironweed at Meadowbrook indicates that it must have been planted there instead of seeding in from some unknown patch in the vicinity. The species is thinly scattered beside the Prairie Path between the Freyfogle Overlook and the Walker Grove Wetland; in the same area are three other species of <i>Vernonia</i> (Baldwin’s Ironweed, Smooth Ironweed, and Missouri Ironweed). It is highly unlikely that Baldwin’s Ironweed and Smooth Ironweed would occur in the park if they were not planted, so I think that Baldwin’s, Smooth, and Ozark Ironweed were all planted in the same part of the park.</p>  |
| 182 | <b>Vernonia x illinoensis</b><br>ILLINOIS IRONWEED      | <p>John Hilty alerted me to the presence of Illinois Ironweed at Meadowbrook Park. Illinois Ironweed is a hybrid between Tall Ironweed and Missouri Ironweed (<i>Vernonia gigantea</i> x <i>Vernonia missurica</i>). I distinguished Illinois Ironweed from its parent species on the basis of information in a study by Faust (1977).</p> <p>Henry A. Gleason described Illinois Ironweed as a species in 1906 from a specimen collected near Champaign. Gleason was born in Dalton City (Moultrie County) in 1882. His bachelor’s thesis, <i>The Flora of the Prairies</i>, was completed at the University of Illinois in 1901 under the direction of T.J. Burrill, namesake of Burrill Hall. Young Henry Gleason immersed himself in the study of the emerging science of ecology, which was being formulated by Midwestern professors at the beginning of the twentieth century. He subsequently published a series of papers that are still cited by ecologists today, including “An Isolated Prairie Grove and Its Phytogeographical Significance” (about Bur Oak Grove near Royal in eastern Champaign County) and “The Individualistic Concept of the Plant Association.” In his publications, Gleason challenged early ecological theories that had already become well entrenched. At the time, his differing views were not well received by the majority of ecologists. Gleason turned his attention to plant classification instead of ecology, and he became one of America’s leading plant taxonomists.</p> |
| 183 | <b>Veronica serpyllifolia</b><br>THYME-LEAVED SPEEDWELL | <p>Thyme-leaved Speedwell is more common than generally assumed because it is easy to overlook. Its most characteristic habitat is moist soil that has been compacted by foot traffic along a semi-shaded path through woods.</p>   |
| 184 | <b>Viburnum opulus</b><br>EUROPEAN CRANBERRY BUSH       | <p>European Cranberry Bush is more robust and prolific than its American counterpart, High-bush Cranberry. It is well established in the park’s wooded areas. Removal of the biggest bushes has prevented it from locally dominating the shrub layer, but there are hundreds and hundreds of seedlings in the park.</p>   |



Appendix 4. Notes for Table 1 *continued*.

| No.  | Name  | Note   |
|--|---|--|
| 185  | <b>Viola bicolor</b><br>CONFEDERATE VIOLET    | <p>Although <i>Vascular Flora of Illinois</i> gives the scientific name for Confederate Violet as <i>Viola bicolor</i>, this scientific name has been commonly applied to a very different kind of violet called Johnny-jump-up.</p> <p>The flowers of Confederate Violet are whitish or very pale blue with darker blue veins. The two most recent comprehensive books about the Illinois flora by Mohlenbrock (1986, 2002) consider Confederate Violet to be a distinct species, but Mohlenbrock's earlier treatment of violets (1978) states that Confederate Violet is merely a differently colored form of a blue-flowered species: "Other than flower color, there is no valid difference between the Confederate violet and <i>V. sororia</i>."</p> <p>Mohlenbrock did not comment on Confederate Violet's nativity, but Jones (1963) stated that it spread into Illinois from the Southeast, and Jones and Fuller (1955) called it a garden escape, so I list it as an exotic species.</p> |
| 186  | <b>Viola pubescens</b><br>DOWNY YELLOW VIOLET | <p>The common yellow-flowered violet that is native to east-central Illinois is the Smooth Yellow Violet (<i>Viola pubescens</i> var. <i>eriocarpa</i>), a variety that grows in Busey Woods but does not occur in Meadowbrook Park. The yellow violet at Meadowbrook is a different variety, known as Downy Yellow Violet (<i>Viola pubescens</i> var. <i>pubescens</i>). The downy variety is native farther north in the state, and it does not occur naturally in east-central Illinois. The small colony of Downy Yellow Violet at Meadowbrook may have been planted there at the very south edge of the park, or perhaps it established itself from ones that were planted somewhere nearby in Yankee Ridge.</p>   |
| 187  | <b>Zoysia japonica</b><br>ZOYSIA              | <p>Zoysia is a very low and dense sod-forming lawn grass. It is not clear whether it was intentionally planted in Meadowbrook Park: it looks as if it may have been inadvertently introduced in a few places in the Wandell Sculpture Garden when soil was brought in to patch low spots or bare patches in the turf next to sculptures.</p>   |
| <b>Additional species that definitely have been observed in Meadowbrook Park</b> |   |  |
| 188  | <b>Allium cernuum</b><br>NODDING ONION        | <p>Although Nodding Onion is on two planting lists for Meadowbrook Prairie, I did not find it in the park. John Hilty has seen two or three specimens of Nodding Onion along a path east of McCullough Creek. Because it has been several years since he saw the plants, John is inclined to think that they probably are no longer present in the park.</p>   |
| 189  | <b>Amsonia tabernaemontana</b><br>BLUE STAR   | <p>John Hilty photographed Blue Star in the Walker Grove Wetland several years ago. Blue Star is conspicuous when flowering, but I could not find it in 2011, so it may no longer be present.</p>  |
| 190  | <b>Artemisia ludoviciana</b><br>WHITE SAGE    | <p>In 1984 Barb Benner and Wendy Garrison identified the typical variety of White Sage (var. <i>ludoviciana</i>) as well as the hoary-leaved variety (var. <i>gnaphalodes</i>) at Meadowbrook Park, describing both of them as uncommon. Several years ago, John Hilty photographed a small colony of the hoary-leaved variety beside a path in the prairie restoration west of the Savanna Peninsula. White Sage should be easy to spot – especially the hoary-leaved variety – but I could not find it, so it appears to have died out.</p>  |

Appendix 4. Notes for Table 1 *continued.*

| No. | Name   | Note  |
|-----|--|---|
| 191 | <b>Baptisia bracteata</b><br>CREAM WILD INDIGO                     | Cream Wild Indigo is on the original 1978 Meadowbrook Prairie planting list and on the 2006 planting list for Walker Grove, but I did not find it anywhere in the park. Some time in the past, Derek Liebert saw one Cream Wild Indigo at Meadowbrook.  |
| 192 | <b>Ceanothus americanus</b><br>NEW JERSEY TEA                      | Bob Vaiden reported that New Jersey Tea was planted near the Freyfogle Overlook but it did not persist. Deer avidly eat the nitrogen-rich foliage of New Jersey Tea, so they may have browsed it to oblivion at Meadowbrook.  |
| 193 | <b>Echinacea paradoxa</b><br>OZARK CONEFLOWER                      | Ozark Coneflower is a striking plant that looks like Pale Purple Coneflower except that its flowers are yellow. John Hilty photographed a single Ozark Coneflower near the Freyfogle Overlook several years ago and has not seen it since. This species is not indigenous to Illinois, but it is becoming a popular choice among gardeners.   |
| 194 | <b>Erigeron strigosus</b><br>DAISY FLEABANE                        | John Hilty has seen a few specimens of Daisy Fleabane in the Wandell Sculpture Garden. I looked closely for this species throughout the growing season but found only the similar-looking Annual Fleabane. Daisy Fleabane may still occur at Meadowbrook in low numbers even though I failed to detect it.  |
| 195 | <b>Heterostipa spartea</b><br>PORCUPINE GRASS                      | Over the years, John Hilty has occasionally seen one or two plants of Porcupine Grass in Meadowbrook Prairie. I kept an eye out for Porcupine Grass as well as June Grass ( <i>Koeleria macrantha</i> ) in the most elevated, best drained parts of the prairie restoration, but I found neither. Both Porcupine Grass and June Grass are native cool-season grasses that can be difficult to spot in tall-grass prairie unless they are flowering or in seed. Most likely Porcupine Grass is still present at Meadowbrook, but I know of no report that June Grass was ever planted or observed in the park.   |
| 196 | <b>Heuchera richardsonii</b><br>PRAIRIE ALUMROOT                   | Bob Vaiden reported that Prairie Alumroot once grew along the path through the prairie restoration west of the Savanna Peninsula. I could not find it there: maybe it is hidden by dense prairie vegetation, or maybe it has been choked out by competing plants. Prairie Alumroot is also on the planting list for the Hickman Wildflower Walk, but I did not see it there.  |
| 197 | <b>Hypericum sphaerocarpum</b><br>ROUND-FRUITED<br>ST. JOHN'S WORT | Several years ago, John Hilty found two colonies of Round-Fruited St. John's Wort on the east side of McCullough Creek. He thinks that they may possibly still exist but probably have died out.  |
| 198 | <b>Lathyrus hirsutus</b><br>SINGLETERARY PEA                       | John Hilty found two Singletary Pea plants in the Savanna Peninsula several years ago. He put pictures of them on his <i>Illinois Wildflowers</i> Web site and stated, "It is doubtful that they will persist at this site." I failed to relocate the plants and concur with John's conclusion.   |
| 199 | <b>Liatris aspera</b><br>ROUGH BLAZING STAR                        | Bob Vaiden has seen Rough Blazing Star in the prairie restoration on the east side of the Savanna Peninsula within 30 to 50 feet of the path. Rough Blazing Star is also on the list for the Hickman Wildflower Walk; John Hilty has seen it there and in the Wandell Sculpture Garden. This species is also on the planting list for Walker Grove. I did not see Rough Blazing Star anywhere in the park even though I looked hard for it during its blooming period, and I continued hunting in the autumn after the prairie vegetation had died back and the blazing star's basal leaves should still have been apparent. I think that Rough Blazing |

Appendix 4. Notes for Table 1 *continued*.

| No.  | Name   | Note   |
|--|--|--|
|  |  | Star must not have bloomed in the park in 2011, and it must be so scarce that I simply could not find it.  |
| 200  | <b>Lilium michiganense</b><br>MICHIGAN LILY          | According to records on file at the Urbana Park District, Barb Benner and Wendy Garrison found a few Michigan Lilies blooming at Meadowbrook Park on July 21, 1984. John Hilty photographed this species in the park several years ago. I could not find any Michigan Lilies in 2011, but they probably are still present.   |
| 201  | <b>Monarda bradburiana</b><br>BRADBURY'S BEE-BALM    | Both Bob Vaiden and John Hilty are familiar with a small group of Bradbury's Bee-balm on the west side of the Prairie Path not far south of the post-and-rail fence at the north end of the prairie restoration. I looked closely and repeatedly for Bradbury's Bee-balm there, but it was already past its blooming period, making it harder to spot. Although I did not find Bradbury's Bee-balm, it probably still exists in the park.                                  |
| 202  | <b>Penstemon tubaeiflorus</b><br>WESTERN BEARDTONGUE | Bill Handel photographed Western Beardtongue several years ago along the Prairie Path not far from the Freyfogle Overlook. Bill reported that the prairie had been burned prior to that growing season, which probably stimulated its flowering. Western Beardtongue comes into bloom after Foxglove Beardtongue has largely finished flowering, so I should have been able to spot it if it bloomed in 2011. Most likely the plant still persists in the park undetected. |
| 203  | <b>Reseda luteola</b><br>WELD                        | John Hilty photographed this herb on the earthen mound (former compost pile) south of the Hickman Wildflower Walk. The plants must have spread from ones that were cultivated nearby in the park. Weld is no longer present on the mound.  |
| 204  | <b>Senecio plattensis</b><br>PRAIRIE RAGWORT         | John Hilty has seen Prairie Ragwort at Meadowbrook Park, but not for several years. I failed to find it despite looking hard for it during its blooming period, when it is conspicuous. Most likely Prairie Ragwort is no longer present in the park.  |
| 205  | <b>Verbascum thapsus</b><br>GREAT MULLEIN            | I could not find Great Mullein in Meadowbrook Park. Evidently the Park District staff has eradicated this invasive species.  |
| 206  | <b>Verbena stricta</b><br>HOARY VERVAIN              | John Hilty saw a couple of Hoary Vervain plants in the prairie restoration several years ago. This weedy native may have died out in the park, but it could show up again.   |
| <b>Other species that have been reported from Meadowbrook Park</b> |  |  |
| 207  | <b>Anemone cylindrica</b><br>THIMBLEWEED             | Thimbleweed is on the 2002 Meadowbrook Prairie Plant List, and it is on two planting lists for the park, but I did not find it. Reports of Thimbleweed at Meadowbrook may be based at least in part on misidentification of Tall Anemone, a similar species in the park.   |
| 208  | <b>Cirsium altissimum</b><br>TALL THISTLE            | I found no Tall Thistles in the park but plenty of the similar-looking Field Thistle. The 2002 Meadowbrook Prairie Plant List includes Tall Thistle but not Field Thistle; maybe Field Thistle was misidentified as Tall Thistle when the list was prepared.   |
| 209  | <b>Cirsium vulgare</b><br>BULL THISTLE               | Bull Thistle is on the 2002 Meadowbrook Prairie Plant List. I did not find it and probably did not overlook it. Maybe this bad weed has been eliminated from the park, or maybe its listing was based on a misidentification of Field Thistle.   |

Appendix 4. Notes for Table 1 *continued*.

| No.  | Name   | Note  |
|--|--|---|
| 210  | <b>Erigeron asperugineus</b><br>IDAHO FLEABANE           | Idaho Fleabane is on the 2002 Meadowbrook Prairie Plant List. This Rocky Mountain wildflower could have been included in the mix of seeds when the prairie was planted. (Commercial prairie seed mixtures often include a number of showy, short-lived western plant species that produce a quick flowering display but tend to die out after a few years as the prairie develops.) In any event, Idaho Fleabane does not appear to be present in Meadowbrook Park now. |
| 211  | <b>Gaura parviflora</b><br>SMALL-FLOWERED GAURA          | Small-flowered Gaura is quite similar to Biennial Gaura. I found much Biennial Gaura but no Small-flowered Gaura in the park. The 2002 Meadowbrook Prairie Plant List includes Small-flowered Gaura but not Biennial Gaura, so its listing probably is a case of mistaken identity.   |
| 212  | <b>Helianthus maximilianii</b><br>MAXIMILIAN'S SUNFLOWER | Maximilian's Sunflower is on the 2002 Meadowbrook Prairie Plant List. Although it is a highly conspicuous species, I did not find it in the park. Either Maximilian's Sunflower has disappeared, or the earlier listing was based on a misidentification of one of the other tall sunflower species.  |
| 213  | <b>Oenothera albicaulis</b><br>PRAIRIE EVENING PRIMROSE  | Prairie Evening Primrose is on the 2002 Meadowbrook Prairie Plant List. This showy native of the western United States may have been included in the seed mix for the prairie restoration (see Note 210). Prairie Evening Primrose does not appear to be present in Meadowbrook Park now.   |
| 214  | <b>Penstemon pallidus</b><br>PALE BEARDTONGUE            | Pale Beardtongue is on an old, undated planting list and the 2002 Meadowbrook Prairie Plant List. I searched for it but found only its larger cousin, Foxglove Beardtongue.   |
| 215  | <b>Phlox pilosa</b><br>DOWNY PHLOX                       | Downy Phlox is on the original 1978 planting list for Meadowbrook Prairie, and it is on the species list for the Hickman Wildflower Walk, but I did not find it anywhere in the park.   |
| <b>Other species that are on planting lists for Meadowbrook Park</b> |  |   |
| 216  | <b>Anemone canadensis</b><br>MEADOW ANEMONE              | One ounce of Meadow Anemone seed is on the original 1978 planting list for Meadowbrook Prairie. I did not find this species and know of no report of it in the park.  |
| 217  | <b>Angelica atropurpurea</b><br>GREAT ANGELICA           | Great Angelica is on the planting list for the Walker Grove Wetland, but I did not find it. This highly conspicuous species could not be overlooked, so it must not have become established from the planting.  |
| 218  | <b>Asclepias sullivantii</b><br>SULLIVANT'S MILKWEED     | Sullivant's Milkweed is on old planting lists for Meadowbrook Prairie, but apparently no plants survived to the present.  |
| 219  | <b>Carex comosa</b><br>BRISTLY SEDGE                     | Bristly Sedge is on the planting list for the Walker Grove Wetland, but I did not find it. The quite similar Porcupine Sedge is present in the wetland; perhaps Porcupine Sedge seeds were planted instead of Bristly Sedge.  |
| 220  | <b>Gentianella quinquefolia</b><br>STIFF GENTIAN         | Stiff Gentian appears on an old, undated Meadowbrook Prairie planting list as <i>Gentiana quinquefolia</i> . I have not seen it in the park.  |
| 221  | <b>Liatris cylindracea</b><br>CYLINDRICAL BLAZING STAR   | Cylindrical Blazing Star is on an old, undated Meadowbrook Prairie planting list, but my survey failed to locate any.   |
| 222  | <b>Lilium philadelphicum</b><br>WOOD LILY                | Five Wood Lily plants are on the original 1978 planting list for Meadowbrook Prairie. I did not find this species and know of no report of it in the park.  |

Appendix 4. Notes for Table 1 *continued*.

| No. | Name   | Note   |
|-----|--|--|
| 223 | <b>Oligoneuron album</b><br>STIFF ASTER                        | Stiff Aster appears on an old, undated Meadowbrook Prairie planting list as <i>Aster ptarmicoides</i> . I have not seen it in the park.  |
| 224 | <b>Penstemon grandiflorus</b><br>LARGE-FLOWERED<br>BEARDTONGUE | Large-flowered Beardtongue is on an old, undated Meadowbrook Prairie planting list. Although this species is conspicuous even when it is not in bloom, I did not find it in the park.  |
| 225 | <b>Polytaenia nuttallii</b><br>PRAIRIE PARSLEY                 | Three ounces of Prairie Parsley seed is on the original 1978 planting list for Meadowbrook Prairie. I did not find this species and know of no report of it in the park.   |
| 226 | <b>Prenanthes racemosa</b><br>GLAUCOUS WHITE LETTUCE           | Eight ounces of Glaucous White Lettuce seed is on the original 1978 planting list for Meadowbrook Prairie. I did not find this species and know of no report of it in the park.  |
| 227 | <b>Schoenoplectus pungens</b><br>THREE-SQUARE                  | Three-square is on the planting list for the Walker Grove Wetland. I searched hard and did not find it there. Evidently it failed to establish itself and persist in the park.   |
| 228 | <b>Senna hebecarpa</b><br>WILD SENNA                           | Wild Senna is on the planting list for Walker Grove Wetland, but I did not find it there. Maryland Senna, a quite similar species, occurs throughout the study area.   |
| 229 | <b>Sisyrinchium campestre</b><br>PRAIRIE BLUE-EYED GRASS       | Prairie Blue-eyed Grass is on an old, undated Meadowbrook Prairie planting list. I looked closely for blue-eyed grasses in the spring when they should be blooming in the prairie but found none of any kind.                            |
| 230 | <b>Sparganium eurycarpum</b><br>COMMON BUR-REED                | Common Bur-reed is on the planting list for the Walker Grove Wetland, but I did not find it. This conspicuous species is not likely to be overlooked; evidently the planting was not successful.   |
| 231 | <b>Spiranthes cernua</b><br>NODDING LADIES' TRESSES            | Five plants of Nodding Ladies' Tresses are on the original 1978 planting list for Meadowbrook Prairie. Although the park has plenty of habitat that appears to be suitable for this orchid, and I searched closely for it, I found none. |
| 232 | <b>Viola pedatifida</b><br>PRAIRIE VIOLET                      | Twenty Prairie Violet plants are on the original 1978 planting list for Meadowbrook Prairie. I did not find any Prairie Violets in the park.   |
| 233 | <b>Zizia aptera</b><br>HEART-LEAVED MEADOW<br>PARSNIP          | According to the Park District's records, a single Heart-leaved Meadow Parsnip was transplanted to Meadowbrook Prairie on November 3, 1984. I have no further evidence of this species in the park.                                      |

## Appendix 5. Flora of Meadowbrook Park –

### Plants listed by family.

#### **Acanthus family (Acanthaceae)**

|                  |                |
|------------------|----------------|
| Ruellia humilis  | Wild Petunia   |
| Ruellia strepens | Smooth Ruellia |

#### **Adder's tongue family (Ophioglossaceae)**

|                      |             |
|----------------------|-------------|
| Botrychium dissectum | Bronze Fern |
|----------------------|-------------|

#### **Amaryllis family (Amaryllidaceae)**

|                            |          |
|----------------------------|----------|
| Narcissus pseudo-narcissus | Daffodil |
|----------------------------|----------|

#### **Arum family (Araceae)**

|                     |                    |
|---------------------|--------------------|
| Arisaema triphyllum | Jack in the Pulpit |
|---------------------|--------------------|

#### **Aster or composite family (Asteraceae)**

|                          |                                   |
|--------------------------|-----------------------------------|
| Achillea millefolium     | Yarrow                            |
| Ageratina altissima      | White Snakeroot                   |
| Ambrosia artemisiifolia  | Common Ragweed                    |
| Ambrosia trifida         | Giant Ragweed                     |
| Antennaria parlinii      | Parlin's Pusseytoes               |
| Anthemis cotula          | Mayweed                           |
| Arctium minus            | Burdock                           |
| Artemisia annua          | Annual Wormwood                   |
| Artemisia vulgaris       | Common Mugwort                    |
| Aster cordifolius        | Blue Heart-leaved Aster           |
| Aster ericoides          | Heath Aster                       |
| Aster laevis             | Smooth Blue Aster                 |
| Aster lanceolatus        | Panicled Aster                    |
| Aster lateriflorus       | Side-flowered Aster               |
| Aster novae-angliae      | New England Aster                 |
| Aster oblongifolius      | Aromatic Aster                    |
| Aster ontarionis         | Ontario Aster                     |
| Aster oolentangiensis    | Sky-blue Aster                    |
| Aster pilosus            | Frost Aster                       |
| Aster praealtus          | Willow Aster                      |
| Aster urophyllus         | White Heart-leaved Aster          |
| Bidens aristosa          | Bearded Beggar-ticks              |
| Bidens cernua            | Nodding Bur Marigold              |
| Bidens connata           | Purple-stemmed Tickseed           |
| Bidens frondosa          | Common Beggar-ticks               |
| Bidens polylepis         | Swamp Marigold                    |
| Boltonia asteroides      | False Aster                       |
| Brickellia eupatorioides | False Boneset                     |
| Cichorium intybus        | Chicory                           |
| Cirsium arvense          | Canada Thistle                    |
| Cirsium discolor         | Field Thistle                     |
| Conoclinium coelestinum  | Blue Mist-flower                  |
| Conyza canadensis        | Mare's Tail                       |
| Coreopsis grandiflora    | Large-flowered Coreopsis          |
| Coreopsis palmata        | Prairie Coreopsis                 |
| Coreopsis tinctoria      | Golden Coreopsis                  |
| Coreopsis tripteris      | Tall Coreopsis                    |
| Cosmos bipinnatus        | Common Cosmos                     |
| Echinacea pallida        | Pale Purple Coneflower            |
| Echinacea purpurea       | Broad-leaved<br>Purple Coneflower |
| Eclipta prostrata        | Yerba de Tajo                     |
| Erechtites hieracifolia  | Fireweed                          |
| Erigeron annuus          | Annual Fleabane                   |
| Erigeron philadelphicus  | Marsh Fleabane                    |

|                               |                                  |
|-------------------------------|----------------------------------|
| Eupatoriadelphus purpureus    | Purple Joe Pye Weed              |
| Eupatorium altissimum         | Tall Boneset                     |
| Eupatorium perfoliatum        | Common Boneset                   |
| Eupatorium serotinum          | Late Boneset                     |
| Euthamia graminifolia         | Hairy Grass-leaved<br>Goldenrod  |
| Euthamia gymnospermoides      | Viscid Grass-leaved<br>Goldenrod |
| Galinsoga quadrisulcata       | Peruvian Daisy                   |
| Helenium autumnale            | Yellow Sneezeweed                |
| Helianthus annuus             | Annual Sunflower                 |
| Helianthus decapetalus        | Ten-petaled Sunflower            |
| Helianthus giganteus          | Tall Sunflower                   |
| Helianthus grosseserratus     | Saw-toothed Sunflower            |
| Helianthus mollis             | Downy Sunflower                  |
| Helianthus strumosus          | Pale-leaved Sunflower            |
| Helianthus tuberosus          | Jerusalem Artichoke              |
| Helianthus x luxurians        | Luxuriant Sunflower              |
| Heliopsis helianthoides       | False Sunflower                  |
| Lactuca canadensis            | Yellow Wild Lettuce              |
| Lactuca serriola              | Prickly Lettuce                  |
| Leucanthemum vulgare          | Ox-eye Daisy                     |
| Liatris pycnostachya          | Prairie Blazing Star             |
| Liatris spicata               | Marsh Blazing Star               |
| Matricaria discoidea          | Pineapple Weed                   |
| Oligoneuron rigidum           | Stiff Goldenrod                  |
| Parthenium integrifolium      | Feverfew                         |
| Pseudognaphalium obtusifolium | Sweet Everlasting                |
| Ratibida pinnata              | Yellow Coneflower                |
| Rudbeckia hirta               | Black-eyed Susan                 |
| Rudbeckia laciniata           | Goldenglow                       |
| Rudbeckia subtomentosa        | Sweet Black-eyed Susan           |
| Rudbeckia sullivantii         | Sullivant's Coneflower           |
| Rudbeckia triloba             | Brown-eyed Susan                 |
| Senecio glabellus             | Butterweed                       |
| Silphium integrifolium        | Rosinweed                        |
| Silphium laciniatum           | Compass Plant                    |
| Silphium perfoliatum          | Cup Plant                        |
| Silphium terebinthinaceum     | Prairie Dock                     |
| Solidago altissima            | Tall Goldenrod                   |
| Solidago missouriensis        | Missouri Goldenrod               |
| Solidago nemoralis            | Gray Goldenrod                   |
| Solidago speciosa             | Showy Goldenrod                  |
| Sonchus asper                 | Prickly Sow Thistle              |
| Sonchus oleraceus             | Smooth Sow Thistle               |
| Taraxacum officinale          | Common Dandelion                 |
| Tragopogon pratensis          | Common Goat's Beard              |
| Verbesina alternifolia        | Wingstem                         |
| Verbesina helianthoides       | Yellow Crownbeard                |
| Vernonia arkansana            | Ozark Ironweed                   |
| Vernonia baldwinii            | Baldwin's Ironweed               |
| Vernonia fasciculata          | Smooth Ironweed                  |
| Vernonia missurica            | Missouri Ironweed                |
| Vernonia x illinoensis        | Illinois Ironweed                |
| Xanthium strumarium           | Common Cocklebur                 |

#### **Bald cypress family (Taxodiaceae)**

|                    |              |
|--------------------|--------------|
| Taxodium distichum | Bald Cypress |
|--------------------|--------------|

#### **Barberry family (Berberidaceae)**

|                      |          |
|----------------------|----------|
| Podophyllum peltatum | Mayapple |
|----------------------|----------|

## Appendix 5. Plants listed by family *continued*.

### **Basswood family** (Tiliaceae)

|                           |                      |
|---------------------------|----------------------|
| <i>Tilia americana</i>    | American Basswood    |
| <i>Tilia cordata</i>      | Little-leaved Linden |
| <i>Tilia platyphyllos</i> | Big-leaved Linden    |
| <i>Tilia tomentosa</i>    | Silver Linden        |

### **Beech family** (Fagaceae)

|                             |                   |
|-----------------------------|-------------------|
| <i>Quercus alba</i>         | White Oak         |
| <i>Quercus bicolor</i>      | Swamp White Oak   |
| <i>Quercus coccinea</i>     | Scarlet Oak       |
| <i>Quercus imbricaria</i>   | Shingle Oak       |
| <i>Quercus macrocarpa</i>   | Burr Oak          |
| <i>Quercus muhlenbergii</i> | Chinquapin Oak    |
| <i>Quercus palustris</i>    | Pin Oak           |
| <i>Quercus prinus</i>       | Rock Chestnut Oak |
| <i>Quercus rubra</i>        | Red Oak           |
| <i>Quercus shumardii</i>    | Shumard Oak       |
| <i>Quercus x saulii</i>     | Saul's Oak        |

### **Bellflower family** (Campanulaceae)

|                                  |                     |
|----------------------------------|---------------------|
| <i>Campanulastrum americanum</i> | American Bellflower |
| <i>Lobelia cardinalis</i>        | Cardinal Flower     |
| <i>Lobelia siphilitica</i>       | Great Blue Lobelia  |

### **Bignonia family** (Bignoniaceae)

|                         |                  |
|-------------------------|------------------|
| <i>Campsis radicans</i> | Trumpet Creeper  |
| <i>Catalpa speciosa</i> | Northern Catalpa |

### **Birch family** (Betulaceae)

|                        |             |
|------------------------|-------------|
| <i>Alnus glutinosa</i> | Black Alder |
| <i>Betula nigra</i>    | River Birch |

### **Birthwort family** (Aristolochiaceae)

|                         |             |
|-------------------------|-------------|
| <i>Asarum canadense</i> | Wild Ginger |
|-------------------------|-------------|

### **Bittersweet family** (Celastraceae)

|                               |                          |
|-------------------------------|--------------------------|
| <i>Celastrus orbiculatus</i>  | Round-leaved Bittersweet |
| <i>Euonymus alatus</i>        | Burning-bush             |
| <i>Euonymus atropurpureus</i> | Wahoo                    |
| <i>Euonymus fortunei</i>      | Wintercreeper            |
| <i>Euonymus yedoensis</i>     | Japanese Spindle Tree    |

### **Bladdernut family** (Staphyleaceae)

|                           |            |
|---------------------------|------------|
| <i>Staphylea trifolia</i> | Bladdernut |
|---------------------------|------------|

### **Borage family** (Boraginaceae)

|                            |                    |
|----------------------------|--------------------|
| <i>Borago officinalis</i>  | Borage             |
| <i>Hackelia virginiana</i> | Stickseed          |
| <i>Mertensia virginica</i> | Virginia Bluebells |

### **Buckthorn family** (Rhamnaceae)

|                           |                  |
|---------------------------|------------------|
| <i>Rhamnus cathartica</i> | Common Buckthorn |
|---------------------------|------------------|

### **Buttercup or crowfoot family** (Ranunculaceae)

|                             |                     |
|-----------------------------|---------------------|
| <i>Anemone hupehensis</i>   | Japanese Windflower |
| <i>Anemone virginiana</i>   | Tall Anemone        |
| <i>Aquilegia canadensis</i> | Wild Columbine      |
| <i>Caltha palustris</i>     | Marsh Marigold      |
| <i>Clematis terniflora</i>  | Yam-leaved Clematis |

|                                   |                          |
|-----------------------------------|--------------------------|
| <i>Consolida ajacis</i>           | Rocket Larkspur          |
| <i>Enemion biternatum</i>         | False Rue Anemone        |
| <i>Ranunculus abortivus</i>       | Small-flowered Buttercup |
| <i>Ranunculus ficaria</i>         | Fig Buttercup            |
| <i>Ranunculus septentrionalis</i> | Swamp Buttercup          |
| <i>Thalictrum revolutum</i>       | Waxy Meadow Rue          |

### **Caesalpinia family** (Caesalpinaceae)

|                                 |                      |
|---------------------------------|----------------------|
| <i>Cercis canadensis</i>        | Redbud               |
| <i>Chamaecrista fasciculata</i> | Partridge Pea        |
| <i>Gleditsia triacanthos</i>    | Honey Locust         |
| <i>Gymnocladus dioica</i>       | Kentucky Coffee Tree |
| <i>Senna marilandica</i>        | Maryland Senna       |

### **Cannabis family** (Cannabaceae)

|                        |      |
|------------------------|------|
| <i>Humulus lupulus</i> | Hops |
|------------------------|------|

### **Caper family** (Capparaceae)

|                           |               |
|---------------------------|---------------|
| <i>Cleome hassleriana</i> | Spider Flower |
|---------------------------|---------------|

### **Carpetweed family** (Molluginaceae)

|                             |            |
|-----------------------------|------------|
| <i>Mollugo verticillata</i> | Carpetweed |
|-----------------------------|------------|

### **Carrot family** (Apiaceae)

|                                |                        |
|--------------------------------|------------------------|
| <i>Anethum graveolens</i>      | Dill                   |
| <i>Conium maculatum</i>        | Poison Hemlock         |
| <i>Coriandrum sativum</i>      | Coriander              |
| <i>Cryptotaenia canadensis</i> | Honewort               |
| <i>Daucus carota</i>           | Wild Carrot            |
| <i>Eryngium yuccifolium</i>    | Rattlesnake Master     |
| <i>Oenanthe sarmentosa</i>     | Pacific Water Parsley  |
| <i>Osmorhiza claytonii</i>     | Sweet Cicely           |
| <i>Osmorhiza longistylis</i>   | Anise Root             |
| <i>Pastinaca sativa</i>        | Wild Parsnip           |
| <i>Perideridia americana</i>   | Thicket Parsley        |
| <i>Sanicula canadensis</i>     | Canada Black Snakeroot |
| <i>Sanicula odorata</i>        | Common Black Snakeroot |
| <i>Thaspium trifoliatum</i>    | Meadow Parsnip         |
| <i>Zizia aurea</i>             | Golden Alexanders      |

### **Cashew family** (Anacardiaceae)

|                               |                     |
|-------------------------------|---------------------|
| <i>Cotinus coggygria</i>      | European Smoke Tree |
| <i>Rhus glabra</i>            | Smooth Sumac        |
| <i>Rhus hirta</i>             | Staghorn Sumac      |
| <i>Toxicodendron radicans</i> | Poison Ivy          |

### **Cat-tail family** (Typhaceae)

|                       |                 |
|-----------------------|-----------------|
| <i>Typha x glauca</i> | Hybrid Cat-tail |
|-----------------------|-----------------|

### **Citrus family** (Rutaceae)

|                               |                |
|-------------------------------|----------------|
| <i>Phellodendron amurense</i> | Amur Cork Tree |
| <i>Ptelea trifoliata</i>      | Wafer Ash      |

### **Custard apple family** (Annonaceae)

|                        |        |
|------------------------|--------|
| <i>Asimina triloba</i> | Pawpaw |
|------------------------|--------|

### **Cypress family** (Cupressaceae)

|                             |                   |
|-----------------------------|-------------------|
| <i>Juniperus virginiana</i> | Eastern Red Cedar |
|-----------------------------|-------------------|

## Appendix 5. Plants listed by family *continued*.

### **Day-flower family** (Commelinaceae)

|                              |                   |
|------------------------------|-------------------|
| <i>Commelina communis</i>    | Common Day-flower |
| <i>Tradescantia ohiensis</i> | Ohio Spiderwort   |

### **Dogbane family** (Apocynaceae)

|                            |                     |
|----------------------------|---------------------|
| <i>Apocynum cannabinum</i> | Common Dogbane      |
| <i>Apocynum sibiricum</i>  | Prairie Indian Hemp |
| <i>Vinca minor</i>         | Common Periwinkle   |

### **Dogwood family** (Cornaceae)

|                            |                          |
|----------------------------|--------------------------|
| <i>Cornus alternifolia</i> | Alternate-leaved Dogwood |
| <i>Cornus amomum</i>       | Swamp Dogwood            |
| <i>Cornus drummondii</i>   | Rough-leaved Dogwood     |
| <i>Cornus florida</i>      | Flowering Dogwood        |
| <i>Cornus sericea</i>      | Red-osier Dogwood        |

### **Duckweed family** (Lemnaceae)

|                    |                 |
|--------------------|-----------------|
| <i>Lemna minor</i> | Lesser Duckweed |
|--------------------|-----------------|

### **Ebony family** (Ebenaceae)

|                             |           |
|-----------------------------|-----------|
| <i>Diospyros virginiana</i> | Persimmon |
|-----------------------------|-----------|

### **Elm family** (Ulmaceae)

|                            |              |
|----------------------------|--------------|
| <i>Celtis laevigata</i>    | Sugarberry   |
| <i>Celtis occidentalis</i> | Hackberry    |
| <i>Ulmus americana</i>     | American Elm |
| <i>Ulmus pumila</i>        | Siberian Elm |
| <i>Ulmus rubra</i>         | Slippery Elm |

### **Evening primrose family** (Onagraceae)

|                            |                          |
|----------------------------|--------------------------|
| <i>Circaea lutetiana</i>   | Enchanter's Nightshade   |
| <i>Epilobium coloratum</i> | Cinnamon Willow Herb     |
| <i>Ludwigia peploides</i>  | Creeping Primrose Willow |
| <i>Gaura biennis</i>       | Biennial Gaura           |
| <i>Oenothera biennis</i>   | Common Evening Primrose  |

### **Figwort family** (Scrophulariaceae)

|                                 |                        |
|---------------------------------|------------------------|
| <i>Chelone glabra</i>           | White Turtlehead       |
| <i>Digitalis lanata</i>         | Grecian Foxglove       |
| <i>Leucospora multifida</i>     | Obe-wan-conobea        |
| <i>Mimulus ringens</i>          | Sessile Monkey-flower  |
| <i>Pedicularis canadensis</i>   | Canada Lousewort       |
| <i>Pedicularis lanceolata</i>   | Swamp Wood Betony      |
| <i>Penstemon digitalis</i>      | Foxglove Beardtongue   |
| <i>Scrophularia marilandica</i> | Maryland Figwort       |
| <i>Verbascum blattaria</i>      | Moth Mullein           |
| <i>Veronica arvensis</i>        | Corn Speedwell         |
| <i>Veronica peregrina</i>       | Purslane Speedwell     |
| <i>Veronica polita</i>          | Wayside Speedwell      |
| <i>Veronica serpyllifolia</i>   | Thyme-leaved Speedwell |
| <i>Veronicastrum virginicum</i> | Culver's Root          |

### **Flax family** (Linaceae)

|                     |           |
|---------------------|-----------|
| <i>Linum medium</i> | Wild Flax |
|---------------------|-----------|

### **Gentian family** (Gentianaceae)

|                                 |                       |
|---------------------------------|-----------------------|
| <i>Gentiana alba</i>            | Pale Gentian          |
| <i>Gentiana andrewsii</i>       | Bottle Gentian        |
| <i>Gentiana x pallidocyanea</i> | Hybrid Closed Gentian |

### **Geranium family** (Geraniaceae)

|                           |               |
|---------------------------|---------------|
| <i>Erodium cicutarium</i> | Crane's Bill  |
| <i>Geranium maculatum</i> | Wild Geranium |

### **Ginkgo family** (Ginkgoaceae)

|                      |        |
|----------------------|--------|
| <i>Ginkgo biloba</i> | Ginkgo |
|----------------------|--------|

### **Gooseberry family** (Grossulariaceae)

|                        |                    |
|------------------------|--------------------|
| <i>Ribes cynosbati</i> | Prickly Gooseberry |
|------------------------|--------------------|

### **Goosefoot family** (Chenopodiaceae)

|                          |                 |
|--------------------------|-----------------|
| <i>Atriplex patula</i>   | Common Orach    |
| <i>Chenopodium album</i> | Lamb's Quarters |

### **Gourd family** (Cucurbitaceae)

|                            |                      |
|----------------------------|----------------------|
| <i>Cucurbita pepo</i>      | Field Pumpkin        |
| <i>Lagenaria siceraria</i> | White-flowered Gourd |

### **Grape family** (Vitaceae)

|                                    |                  |
|------------------------------------|------------------|
| <i>Parthenocissus quinquefolia</i> | Virginia Creeper |
| <i>Vitis cinerea</i>               | Winter Grape     |
| <i>Vitis riparia</i>               | Riverbank Grape  |
| <i>Vitis vulpina</i>               | Frost Grape      |

### **Grass family** (Poaceae)

|                                 |                     |
|---------------------------------|---------------------|
| <i>Agropyron repens</i>         | Quack Grass         |
| <i>Agrostis gigantea</i>        | Redtop              |
| <i>Agrostis hyemalis</i>        | Tickle Grass        |
| <i>Agrostis perennans</i>       | Upland Bent Grass   |
| <i>Agrostis stolonifera</i>     | Creeping Bent Grass |
| <i>Alopecurus carolinianus</i>  | Carolina Foxtail    |
| <i>Andropogon gerardii</i>      | Big Bluestem        |
| <i>Avena sativa</i>             | Oats                |
| <i>Bothriochloa ischaemum</i>   | Turkestan Bluestem  |
| <i>Bouteloua curtipendula</i>   | Side-oats Grama     |
| <i>Brachyelytrum erectum</i>    | False Brome         |
| <i>Bromus commutatus</i>        | Hairy Chess         |
| <i>Bromus inermis</i>           | Smooth Brome        |
| <i>Bromus secalinus</i>         | Cheat               |
| <i>Bromus tectorum</i>          | Downy Chess         |
| <i>Buchloë dactyloides</i>      | Buffalo Grass       |
| <i>Calamagrostis canadensis</i> | Blue-joint Grass    |
| <i>Chasmanthium latifolium</i>  | Sea Oats            |
| <i>Chloris verticillata</i>     | Windmill Grass      |
| <i>Cinna arundinacea</i>        | Stout Wood Reed     |
| <i>Dactylis glomerata</i>       | Orchard Grass       |
| <i>Diarrhena americana</i>      | Beak Grass          |
| <i>Digitaria ischaemum</i>      | Smooth Crabgrass    |
| <i>Digitaria sanguinalis</i>    | Common Crabgrass    |
| <i>Echinochloa muricata</i>     | Wild Millet         |
| <i>Eleusine indica</i>          | Goose Grass         |
| <i>Elymus canadensis</i>        | Nodding Wild Rye    |
| <i>Elymus hystrix</i>           | Bottlebrush Grass   |
| <i>Elymus villosus</i>          | Silky Wild Rye      |
| <i>Elymus virginicus</i>        | Virginia Wild Rye   |
| <i>Eragrostis cilianensis</i>   | Stinking Love Grass |
| <i>Eragrostis minor</i>         | Little Love Grass   |
| <i>Eragrostis pectinacea</i>    | Tufted Love Grass   |
| <i>Eragrostis spectabilis</i>   | Purple Lace Grass   |
| <i>Festuca arundinacea</i>      | Tall Fescue         |



## Appendix 5. Plants listed by family *continued*.

|                                |                      |
|--------------------------------|----------------------|
| <i>Festuca rubra</i>           | Red Fescue           |
| <i>Glyceria striata</i>        | Fowl Manna Grass     |
| <i>Hordeum jubatum</i>         | Squirrel-tail        |
| <i>Hordeum pusillum</i>        | Little Barley        |
| <i>Leersia oryzoides</i>       | Rice Cut Grass       |
| <i>Leersia virginica</i>       | White Grass          |
| <i>Lolium perenne</i>          | English Rye Grass    |
| <i>Miscanthus sinensis</i>     | Chinese Silver Grass |
| <i>Muhlenbergia frondosa</i>   | Satin Grass          |
| <i>Muhlenbergia schreberi</i>  | Nimble Will          |
| <i>Panicum dichotomiflorum</i> | Fall Panicum         |
| <i>Panicum virgatum</i>        | Switch Grass         |
| <i>Phalaris arundinacea</i>    | Reed Canary Grass    |
| <i>Pheum pratense</i>          | Timothy              |
| <i>Poa annua</i>               | Annual Bluegrass     |
| <i>Poa compressa</i>           | Canada Bluegrass     |
| <i>Poa pratinensis</i>         | Kentucky Bluegrass   |
| <i>Poa sylvestris</i>          | Woodland Bluegrass   |
| <i>Schizachyrium scoparium</i> | Little Bluestem      |
| <i>Setaria faberi</i>          | Giant Foxtail        |
| <i>Setaria glauca</i>          | Yellow Foxtail       |
| <i>Setaria viridis</i>         | Green Foxtail        |
| <i>Sorghastrum nutans</i>      | Indian Grass         |
| <i>Spartina pectinata</i>      | Prairie Cord Grass   |
| <i>Sphenopholis obtusata</i>   | Wedge Grass          |
| <i>Sporobolus heterolepis</i>  | Prairie Dropseed     |
| <i>Sporobolus vaginiflorus</i> | Poverty Grass        |
| <i>Tridens flavus</i>          | Purple-top           |
| <i>Tripsacum dactyloides</i>   | Gama Grass           |
| <i>Triticum aestivum</i>       | Wheat                |
| <i>Zea mays</i>                | Corn                 |
| <i>Zoysia japonica</i>         | Zoysia               |

### **Greenbrier family (Smilacaceae)**

|                         |                   |
|-------------------------|-------------------|
| <i>Smilax tamnoides</i> | Bristly Cat Briar |
|-------------------------|-------------------|

### **Hazel family (Corylaceae)**

|                             |                |
|-----------------------------|----------------|
| <i>Carpinus caroliniana</i> | Musclewood     |
| <i>Corylus americana</i>    | American Hazel |
| <i>Ostrya virginiana</i>    | Hop Hornbeam   |

### **Holly family (Aquifoliaceae)**

|                          |                   |
|--------------------------|-------------------|
| <i>Ilex verticillata</i> | Winterberry Holly |
|--------------------------|-------------------|

### **Honeysuckle family (Caprifoliaceae)**

|                                   |                         |
|-----------------------------------|-------------------------|
| <i>Lonicera japonica</i>          | Japanese Honeysuckle    |
| <i>Lonicera maackii</i>           | Amur Honeysuckle        |
| <i>Lonicera tatarica</i>          | Tartarian Honeysuckle   |
| <i>Lonicera x bella</i>           | Showy Fly Honeysuckle   |
| <i>Sambucus canadensis</i>        | Elderberry              |
| <i>Symphoricarpos orbiculatus</i> | Coralberry              |
| <i>Viburnum lentago</i>           | Nannyberry              |
| <i>Viburnum opulus</i>            | European Cranberry Bush |
| <i>Viburnum prunifolium</i>       | Black Haw               |
| <i>Viburnum recognitum</i>        | Smooth Arrow-wood       |
| <i>Viburnum trilobum</i>          | High-bush Cranberry     |

### **Horse chestnut family (Hippocastanaceae)**

|                        |              |
|------------------------|--------------|
| <i>Aesculus glabra</i> | Ohio Buckeye |
|------------------------|--------------|

### **Iris family (Iridaceae)**

|                             |                 |
|-----------------------------|-----------------|
| <i>Belamcanda chinensis</i> | Blackberry Lily |
| <i>Crocus vernus</i>        | Spring Crocus   |
| <i>Iris shrevei</i>         | Wild Blue Iris  |
| <i>Iris x germanica</i>     | Garden Iris     |

### **Laurel family (Lauraceae)**

|                          |           |
|--------------------------|-----------|
| <i>Lindera benzoin</i>   | Spicebush |
| <i>Sassafras albidum</i> | Sassafras |

### **Lily family (Liliaceae)**

|                                |                             |
|--------------------------------|-----------------------------|
| <i>Allium canadense</i>        | Wild Onion                  |
| <i>Allium sativum</i>          | Garlic                      |
| <i>Allium vineale</i>          | Field Garlic                |
| <i>Asparagus officinalis</i>   | Asparagus                   |
| <i>Camassia scilloides</i>     | Wild Hyacinth               |
| <i>Convallaria majalis</i>     | Lily of the Valley          |
| <i>Erythronium albidum</i>     | White Trout Lily            |
| <i>Hemerocallis fulva</i>      | Orange Day Lily             |
| <i>Lilium lancifolium</i>      | Tiger Lily                  |
| <i>Lilium superbum</i>         | Turk's Cap Lily             |
| <i>Ornithogalum umbellatum</i> | Star of Bethlehem           |
| <i>Polygonatum commutatum</i>  | Great Solomon's Seal        |
| <i>Scilla sibirica</i>         | Siberian Squill             |
| <i>Smilacina racemosa</i>      | False Solomon's Seal        |
| <i>Smilacina stellata</i>      | Starry False Solomon's Seal |
| <i>Trillium recurvatum</i>     | Wake Robin                  |
| <i>Veratrum woodii</i>         | False Hellebore             |

### **Loosestrife family (Lythraceae)**

|                       |                    |
|-----------------------|--------------------|
| <i>Lythrum alatum</i> | Winged Loosestrife |
|-----------------------|--------------------|

### **Madder family (Rubiaceae)**

|                         |                        |
|-------------------------|------------------------|
| <i>Galium aparine</i>   | Cleavers               |
| <i>Galium triflorum</i> | Sweet-scented Bedstraw |

### **Magnolia family (Magnoliaceae)**

|                                |           |
|--------------------------------|-----------|
| <i>Liriodendron tulipifera</i> | Tuliptree |
|--------------------------------|-----------|

### **Mallow family (Malvaceae)**

|                              |                            |
|------------------------------|----------------------------|
| <i>Abutilon theophrastii</i> | Velvet-leaf                |
| <i>Alcea rosea</i>           | Hollyhock                  |
| <i>Callirhoë digitata</i>    | Fringed Poppy Mallow       |
| <i>Hibiscus esculentus</i>   | Okra                       |
| <i>Hibiscus laevis</i>       | Halberd-leaved Rose Mallow |
| <i>Hibiscus moscheutos</i>   | Swamp Rose Mallow          |
| <i>Hibiscus trionum</i>      | Flower of an Hour          |
| <i>Malva neglecta</i>        | Common Mallow              |
| <i>Napaea dioica</i>         | Glade Mallow               |
| <i>Sida spinosa</i>          | Prickly Sida               |

### **Maple family (Aceraceae)**

|                         |              |
|-------------------------|--------------|
| <i>Acer campestre</i>   | Hedge Maple  |
| <i>Acer ginnala</i>     | Amur Maple   |
| <i>Acer negundo</i>     | Box Elder    |
| <i>Acer platanoides</i> | Norway Maple |
| <i>Acer rubrum</i>      | Red Maple    |
| <i>Acer saccharinum</i> | Silver Maple |
| <i>Acer saccharum</i>   | Sugar Maple  |

## Appendix 5. Plants listed by family *continued*.

### **Milkweed family** (Asclepiadaceae)

|                               |                  |
|-------------------------------|------------------|
| <i>Ampelamus albidus</i>      | Bluevine         |
| <i>Asclepias incarnata</i>    | Swamp Milkweed   |
| <i>Asclepias syriaca</i>      | Common Milkweed  |
| <i>Asclepias tuberosa</i>     | Butterfly Weed   |
| <i>Asclepias verticillata</i> | Whorled Milkweed |

### **Mimosa family** (Mimosaceae)

|                               |                        |
|-------------------------------|------------------------|
| <i>Desmanthus illinoensis</i> | Illinois Bundle-flower |
|-------------------------------|------------------------|

### **Mint family** (Lamiaceae)

|                                     |                        |
|-------------------------------------|------------------------|
| <i>Agastache nepetoides</i>         | Yellow Giant Hyssop    |
| <i>Agastache scrophulariaefolia</i> | Purple Giant Hyssop    |
| <i>Ajuga reptans</i>                | Carpet Bugle Weed      |
| <i>Blephilia hirsuta</i>            | Hairy Wood Mint        |
| <i>Glechoma hederacea</i>           | Creeping Charlie       |
| <i>Lamium amplexicaule</i>          | Henbit                 |
| <i>Lamium purpureum</i>             | Purple Dead Nettle     |
| <i>Leonurus cardiaca</i>            | Motherwort             |
| <i>Melissa officinalis</i>          | Lemon Balm             |
| <i>Mentha arvensis</i>              | Field Mint             |
| <i>Mentha spicata</i>               | Spearmint              |
| <i>Mentha x piperita</i>            | Peppermint             |
| <i>Monarda fistulosa</i>            | Bergamot               |
| <i>Nepeta cataria</i>               | Catnip                 |
| <i>Perilla frutescens</i>           | Beefsteak Plant        |
| <i>Physostegia speciosa</i>         | Showy False Dragonhead |
| <i>Physostegia virginiana</i>       | Obedient Plant         |
| <i>Prunella vulgaris</i>            | Self-heal              |
| <i>Pycnanthemum pilosum</i>         | Hairy Mountain Mint    |
| <i>Pycnanthemum tenuifolium</i>     | Slender Mountain Mint  |
| <i>Pycnanthemum virginianum</i>     | Virginia Mountain Mint |
| <i>Salvia azurea</i>                | Wild Blue Sage         |
| <i>Stachys pilosa</i>               | Marsh Hedge Nettle     |
| <i>Teucrium canadense</i>           | American Germander     |

### **Moonseed family** (Menispermaceae)

|                              |          |
|------------------------------|----------|
| <i>Menispermum canadense</i> | Moonseed |
|------------------------------|----------|

### **Morning glory family** (Convolvulaceae)

|                             |                          |
|-----------------------------|--------------------------|
| <i>Calystegia sepium</i>    | Hedge Bindweed           |
| <i>Convolvulus arvensis</i> | Field Bindweed           |
| <i>Ipomoea hederacea</i>    | Ivy-leaved Morning Glory |
| <i>Ipomoea pandurata</i>    | Wild Sweet Potato        |
| <i>Ipomoea purpurea</i>     | Common Morning Glory     |

### **Mulberry family** (Moraceae)

|                         |                |
|-------------------------|----------------|
| <i>Maclura pomifera</i> | Hedge-apple    |
| <i>Morus alba</i>       | White Mulberry |

### **Mustard family** (Brassicaceae)

|                                |                           |
|--------------------------------|---------------------------|
| <i>Alliaria petiolata</i>      | Garlic Mustard            |
| <i>Armoracia rusticana</i>     | Horseradish               |
| <i>Barbarea vulgaris</i>       | Yellow Rocket             |
| <i>Brassica juncea</i>         | Mustard Greens            |
| <i>Brassica nigra</i>          | Black Mustard             |
| <i>Brassica rapa</i>           | Field Mustard             |
| <i>Capsella bursa-pastoris</i> | Shepherd's Purse          |
| <i>Cardamine hirsuta</i>       | Hairy Bitter Cress        |
| <i>Cardamine pensylvanica</i>  | Pennsylvania Bitter Cress |

|                               |                        |
|-------------------------------|------------------------|
| <i>Dentaria laciniata</i>     | Toothwort              |
| <i>Descurainia pinnata</i>    | Tansy Mustard          |
| <i>Eriophila verna</i>        | Vernal Whitlow Grass   |
| <i>Iodanthus pinnatifidus</i> | Purple Rocket          |
| <i>Lepidium campestre</i>     | Field Pepper Grass     |
| <i>Lepidium densiflorum</i>   | Small Pepper Grass     |
| <i>Lepidium virginicum</i>    | Common Pepper Grass    |
| <i>Raphanus raphanistrum</i>  | Wild Radish            |
| <i>Rorippa palustris</i>      | Marsh Yellow Cress     |
| <i>Rorippa sinuata</i>        | Spreading Yellow Cress |
| <i>Sisymbrium officinale</i>  | Hedge Mustard          |
| <i>Thlaspi arvensis</i>       | Field Penny Cress      |

### **Nettle family** (Urticaceae)

|                             |              |
|-----------------------------|--------------|
| <i>Boehmeria cylindrica</i> | False Nettle |
| <i>Pilea pumila</i>         | Clearweed    |

### **Nightshade family** (Solanaceae)

|                                |                      |
|--------------------------------|----------------------|
| <i>Datura stramonium</i>       | Jimson Weed          |
| <i>Lycopersicon esculentum</i> | Tomato               |
| <i>Physalis heterophylla</i>   | Clammy Ground Cherry |
| <i>Physalis subglabrata</i>    | Smooth Ground Cherry |
| <i>Solanum carolinense</i>     | Horse Nettle         |
| <i>Solanum dulcamara</i>       | Deadly Nightshade    |
| <i>Solanum ptycanthum</i>      | Black Nightshade     |

### **Oleaster family** (Elaeagnaceae)

|                            |              |
|----------------------------|--------------|
| <i>Elaeagnus umbellata</i> | Autumn Olive |
|----------------------------|--------------|

### **Olive family** (Oleaceae)

|                               |                     |
|-------------------------------|---------------------|
| <i>Fraxinus americana</i>     | White Ash           |
| <i>Fraxinus lanceolata</i>    | Green Ash           |
| <i>Fraxinus pennsylvanica</i> | Red Ash             |
| <i>Ligustrum obtusifolium</i> | Border Privet       |
| <i>Ligustrum vulgare</i>      | Common Privet       |
| <i>Syringa reticulata</i>     | Japanese Tree Lilac |

### **Orchid family** (Orchidaceae)

|                              |                         |
|------------------------------|-------------------------|
| <i>Cypripedium pubescens</i> | Yellow Lady's Slipper   |
| <i>Liparis liliifolia</i>    | Twayblade Orchid        |
| <i>Spiranthes ovalis</i>     | October Ladies' Tresses |

### **Pea family** (Fabaceae)

|                              |                          |
|------------------------------|--------------------------|
| <i>Amorpha canescens</i>     | Leadplant                |
| <i>Amorpha fruticosa</i>     | False Indigo             |
| <i>Astragalus canadensis</i> | Canada Milk Vetch        |
| <i>Baptisia alba</i>         | White Wild Indigo        |
| <i>Dalea candida</i>         | White Prairie Clover     |
| <i>Dalea purpurea</i>        | Purple Prairie Clover    |
| <i>Desmodium canadense</i>   | Showy Tick Trefoil       |
| <i>Desmodium illinoense</i>  | Illinois Tick Trefoil    |
| <i>Glycine max</i>           | Soybean                  |
| <i>Lespedeza capitata</i>    | Round-headed Bush Clover |
| <i>Lespedeza cuneata</i>     | Sericea Lespedeza        |
| <i>Medicago lupulina</i>     | Black Medic              |
| <i>Medicago sativa</i>       | Alfalfa                  |
| <i>Melilotus albus</i>       | White Sweet Clover       |
| <i>Melilotus officinalis</i> | Yellow Sweet Clover      |
| <i>Securigera varia</i>      | Crown Vetch              |
| <i>Trifolium campestre</i>   | Low Hop Clover           |

## Appendix 5. Plants listed by family *continued*.

|                    |                     |
|--------------------|---------------------|
| Trifolium hybridum | Alsike Clover       |
| Trifolium pratense | Red Clover          |
| Trifolium repens   | White Clover        |
| Vicia angustifolia | Narrow-leaved Vetch |

### **Phlox family** (Polemoniaceae)

|                    |                |
|--------------------|----------------|
| Phlox divaricata   | Blue Phlox     |
| Phlox paniculata   | Summer Phlox   |
| Polemonium reptans | Jacob's Ladder |

### **Pigweed family** (Amaranthaceae)

|                         |                   |
|-------------------------|-------------------|
| Amaranthus albus        | White Amaranth    |
| Amaranthus blitoides    | Prostrate Pigweed |
| Amaranthus hybridus     | Green Pigweed     |
| Amaranthus spinosus     | Spiny Pigweed     |
| Amaranthus tuberculatus | Water Hemp        |

### **Pine family** (Pinaceae)

|                       |                 |
|-----------------------|-----------------|
| Pinus flexilis        | Limber Pine     |
| Pinus strobus         | White Pine      |
| Pseudotsuga menziesii | Douglas Fir     |
| Tsuga canadensis      | Eastern Hemlock |

### **Pink family** (Caryophyllaceae)

|                        |                                 |
|------------------------|---------------------------------|
| Arenaria serpyllifolia | Thyme-leaved Sandwort           |
| Cerastium diffusum     | Four-stamen Chickweed           |
| Cerastium fontanum     | Common Mouse-eared<br>Chickweed |
| Cerastium glomeratum   | Clammy Mouse-eared<br>Chickweed |
| Dianthus armeria       | Deptford Pink                   |
| Holosteum umbellatum   | Jagged Chickweed                |
| Lychnis coronaria      | Rose Campion                    |
| Myosoton aquaticum     | Giant Chickweed                 |
| Silene antirrhina      | Sleepy Catchfly                 |
| Silene regia           | Royal Catchfly                  |
| Stellaria media        | Common Chickweed                |

### **Plane tree family** (Platanaceae)

|                       |                   |
|-----------------------|-------------------|
| Platanus occidentalis | Sycamore          |
| Platanus x acerifolia | London Plane Tree |

### **Plantain family** (Plantaginaceae)

|                     |                  |
|---------------------|------------------|
| Plantago lanceolata | Buckhorn         |
| Plantago major      | Common Plantain  |
| Plantago rugelii    | Rugel's Plantain |

### **Pokeweed family** (Phytolaccaceae)

|                      |          |
|----------------------|----------|
| Phytolacca americana | Pokeweed |
|----------------------|----------|

### **Pondweed family** (Potamogetonaceae)

|                     |                      |
|---------------------|----------------------|
| Potamogeton nodosus | Long-leaved Pondweed |
|---------------------|----------------------|

### **Poppy family** (Papaveraceae)

|                        |           |
|------------------------|-----------|
| Sanguinaria canadensis | Bloodroot |
|------------------------|-----------|

### **Primrose family** (Primulaceae)

|                    |                   |
|--------------------|-------------------|
| Anagallis arvensis | Scarlet Pimpernel |
| Dodecatheon meadia | Shooting Star     |

|                       |                     |
|-----------------------|---------------------|
| Lysimachia ciliata    | Fringed Loosestrife |
| Lysimachia nummularia | Moneywort           |

### **Purslane family** (Portulacaceae)

|                     |               |
|---------------------|---------------|
| Claytonia virginica | Spring Beauty |
| Portulacca oleracea | Purslane      |

### **Quassia family** (Simaroubaceae)

|                     |                |
|---------------------|----------------|
| Ailanthus altissima | Tree of Heaven |
|---------------------|----------------|

### **Rose family** (Rosaceae)

|                           |                         |
|---------------------------|-------------------------|
| Agrimonia parviflora      | Small-flowered Agrimony |
| Amelanchier arborea       | Shadbush                |
| Amelanchier x grandiflora | Hybrid Serviceberry     |
| Crataegus crus-galli      | Cock's Spur Thorn       |
| Crataegus mollis          | Downy Hawthorn          |
| Crataegus phaenopyrum     | Washington Thorn        |
| Crataegus succulenta      | Long-spined Hawthorn    |
| Duchesnea indica          | Indian Strawberry       |
| Filipendula rubra         | Queen of the Prairie    |
| Fragaria virginiana       | Wild Strawberry         |
| Fragaria x ananassa       | Domestic Strawberry     |
| Geum canadense            | White Avens             |
| Geum vernum               | Spring Avens            |
| Malus baccata             | Siberian Crab           |
| Malus ioensis             | Iowa Crab               |
| Malus prunifolia          | Plum-leaved Crab        |
| Malus pumila              | Domestic Apple          |
| Malus sieboldii           | Japanese Crab           |
| Malus x soulardii         | Soulard Crab            |
| Potentilla arguta         | Prairie Cinquefoil      |
| Potentilla norvegica      | Rough Cinquefoil        |
| Potentilla simplex        | Common Cinquefoil       |
| Prunus americana          | Wild Plum               |
| Prunus avium              | Sweet Cherry            |
| Prunus padus              | European Bird Cherry    |
| Prunus serotina           | Wild Black Cherry       |
| Pyrus calleryana          | Callery Pear            |
| Pyrus longipes            | Long-stalked Pear       |
| Rosa carolina             | Pasture Rose            |
| Rosa multiflora           | Multiflora Rose         |
| Rubus allegheniensis      | Common Blackberry       |
| Rubus flagellaris         | Common Dewberry         |
| Rubus occidentalis        | Black Raspberry         |
| Rubus ulmifolius          | Elm-leaved Blackberry   |

### **Rush family** (Juncaceae)

|                 |               |
|-----------------|---------------|
| Juncus dudleyi  | Dudley's Rush |
| Juncus interior | Inland Rush   |
| Juncus tenuis   | Path Rush     |
| Juncus torreyi  | Torrey's Rush |

### **Saxifrage family** (Saxifragaceae)

|                    |                 |
|--------------------|-----------------|
| Penthorum sedoides | Ditch Stonecrop |
|--------------------|-----------------|

### **Sedge family** (Cyperaceae)

|                    |                    |
|--------------------|--------------------|
| Carex blanda       | Common Wood Sedge  |
| Carex cephalophora | Capitate Sedge     |
| Carex cristatella  | Crested Oval Sedge |
| Carex davisii      | Davis's Sedge      |

## Appendix 5. Plants listed by family *continued*.

|                                   |                           |
|-----------------------------------|---------------------------|
| Carex frankii                     | Bristly Cat-tail Sedge    |
| Carex granularis                  | Pale Sedge                |
| Carex gravida                     | Long-awned Bracted Sedge  |
| Carex grisea                      | Wood Gray Sedge           |
| Carex hystericina                 | Porcupine Sedge           |
| Carex jamesii                     | James's Sedge             |
| Carex laeviconica                 | Long-toothed Lake Sedge   |
| Carex normalis                    | Spreading Oval Sedge      |
| Carex pellita                     | Broad-leaved Woolly Sedge |
| Carex stipata                     | Common Fox Sedge          |
| Carex tribuloides                 | Awl-fruited Oval Sedge    |
| Carex vulpinoidea                 | Brown Fox Sedge           |
| Cyperus esculentus                | Yellow Nut-sedge          |
| Cyperus ferruginescens            | Rusty Flat-sedge          |
| Cyperus strigosus                 | Straw-colored Flat-sedge  |
| Schoenoplectus<br>tabernaemontani | Soft-stemmed Bulrush      |
| Scirpus atrovirens                | Dark Green Bulrush        |
| Scirpus pendulus                  | Drooping Bulrush          |

### Smartweed family (Polygonaceae)

|                         |                    |
|-------------------------|--------------------|
| Antenoron virginianum   | Virginia Knotweed  |
| Fallopia scandens       | Climbing Buckwheat |
| Persicaria cespitosa    | Creeping Smartweed |
| Persicaria coccinea     | Scarlet Smartweed  |
| Persicaria hydropiper   | Water Pepper       |
| Persicaria pensylvanica | Pinkweed           |
| Persicaria punctata     | Dotted Smartweed   |
| Persicaria vulgaris     | Lady's Thumb       |
| Polygonum arenastrum    | Sidewalk Knotweed  |
| Polygonum erectum       | Erect Knotweed     |
| Rumex altissimus        | Pale Dock          |
| Rumex crispus           | Curly Dock         |
| Rumex obtusifolius      | Broad-leaved Dock  |

### Spurge family (Euphorbiaceae)

|                      |                                |
|----------------------|--------------------------------|
| Acalypha rhomboidea  | Common Three-seeded<br>Mercury |
| Chamaesyce maculata  | Spotted Spurge                 |
| Chamaesyce nutans    | Nodding Spurge                 |
| Chamaesyce prostrata | Green Creeping Spurge          |
| Euphorbia corollata  | Flowering Spurge               |

### St. John's wort family (Hypericaceae)

|                       |                         |
|-----------------------|-------------------------|
| Hypericum perforatum  | Common St. John's Wort  |
| Hypericum punctatum   | Spotted St. John's Wort |
| Hypericum pyramidatum | Giant St. John's Wort   |

### Sweet flag family (Acoraceae)

|                |                       |
|----------------|-----------------------|
| Acorus calamus | One-veined Sweet Flag |
|----------------|-----------------------|

### Vervain family (Verbenaceae)

|                      |                    |
|----------------------|--------------------|
| Callicarpa dichotoma | Purple Beautyberry |
| Phyla lanceolata     | Fog-fruit          |
| Verbena bracteata    | Prostrate Vervain  |
| Verbena hastata      | Blue Vervain       |
| Verbena urticifolia  | White Vervain      |

### Violet family (Violaceae)

|                  |                     |
|------------------|---------------------|
| Viola bicolor    | Confederate Violet  |
| Viola pratincola | Common Blue Violet  |
| Viola pubescens  | Downy Yellow Violet |
| Viola striata    | Cream Violet        |

### Walnut family (Juglandaceae)

|                   |                      |
|-------------------|----------------------|
| Carya illinoensis | Pecan                |
| Carya ovalis      | Sweet Pignut Hickory |
| Carya ovata       | Shagbark Hickory     |
| Juglans cinerea   | Butternut            |
| Juglans nigra     | Black Walnut         |

### Water plantain family (Alismataceae)

|                      |                               |
|----------------------|-------------------------------|
| Alisma subcordatum   | Small-flowered Water Plantain |
| Sagittaria latifolia | Common Arrowhead              |

### Waterleaf family (Hydrophyllaceae)

|                          |                    |
|--------------------------|--------------------|
| Ellisia nyctelea         | Aunt Lucy          |
| Hydrophyllum virginianum | Virginia Waterleaf |

### Willow family (Salicaceae)

|                    |                       |
|--------------------|-----------------------|
| Populus deltoides  | Eastern Cottonwood    |
| Salix alba         | Golden Weeping Willow |
| Salix amygdaloides | Peach-leaved Willow   |
| Salix interior     | Sandbar Willow        |
| Salix nigra        | Black Willow          |

### Witch hazel family (Hamamelidaceae)

|                         |                    |
|-------------------------|--------------------|
| Hamamelis vernalis      | Vernal Witch Hazel |
| Liquidambar styraciflua | Sweetgum           |

### Wood sorrel family (Oxalidaceae)

|                |                           |
|----------------|---------------------------|
| Oxalis fontana | Tall Yellow Wood Sorrel   |
| Oxalis stricta | Common Yellow Wood Sorrel |

### Yew family (Taxaceae)

|               |             |
|---------------|-------------|
| Taxus baccata | English Yew |
|---------------|-------------|

## Alphabetical list of common names and electronic index

This list includes only the 608 species that were seen growing without cultivation in the study area in 2011.

With the Adobe PDF version of this report, one can click on a scientific name in the list to go to detailed information about the species in Table 1. When using Adobe Reader or Adobe Acrobat, the Page Navigation toolbar can be set so that it has a Previous View button. After clicking a species name in the index to go to Table 1, it is possible to go directly back to the species index by clicking the Previous View button.

|   |   |                                     |  |
|---|---|-------------------------------------|--|
| <b>A</b> grimony, Small-flowered. . . . . | <a href="#">Agrimonia parviflora</a>      | Bindweed, Field. . . . .            | <a href="#">Convolvulus arvensis</a>           |
| Alder, Black. . . . .                     | <a href="#">Alnus glutinosa</a>           | Bindweed, Hedge. . . . .            | <a href="#">Calystegia sepium</a>              |
| Alexanders, Golden. . . . .               | <a href="#">Zizia aurea</a>               | Birch, River. . . . .               | <a href="#">Betula nigra</a>                   |
| Alfalfa. . . . .                          | <a href="#">Medicago sativa</a>           | Bitter Cress, Hairy. . . . .        | <a href="#">Cardamine hirsuta</a>              |
| Amaranth, White. . . . .                  | <a href="#">Amaranthus albus</a>          | Bitter Cress, Pennsylvania. . . . . | <a href="#">Cardamine pennsylvanica</a>        |
| Anemone, Tall. . . . .                    | <a href="#">Anemone virginiana</a>        | Bittersweet, Round-leaved. . . . .  | <a href="#">Celastrus orbiculatus</a>          |
| Anise Root. . . . .                       | <a href="#">Osmorhiza longistylis</a>     | Blackberry, Common. . . . .         | <a href="#">Rubus allegheniensis</a>           |
| Apple, Domestic. . . . .                  | <a href="#">Malus pumila</a>              | Blackberry, Elm-leaved. . . . .     | <a href="#">Rubus ulmifolius</a>               |
| Arrow-wood, Smooth. . . . .               | <a href="#">Viburnum recognitum</a>       | Bladdernut. . . . .                 | <a href="#">Staphylea trifolia</a>             |
| Arrowhead, Common. . . . .                | <a href="#">Sagittaria latifolia</a>      | Blazing Star, Marsh. . . . .        | <a href="#">Liatris spicata</a>                |
| Artichoke, Jerusalem. . . . .             | <a href="#">Helianthus tuberosus</a>      | Blazing Star, Prairie. . . . .      | <a href="#">Liatris pycnostachya</a>           |
| Ash, Green. . . . .                       | <a href="#">Fraxinus lanceolata</a>       | Bloodroot. . . . .                  | <a href="#">Sanguinaria canadensis</a>         |
| Ash, Red. . . . .                         | <a href="#">Fraxinus pennsylvanica</a>    | Bluebells, Virginia. . . . .        | <a href="#">Mertensia virginica</a>            |
| Ash, Wafer. . . . .                       | <a href="#">Ptelea trifoliata</a>         | Bluegrass, Annual. . . . .          | <a href="#">Poa annua</a>                      |
| Ash, White. . . . .                       | <a href="#">Fraxinus americana</a>        | Bluegrass, Canada. . . . .          | <a href="#">Poa compressa</a>                  |
| Asparagus. . . . .                        | <a href="#">Asparagus officinalis</a>     | Bluegrass, Kentucky. . . . .        | <a href="#">Poa pratensis</a>                  |
| Aster, Aromatic. . . . .                  | <a href="#">Aster oblongifolius</a>       | Bluegrass, Woodland. . . . .        | <a href="#">Poa sylvestris</a>                 |
| Aster, Blue Heart-leaved. . . . .         | <a href="#">Aster cordifolius</a>         | Bluestem, Big. . . . .              | <a href="#">Andropogon gerardii</a>            |
| Aster, False. . . . .                     | <a href="#">Boltonia asteroides</a>       | Bluestem, Little. . . . .           | <a href="#">Schizachyrium scoparium</a>        |
| Aster, Frost. . . . .                     | <a href="#">Aster pilosus</a>             | Bluestem, Turkestan. . . . .        | <a href="#">Bothriochloa ischaemum</a>         |
| Aster, Heath. . . . .                     | <a href="#">Aster ericoides</a>           | Bluevine. . . . .                   | <a href="#">Ampelamus albidus</a>              |
| Aster, New England. . . . .               | <a href="#">Aster novae-angliae</a>       | Boneset, Common. . . . .            | <a href="#">Eupatorium perfoliatum</a>         |
| Aster, Ontario. . . . .                   | <a href="#">Aster ontarionis</a>          | Boneset, False. . . . .             | <a href="#">Brickellia eupatorioides</a>       |
| Aster, Panicked. . . . .                  | <a href="#">Aster lanceolatus</a>         | Boneset, Late. . . . .              | <a href="#">Eupatorium serotinum</a>           |
| Aster, Side-flowered. . . . .             | <a href="#">Aster lateriflorus</a>        | Boneset, Tall. . . . .              | <a href="#">Eupatorium altissimum</a>          |
| Aster, Sky-blue. . . . .                  | <a href="#">Aster oolentangiensis</a>     | Borage. . . . .                     | <a href="#">Borago officinalis</a>             |
| Aster, Smooth Blue. . . . .               | <a href="#">Aster laevis</a>              | Box Elder. . . . .                  | <a href="#">Acer negundo</a>                   |
| Aster, White Heart-leaved. . . . .        | <a href="#">Aster urophyllus</a>          | Brome, False. . . . .               | <a href="#">Brachyelytrum erectum</a>          |
| Aster, Willow. . . . .                    | <a href="#">Aster praealtus</a>           | Brome, Smooth. . . . .              | <a href="#">Bromus inermis</a>                 |
| Aunt Lucy. . . . .                        | <a href="#">Ellisia nyctelea</a>          | Buckeye, Ohio. . . . .              | <a href="#">Aesculus glabra</a>                |
| Avens, Spring. . . . .                    | <a href="#">Geum vernum</a>               | Buckhorn. . . . .                   | <a href="#">Plantago lanceolata</a>            |
| Avens, White. . . . .                     | <a href="#">Geum canadense</a>            | Buckthorn, Common. . . . .          | <a href="#">Rhamnus cathartica</a>             |
| <b>B</b> alm, Lemon. . . . .              | <a href="#">Melissa officinalis</a>       | Buckwheat, Climbing. . . . .        | <a href="#">Fallopia scandens</a>              |
| Barley, Little. . . . .                   | <a href="#">Hordeum pusillum</a>          | Bugle Weed, Carpet. . . . .         | <a href="#">Ajuga reptans</a>                  |
| Basswood, American. . . . .               | <a href="#">Tilia americana</a>           | Bulrush, Dark Green. . . . .        | <a href="#">Scirpus atrovirens</a>             |
| Beardtongue, Foxglove. . . . .            | <a href="#">Penstemon digitalis</a>       | Bulrush, Drooping. . . . .          | <a href="#">Scirpus pendulus</a>               |
| Beautyberry, Purple. . . . .              | <a href="#">Callicarpa dichotoma</a>      | Bulrush, Soft-stemmed. . . . .      | <a href="#">Schoenoplectus tabernaemontani</a> |
| Bedstraw, Sweet-scented. . . . .          | <a href="#">Galium triflorum</a>          | Bundle-flower, Illinois. . . . .    | <a href="#">Desmanthus illinoensis</a>         |
| Beefsteak Plant. . . . .                  | <a href="#">Perilla frutescens</a>        | Bur Marigold, Nodding. . . . .      | <a href="#">Bidens cernua</a>                  |
| Beggar-ticks, Common. . . . .             | <a href="#">Bidens frondosa</a>           | Burdock. . . . .                    | <a href="#">Arctium minus</a>                  |
| Beggar-ticks, Bearded. . . . .            | <a href="#">Bidens aristosa</a>           | Burning-bush. . . . .               | <a href="#">Euonymus alatus</a>                |
| Bellflower, American. . . . .             | <a href="#">Campanulastrum americanum</a> | Bush Clover, Round-headed. . . . .  | <a href="#">Lespedeza capitata</a>             |
| Bergamot. . . . .                         | <a href="#">Monarda fistulosa</a>         | Buttercup, Fig. . . . .             | <a href="#">Ranunculus ficaria</a>             |
|   |   | Buttercup, Small-flowered. . . . .  | <a href="#">Ranunculus abortivus</a>           |
|   |   | Buttercup, Swamp. . . . .           | <a href="#">Ranunculus septentrionalis</a>     |

Butterfly Weed. . . . . *Asclepias tuberosa*  
 Butternut. . . . . *Juglans cinerea*  
 Butterweed. . . . . *Senecio glabellus*

**C**ampion, Rose. . . . . *Lychnis coronaria*  
 Cardinal Flower. . . . . *Lobelia cardinalis*  
 Carpetweed. . . . . *Mollugo verticillata*  
 Carrot, Wild. . . . . *Daucus carota*  
 Cat Briar, Bristly. . . . . *Smilax tamnoides*  
 Cat-tail, Hybrid. . . . . *Typha x glauca*  
 Catalpa, Northern. . . . . *Catalpa speciosa*  
 Catchfly, Royal. . . . . *Silene regia*  
 Catchfly, Sleepy. . . . . *Silene antirrhina*  
 Catnip. . . . . *Nepeta cataria*  
 Cheat. . . . . *Bromus secalinus*  
 Cherry, European Bird. . . . . *Prunus padus*  
 Cherry, Sweet. . . . . *Prunus avium*  
 Cherry, Wild Black. . . . . *Prunus serotina*  
 Chess, Downy. . . . . *Bromus tectorum*  
 Chess, Hairy. . . . . *Bromus commutatus*  
 Chickweed, Clammy  
   Mouse-eared. . . . . *Cerastium glomeratum*  
 Chickweed, Common. . . . . *Stellaria media*  
 Chickweed, Common  
   Mouse-eared. . . . . *Cerastium fontanum*  
 Chickweed, Four-stamen. . . . . *Cerastium diffusum*  
 Chickweed, Giant. . . . . *Myosoton aquaticum*  
 Chickweed, Jagged. . . . . *Holosteum umbellatum*  
 Chicory. . . . . *Cichorium intybus*  
 Cicely, Sweet. . . . . *Osmorhiza claytonii*  
 Cinquefoil, Common. . . . . *Potentilla simplex*  
 Cinquefoil, Prairie. . . . . *Potentilla arguta*  
 Cinquefoil, Rough. . . . . *Potentilla norvegica*  
 Clearweed. . . . . *Pilea pumila*  
 Cleavers. . . . . *Galium aparine*  
 Clematis, Yam-leaved. . . . . *Clematis terniflora*  
 Clover, Alsike. . . . . *Trifolium hybridum*  
 Clover, Red. . . . . *Trifolium pratense*  
 Clover, White. . . . . *Trifolium repens*  
 Cocklebur, Common. . . . . *Xanthium strumarium*  
 Coffee Tree, Kentucky. . . . . *Gymnocladus dioicus*  
 Columbine, Wild. . . . . *Aquilegia canadensis*  
 Compass Plant. . . . . *Silphium laciniatum*  
 Coneflower, Broad-leaved  
   Purple. . . . . *Echinacea purpurea*  
 Coneflower, Pale Purple. . . . . *Echinacea pallida*  
 Coneflower, Sullivant's. . . . . *Rudbeckia sullivantii*  
 Coneflower, Yellow. . . . . *Ratibida pinnata*  
 Coralberry. . . . . *Symphoricarpos orbiculatus*  
 Coreopsis, Golden. . . . . *Coreopsis tinctoria*  
 Coreopsis, Large-flowered. . . . . *Coreopsis grandiflora*  
 Coreopsis, Prairie. . . . . *Coreopsis palmata*  
 Coreopsis, Tall. . . . . *Coreopsis tripteris*  
 Coriander. . . . . *Coriandrum sativum*  
 Cork Tree, Amur. . . . . *Phellodendron amurense*  
 Corn. . . . . *Zea mays*  
 Cosmos, Common. . . . . *Cosmos bipinnatus*  
 Cottonwood, Eastern. . . . . *Populus deltoides*

Crab, Iowa. . . . . *Malus ioensis*  
 Crab, Japanese. . . . . *Malus sieboldii*  
 Crab, Plum-leaved. . . . . *Malus prunifolia*  
 Crab, Siberian. . . . . *Malus baccata*  
 Crab, Soulard. . . . . *Malus x soulardii*  
 Crabgrass, Common. . . . . *Digitaria sanguinalis*  
 Crabgrass, Smooth. . . . . *Digitaria ischaemum*  
 Cranberry, High-bush. . . . . *Viburnum trilobum*  
 Cranberry Bush, European. . . . . *Viburnum opulus*  
 Crane's Bill. . . . . *Erodium cicutarium*  
 Creeping Charlie. . . . . *Glechoma hederacea*  
 Crocus, Spring. . . . . *Crocus vernus*  
 Crownbeard, Yellow. . . . . *Verbesina helianthoides*  
 Culver's Root. . . . . *Veronicastrum virginicum*  
 Cup Plant. . . . . *Silphium perfoliatum*  
 Cypress, Bald. . . . . *Taxodium distichum*

**D**affodil. . . . . *Narcissus pseudo-narcissus*  
 Daisy, Ox-eye. . . . . *Leucanthemum vulgare*  
 Daisy, Peruvian. . . . . *Galinsoga quadrisulcata*  
 Dandelion, Common. . . . . *Taraxacum officinale*  
 Day Lily, Orange. . . . . *Hemerocallis fulva*  
 Day-flower, Common. . . . . *Commelina communis*  
 Dead Nettle, Purple. . . . . *Lamium purpureum*  
 Dewberry, Common. . . . . *Rubus flagellaris*  
 Dill . . . . . *Anethum graveolens*  
 Dock, Broad-leaved. . . . . *Rumex obtusifolius*  
 Dock, Curly. . . . . *Rumex crispus*  
 Dock, Pale. . . . . *Rumex altissimus*  
 Dock, Prairie. . . . . *Silphium terebinthinaceum*  
 Dogbane, Common. . . . . *Apocynum cannabinum*  
 Dogwood, Alternate-leaved. . . . . *Cornus alternifolia*  
 Dogwood, Flowering. . . . . *Cornus florida*  
 Dogwood, Red-osier. . . . . *Cornus sericea*  
 Dogwood, Rough-leaved. . . . . *Cornus drummondii*  
 Dogwood, Swamp. . . . . *Cornus amomum*  
 Dragonhead, Showy False. . . . . *Physostegia speciosa*  
 Dropseed, Prairie. . . . . *Sporobolus heterolepis*  
 Duckweed, Lesser. . . . . *Lemna minor*

**E**lderberry. . . . . *Sambucus canadensis*  
 Elm, American. . . . . *Ulmus americana*  
 Elm, Siberian. . . . . *Ulmus pumila*  
 Elm, Slippery. . . . . *Ulmus rubra*  
 Evening Primrose, Common. . . . . *Oenothera biennis*  
 Everlasting, Sweet. . . . . *Pseudognaphalium obtusifolium*

**F**ern, Bronze. . . . . *Botrychium dissectum*  
 Fescue, Red. . . . . *Festuca rubra*  
 Fescue, Tall. . . . . *Festuca arundinacea*  
 Feverfew. . . . . *Parthenium integrifolium*  
 Figwort, Maryland. . . . . *Scrophularia marilandica*  
 Fir, Douglas. . . . . *Pseudotsuga menziesii*  
 Fireweed. . . . . *Erechtites hieracifolia*  
 Flat-sedge, Rusty. . . . . *Cyperus ferruginescens*  
 Flat-sedge, Straw-colored. . . . . *Cyperus strigosus*  
 Flax, Wild. . . . . *Linum medium*

Fleabane, Annual. . . . . *Erigeron annuus*  
 Fleabane, Marsh. . . . . *Erigeron philadelphicus*  
 Flower of an Hour. . . . . *Hibiscus trionum*  
 Fog-fruit. . . . . *Phyla lanceolata*  
 Foxglove, Grecian. . . . . *Digitalis lanata*  
 Foxtail, Carolina. . . . . *Alopecurus carolinianus*  
 Foxtail, Giant. . . . . *Setaria faberi*  
 Foxtail, Green. . . . . *Setaria viridis*  
 Foxtail, Yellow. . . . . *Setaria glauca*

**G**arlic. . . . . *Allium sativum*  
 Garlic, Field. . . . . *Allium vineale*  
 Gaura, Biennial. . . . . *Gaura biennis*  
 Gentian, Bottle. . . . . *Gentiana andrewsii*  
 Gentian, Hybrid Closed. . . . . *Gentiana x pallidocyanea*  
 Gentian, Pale. . . . . *Gentiana alba*  
 Geranium, Wild. . . . . *Geranium maculatum*  
 Germander, American. . . . . *Teucrium canadense*  
 Giant Hyssop, Purple. . . . . *Agastache scrophulariaefolia*  
 Giant Hyssop, Yellow. . . . . *Agastache nepetoides*  
 Ginger, Wild. . . . . *Asarum canadense*  
 Ginkgo. . . . . *Ginkgo biloba*  
 Goat's Beard, Common. . . . . *Tragopogon pratensis*  
 Goldenglow. . . . . *Rudbeckia laciniata*  
 Goldenrod, Gray. . . . . *Solidago nemoralis*  
 Goldenrod, Hairy  
     Grass-leaved. . . . . *Euthamia graminifolia*  
 Goldenrod, Missouri. . . . . *Solidago missouriensis*  
 Goldenrod, Showy. . . . . *Solidago speciosa*  
 Goldenrod, Stiff. . . . . *Oligoneuron rigidum*  
 Goldenrod, Tall. . . . . *Solidago altissima*  
 Goldenrod, Viscid  
     Grass-leaved. . . . . *Euthamia gymnospermoides*  
 Gooseberry, Prickly. . . . . *Ribes cynosbati*  
 Gourd, White-flowered. . . . . *Lagenaria siceraria*  
 Grama, Side-oats. . . . . *Bouteloua curtipendula*  
 Grape, Frost. . . . . *Vitis vulpina*  
 Grape, Riverbank. . . . . *Vitis riparia*  
 Grape, Winter. . . . . *Vitis cinerea*  
 Grass, Beak. . . . . *Diarrhena americana*  
 Grass, Blue-joint. . . . . *Calamagrostis canadensis*  
 Grass, Bottlebrush. . . . . *Elymus hystrix*  
 Grass, Buffalo. . . . . *Buchloë dactyloides*  
 Grass, Chinese Silver. . . . . *Miscanthus sinensis*  
 Grass, Creeping Bent. . . . . *Agrostis stolonifera*  
 Grass, English Rye. . . . . *Lolium perenne*  
 Grass, Fowl Manna. . . . . *Glyceria striata*  
 Grass, Gama. . . . . *Tripsacum dactyloides*  
 Grass, Goose. . . . . *Eleusine indica*  
 Grass, Indian. . . . . *Sorghastrum nutans*  
 Grass, Little Love. . . . . *Eragrostis minor*  
 Grass, Orchard. . . . . *Dactylis glomerata*  
 Grass, Poverty. . . . . *Sporobolus vaginiflorus*  
 Grass, Prairie Cord. . . . . *Spartina pectinata*  
 Grass, Purple Lace. . . . . *Eragrostis spectabilis*  
 Grass, Quack. . . . . *Agropyron repens*  
 Grass, Reed Canary. . . . . *Phalaris arundinacea*  
 Grass, Rice Cut. . . . . *Leersia oryzoides*

Grass, Satin. . . . . *Muhlenbergia frondosa*  
 Grass, Stinking Love. . . . . *Eragrostis cilianensis*  
 Grass, Switch. . . . . *Panicum virgatum*  
 Grass, Tickle. . . . . *Agrostis hyemalis*  
 Grass, Tufted Love. . . . . *Eragrostis pectinacea*  
 Grass, Upland Bent. . . . . *Agrostis perennans*  
 Grass, Wedge. . . . . *Sphenopholis obtusata*  
 Grass, White. . . . . *Leersia virginica*  
 Grass, Windmill. . . . . *Chloris verticillata*  
 Ground Cherry, Clammy. . . . . *Physalis heterophylla*  
 Ground Cherry, Smooth. . . . . *Physalis subglabrata*

**H**ackberry. . . . . *Celtis occidentalis*  
 Haw, Black. . . . . *Viburnum prunifolium*  
 Hawthorn, Downy. . . . . *Crataegus mollis*  
 Hawthorn, Long-spined. . . . . *Crataegus succulenta*  
 Hazel, American. . . . . *Corylus americana*  
 Hedge Nettle, Marsh. . . . . *Stachys pilosa*  
 Hedge-apple. . . . . *Maclura pomifera*  
 Hellebore, False. . . . . *Veratrum woodii*  
 Hemlock, Eastern. . . . . *Tsuga canadensis*  
 Hemlock, Poison. . . . . *Conium maculatum*  
 Hemp, Prairie Indian. . . . . *Apocynum sibiricum*  
 Hemp, Water. . . . . *Amaranthus tuberculatus*  
 Henbit. . . . . *Lamium amplexicaule*  
 Hickory, Shagbark. . . . . *Carya ovata*  
 Hickory, Sweet Pignut. . . . . *Carya ovalis*  
 Holly, Winterberry. . . . . *Ilex verticillata*  
 Hollyhock. . . . . *Alcea rosea*  
 Honewort. . . . . *Cryptotaenia canadensis*  
 Honeysuckle, Amur. . . . . *Lonicera maackii*  
 Honeysuckle, Japanese. . . . . *Lonicera japonica*  
 Honeysuckle, Showy Fly. . . . . *Lonicera x bella*  
 Honeysuckle, Tartarian. . . . . *Lonicera tatarica*  
 Hop Clover, Low. . . . . *Trifolium campestre*  
 Hops. . . . . *Humulus lupulus*  
 Hornbeam, Hop. . . . . *Ostrya virginiana*  
 Horse Nettle. . . . . *Solanum carolinense*  
 Horseradish. . . . . *Armoracia rusticana*  
 Hyacinth, Wild. . . . . *Camassia scilloides*

**I**ndigo, False. . . . . *Amorpha fruticosa*  
 Indigo, White Wild. . . . . *Baptisia alba*  
 Iris, Garden. . . . . *Iris x germanica*  
 Iris, Wild Blue. . . . . *Iris shrevei*  
 Ironweed, Baldwin's. . . . . *Vernonia baldwinii*  
 Ironweed, Illinois. . . . . *Vernonia x illinoensis*  
 Ironweed, Missouri. . . . . *Vernonia missurica*  
 Ironweed, Ozark. . . . . *Vernonia arkansana*  
 Ironweed, Smooth. . . . . *Vernonia fasciculata*  
 Ivy, Poison. . . . . *Toxicodendron radicans*

**J**ack in the Pulpit. . . . . *Arisaema triphyllum*  
 Jacob's Ladder. . . . . *Polemonium reptans*  
 Jimson Weed. . . . . *Datura stramonium*  
 Joe Pye Weed, Purple. . . . . *Eupatoriadelphus purpureus*

**K**notweed, Erect. . . . . *Polygonum erectum*  
 Knotweed, Sidewalk. . . . . *Polygonum arenastrum*  
 Knotweed, Virginia. . . . . *Antenoron virginianum*

**L**adies' Tresses, October. . . . *Spiranthes ovalis*  
 Lady's Slipper, Yellow. . . . . *Cypripedium pubescens*  
 Lady's Thumb. . . . . *Persicaria vulgaris*  
 Lamb's Quarters. . . . . *Chenopodium album*  
 Larkspur, Rocket. . . . . *Consolida ajacis*  
 Leadplant. . . . . *Amorpha canescens*  
 Lespedeza, Sericea. . . . . *Lespedeza cuneata*  
 Lettuce, Prickly. . . . . *Lactuca serriola*  
 Lettuce, Yellow Wild. . . . . *Lactuca canadensis*  
 Lilac, Japanese Tree. . . . . *Syringa reticulata*  
 Lily, Blackberry. . . . . *Belamcanda chinensis*  
 Lily, Tiger. . . . . *Lilium lancifolium*  
 Lily, Turk's Cap. . . . . *Lilium superbum*  
 Lily of the Valley. . . . . *Convallaria majalis*  
 Linden, Big-leaved. . . . . *Tilia platyphyllos*  
 Linden, Little-leaved. . . . . *Tilia cordata*  
 Linden, Silver. . . . . *Tilia tomentosa*  
 Lobelia, Great Blue. . . . . *Lobelia siphilitica*  
 Locust, Honey. . . . . *Gleditsia triacanthos*  
 Loosestrife, Fringed. . . . . *Lysimachia ciliata*  
 Loosestrife, Winged. . . . . *Lythrum alatum*  
 Lousewort, Canada. . . . . *Pedicularis canadensis*

**M**allow, Glade. . . . . *Napaea dioica*  
 Mallow, Common. . . . . *Malva neglecta*  
 Maple, Amur. . . . . *Acer ginnala*  
 Maple, Hedge. . . . . *Acer campestre*  
 Maple, Norway. . . . . *Acer platanoides*  
 Maple, Red. . . . . *Acer rubrum*  
 Maple, Silver. . . . . *Acer saccharinum*  
 Maple, Sugar. . . . . *Acer saccharum*  
 Mare's Tail. . . . . *Conyza canadensis*  
 Marigold, Marsh. . . . . *Caltha palustris*  
 Mayapple. . . . . *Podophyllum peltatum*  
 Mayweed. . . . . *Anthemis cotula*  
 Meadow Rue, Waxy. . . . . *Thalictrum revolutum*  
 Medic, Black. . . . . *Medicago lupulina*  
 Milk Vetch, Canada. . . . . *Astragalus canadensis*  
 Milkweed, Common. . . . . *Asclepias syriaca*  
 Milkweed, Swamp. . . . . *Asclepias incarnata*  
 Milkweed, Whorled. . . . . *Asclepias verticillata*  
 Millet, Wild. . . . . *Echinochloa muricata*  
 Mint, Field. . . . . *Mentha arvensis*  
 Mist-flower, Blue. . . . . *Conoclinium coelestinum*  
 Moneywort. . . . . *Lysimachia nummularia*  
 Monkey-flower, Sessile. . . . . *Mimulus ringens*  
 Moonseed. . . . . *Menispermum canadensis*  
 Morning Glory, Common. . . . . *Ipomoea purpurea*  
 Morning Glory, Ivy-leaved. . . . *Ipomoea hederacea*  
 Motherwort. . . . . *Leonurus cardiaca*  
 Mountain Mint, Hairy. . . . . *Pycnanthemum pilosum*  
 Mountain Mint, Slender. . . . . *Pycnanthemum tenuifolium*  
 Mountain Mint, Virginia. . . . . *Pycnanthemum virginianum*

Mugwort, Common. . . . . *Artemisia vulgaris*  
 Mulberry, White. . . . . *Morus alba*  
 Mullein, Moth. . . . . *Verbascum blattaria*  
 Musclewood. . . . . *Carpinus caroliniana*  
 Mustard, Black. . . . . *Brassica nigra*  
 Mustard, Field. . . . . *Brassica rapa*  
 Mustard, Hedge. . . . . *Sisymbrium officinale*  
 Mustard, Garlic. . . . . *Alliaria petiolata*  
 Mustard, Tansy. . . . . *Descurainia pinnata*  
 Mustard Greens. . . . . *Brassica juncea*

**N**annyberry. . . . . *Viburnum lentago*  
 Nettle, False. . . . . *Boehmeria cylindrica*  
 Nightshade, Black. . . . . *Solanum ptycanthum*  
 Nightshade, Deadly. . . . . *Solanum dulcamara*  
 Nightshade, Enchanter's. . . . . *Circaea lutetiana*  
 Nimble Will. . . . . *Muhlenbergia schreberi*  
 Nut-sedge, Yellow. . . . . *Cyperus esculentus*

**O**ak, Burr. . . . . *Quercus macrocarpa*  
 Oak, Chinquapin. . . . . *Quercus muhlenbergii*  
 Oak, Pin. . . . . *Quercus palustris*  
 Oak, Red. . . . . *Quercus rubra*  
 Oak, Rock Chestnut. . . . . *Quercus prinus*  
 Oak, Saul's. . . . . *Quercus x saulii*  
 Oak, Scarlet. . . . . *Quercus coccinea*  
 Oak, Shingle. . . . . *Quercus imbricaria*  
 Oak, Shumard. . . . . *Quercus shumardii*  
 Oak, Swamp White. . . . . *Quercus bicolor*  
 Oak, White. . . . . *Quercus alba*  
 Oats . . . . . *Avena sativa*  
 Oats, Sea. . . . . *Chasmanthium latifolium*  
 Obe-wan-conobea. . . . . *Leucospora multifida*  
 Obedient Plant. . . . . *Physostegia virginiana*  
 Okra. . . . . *Hibiscus esculentus*  
 Olive, Autumn. . . . . *Elaeagnus umbellata*  
 Onion, Wild. . . . . *Allium canadense*  
 Orach, Common. . . . . *Atriplex patula*  
 Orchid, Twayblade. . . . . *Liparis liliifolia*

**P**anicum, Fall. . . . . *Panicum dichotomiflorum*  
 Parsley, Thicket. . . . . *Perideridia americana*  
 Parsnip, Meadow. . . . . *Thaspium trifoliatum*  
 Parsnip, Wild. . . . . *Pastinaca sativa*  
 Pawpaw. . . . . *Asimina triloba*  
 Pea, Partridge. . . . . *Chamaecrista fasciculata*  
 Pear, Callery. . . . . *Pyrus calleryana*  
 Pear, Long-stalked. . . . . *Pyrus longipes*  
 Pecan. . . . . *Carya illinoensis*  
 Penny Cress, Field. . . . . *Thlaspi arvensis*  
 Pepper Grass, Common. . . . . *Lepidium virginicum*  
 Pepper Grass, Field. . . . . *Lepidium campestre*  
 Pepper Grass, Small. . . . . *Lepidium densiflorum*  
 Peppermint. . . . . *Mentha x piperita*  
 Periwinkle, Common. . . . . *Vinca minor*  
 Persimmon. . . . . *Diospyros virginiana*  
 Petunia, Wild. . . . . *Ruellia humilis*



Phlox, Blue. . . . . *Phlox divaricata*  
 Phlox, Summer. . . . . *Phlox paniculata*  
 Pigweed, Green. . . . . *Amaranthus hybridus*  
 Pigweed, Prostrate. . . . . *Amaranthus blitoides*  
 Pigweed, Spiny. . . . . *Amaranthus spinosus*  
 Pimpernel, Scarlet. . . . . *Anagallis arvensis*  
 Pine, Limber. . . . . *Pinus flexilis*  
 Pine, White. . . . . *Pinus strobus*  
 Pineapple Weed. . . . . *Matricaria discoidea*  
 Pink, Deptford. . . . . *Dianthus armeria*  
 Pinkweed. . . . . *Persicaria pensylvanica*  
 Plane Tree, London. . . . . *Platanus x acerifolia*  
 Plantain, Common. . . . . *Plantago major*  
 Plantain, Rugel's. . . . . *Plantago rugelii*  
 Plum, Wild. . . . . *Prunus americana*  
 Pokeweed. . . . . *Phytolacca americana*  
 Pondweed, Long-leaved. . . . . *Potamogeton nodosus*  
 Poppy Mallow, Fringed. . . . . *Callirhoë digitata*  
 Prairie Clover, Purple. . . . . *Dalea purpurea*  
 Prairie Clover, White. . . . . *Dalea candida*  
 Primrose Willow, Creeping. . . . . *Ludwigia peploides*  
 Privet, Border. . . . . *Ligustrum obtusifolium*  
 Privet, Common. . . . . *Ligustrum vulgare*  
 Pumpkin, Field. . . . . *Cucurbita pepo*  
 Purple-top. . . . . *Tridens flavus*  
 Purslane. . . . . *Portulacca oleracea*  
 Pussetoes, Parlin's. . . . . *Antennaria parlinii*

**Q**ueen of the Prairie. . . . . *Filipendula rubra*

**R**adish, Wild. . . . . *Raphanus raphanistrum*  
 Ragweed, Common. . . . . *Ambrosia artemisiifolia*  
 Ragweed, Giant. . . . . *Ambrosia trifida*  
 Raspberry, Black. . . . . *Rubus occidentalis*  
 Rattlesnake Master. . . . . *Eryngium yuccifolium*  
 Red Cedar, Eastern. . . . . *Juniperus virginiana*  
 Redbud. . . . . *Cercis canadensis*  
 Redtop. . . . . *Agrostis gigantea*  
 Rocket, Purple. . . . . *Iodanthus pinnatifidus*  
 Rocket, Yellow. . . . . *Barbarea vulgaris*  
 Rose, Multiflora. . . . . *Rosa multiflora*  
 Rose, Pasture. . . . . *Rosa carolina*  
 Rose Mallow, Halberd-leaved. *Hibiscus laevis*  
 Rose Mallow, Swamp. . . . . *Hibiscus moscheutos*  
 Rosinweed. . . . . *Silphium integrifolium*  
 Rue Anemone, False. . . . . *Enemion biternatum*  
 Ruellia, Smooth. . . . . *Ruellia strepens*  
 Rush, Dudley's. . . . . *Juncus dudleyi*  
 Rush, Inland. . . . . *Juncus interior*  
 Rush, Path. . . . . *Juncus tenuis*  
 Rush, Torrey's. . . . . *Juncus torreyi*  
 Rye, Nodding Wild. . . . . *Elymus canadensis*  
 Rye, Silky Wild. . . . . *Elymus villosus*  
 Rye, Virginia Wild. . . . . *Elymus virginicus*

**S**age, Wild Blue. . . . . *Salvia azurea*  
 Sandwort, Thyme-leaved. . . . . *Arenaria serpyllifolia*

Sassafras. . . . . *Sassafras albidum*  
 Sedge, Awl-fruited Oval. . . . . *Carex tribuloides*  
 Sedge, Bristly Cat-tail. . . . . *Carex frankii*  
 Sedge, Broad-leaved Woolly. . . . . *Carex pellita*  
 Sedge, Brown Fox. . . . . *Carex vulpinoidea*  
 Sedge, Capitata. . . . . *Carex cephalophora*  
 Sedge, Common Fox. . . . . *Carex stipata*  
 Sedge, Common Wood. . . . . *Carex blanda*  
 Sedge, Crested Oval. . . . . *Carex cristatella*  
 Sedge, Davis's. . . . . *Carex davisii*  
 Sedge, James's. . . . . *Carex jamesii*  
 Sedge, Long-awned Bracted. . . . . *Carex gravida*  
 Sedge, Long-toothed Lake. . . . . *Carex laeviconica*  
 Sedge, Pale. . . . . *Carex granularis*  
 Sedge, Porcupine. . . . . *Carex hystericina*  
 Sedge, Spreading Oval. . . . . *Carex normalis*  
 Sedge, Wood Gray. . . . . *Carex grisea*  
 Self-heal. . . . . *Prunella vulgaris*  
 Senna, Maryland. . . . . *Senna marilandica*  
 Serviceberry, Hybrid. . . . . *Amelanchier x grandiflora*  
 Shadbush. . . . . *Amelanchier arborea*  
 Shepherd's Purse. . . . . *Capsella bursa-pastoris*  
 Shooting Star. . . . . *Dodecatheon meadia*  
 Sida, Prickly. . . . . *Sida spinosa*  
 Smartweed, Creeping. . . . . *Persicaria cespitosa*  
 Smartweed, Dotted. . . . . *Persicaria punctata*  
 Smartweed, Scarlet. . . . . *Persicaria coccinea*  
 Smoke Tree, European. . . . . *Cotinus coggygria*  
 Snakeroot, Canada Black. . . . . *Sanicula canadensis*  
 Snakeroot, Common Black. . . . . *Sanicula odorata*  
 Snakeroot, White. . . . . *Ageratina altissima*  
 Sneezeweed, Yellow. . . . . *Helenium autumnale*  
 Solomon's Seal, False. . . . . *Smilacina racemosa*  
 Solomon's Seal, Great. . . . . *Polygonatum commutatum*  
 Solomon's Seal, Starry False. . . . . *Smilacina stellata*  
 Sow Thistle, Prickly. . . . . *Sonchus asper*  
 Sow Thistle, Smooth. . . . . *Sonchus oleraceus*  
 Soybean. . . . . *Glycine max*  
 Spearmint. . . . . *Mentha spicata*  
 Speedwell, Corn. . . . . *Veronica arvensis*  
 Speedwell, Purslane. . . . . *Veronica peregrina*  
 Speedwell, Thyme-leaved. . . . . *Veronica serpyllifolia*  
 Speedwell, Wayside. . . . . *Veronica polita*  
 Spicebush. . . . . *Lindera benzoin*  
 Spider Flower. . . . . *Cleome hassleriana*  
 Spiderwort, Ohio. . . . . *Tradescantia ohiensis*  
 Spindle Tree, Japanese. . . . . *Euonymus yedoensis*  
 Spring Beauty. . . . . *Claytonia virginica*  
 Spurge, Flowering. . . . . *Euphorbia corollata*  
 Spurge, Green Creeping. . . . . *Chamaesyce prostrata*  
 Spurge, Nodding. . . . . *Chamaesyce nutans*  
 Spurge, Spotted. . . . . *Chamaesyce maculata*  
 Squill, Siberian. . . . . *Scilla sibirica*  
 Squirrel-tail. . . . . *Hordeum jubatum*  
 St. John's Wort, Common. . . . . *Hypericum perforatum*  
 St. John's Wort, Giant. . . . . *Hypericum pyramidatum*  
 St. John's Wort, Spotted. . . . . *Hypericum punctatum*  
 Star of Bethlehem. . . . . *Ornithogalum umbellatum*

Stickseed. . . . . *Hackelia virginiana*  
 Stonecrop, Ditch. . . . . *Penthorum sedoides*  
 Strawberry, Domestic. . . . . *Fragaria x ananassa*  
 Strawberry, Indian. . . . . *Duchesnea indica*  
 Strawberry, Wild. . . . . *Fragaria virginiana*  
 Sugarberry. . . . . *Celtis laevigata*  
 Sumac, Smooth. . . . . *Rhus glabra*  
 Sumac, Staghorn. . . . . *Rhus hirta*  
 Sunflower, Annual. . . . . *Helianthus annuus*  
 Sunflower, Downy. . . . . *Helianthus mollis*  
 Sunflower, False. . . . . *Heliopsis helianthoides*  
 Sunflower, Luxuriant. . . . . *Helianthus x luxurians*  
 Sunflower, Pale-leaved. . . . . *Helianthus strumosus*  
 Sunflower, Saw-toothed. . . . . *Helianthus grosseserratus*  
 Sunflower, Ten-petaled. . . . . *Helianthus decapetalus*  
 Sunflower, Tall. . . . . *Helianthus giganteus*  
 Susan, Black-eyed. . . . . *Rudbeckia hirta*  
 Susan, Brown-eyed. . . . . *Rudbeckia triloba*  
 Susan, Sweet Black-eyed. . . . . *Rudbeckia subtomentosa*  
 Swamp Marigold. . . . . *Bidens polylepis*  
 Sweet Clover, White. . . . . *Melilotus albus*  
 Sweet Clover, Yellow. . . . . *Melilotus officinalis*  
 Sweet Flag, One-veined. . . . . *Acorus calamus*  
 Sweet Potato, Wild. . . . . *Ipomoea pandurata*  
 Sweetgum. . . . . *Liquidambar styraciflua*  
 Sycamore. . . . . *Platanus occidentalis*

**T**histle, Canada. . . . . *Cirsium arvense*  
 Thistle, Field. . . . . *Cirsium discolor*  
 Thorn, Cock's Spur. . . . . *Crataegus crus-galli*  
 Thorn, Washington. . . . . *Crataegus phaenopyrum*  
 Three-seeded Mercury,  
     Common. . . . . *Acalypha rhomboidea*  
 Tick Trefoil, Illinois. . . . . *Desmodium illinoense*  
 Tick Trefoil, Showy. . . . . *Desmodium canadense*  
 Tickseed, Purple-stemmed. . . . . *Bidens connata*  
 Timothy. . . . . *Phleum pratense*  
 Tomato. . . . . *Lycopersicon esculentum*  
 Toothwort. . . . . *Dentaria laciniata*  
 Tree of Heaven. . . . . *Ailanthus altissima*  
 Trout Lily, White. . . . . *Erythronium albidum*  
 Trumpet Creeper. . . . . *Campsis radicans*  
 Tuliptree. . . . . *Liriodendron tulipifera*  
 Turtlehead, White. . . . . *Chelone glabra*

**V**elvet-leaf. . . . . *Abutilon theophrastii*  
 Vervain, Blue. . . . . *Verbena hastata*  
 Vervain, Prostrate. . . . . *Verbena bracteata*  
 Vervain, White. . . . . *Verbena urticifolia*  
 Vetch, Crown. . . . . *Securigera varia*  
 Vetch, Narrow-leaved. . . . . *Vicia angustifolia*  
 Violet, Common Blue. . . . . *Viola pratensis*  
 Violet, Confederate. . . . . *Viola bicolor*  
 Violet, Cream. . . . . *Viola striata*  
 Violet, Downy Yellow. . . . . *Viola pubescens*  
 Virginia Creeper. . . . . *Parthenocissus quinquefolia*

**W**ahoo. . . . . *Euonymus atropurpureus*  
 Wake Robin. . . . . *Trillium recurvatum*  
 Walnut, Black. . . . . *Juglans nigra*  
 Water Parsley, Pacific. . . . . *Oenanthe sarmentosa*  
 Water Pepper. . . . . *Persicaria hydropiper*  
 Water Plantain,  
     Small-flowered. . . . . *Alisma subcordatum*  
 Waterleaf, Virginia. . . . . *Hydrophyllum virginianum*  
 Wheat. . . . . *Triticum aestivum*  
 Whitlow Grass, Vernal. . . . . *Eriophila verna*  
 Willow, Black. . . . . *Salix nigra*  
 Willow, Golden Weeping. . . . . *Salix alba*  
 Willow, Peach-leaved. . . . . *Salix amygdaloides*  
 Willow, Sandbar. . . . . *Salix interior*  
 Willow Herb, Cinnamon. . . . . *Epilobium coloratum*  
 Windflower, Japanese. . . . . *Anemone hupehensis*  
 Wingstem. . . . . *Verbesina alternifolia*  
 Wintercreeper. . . . . *Euonymus fortunei*  
 Witch Hazel, Vernal. . . . . *Hamamelis vernalis*  
 Wood Betony, Swamp. . . . . *Pedicularis lanceolata*  
 Wood Mint, Hairy. . . . . *Blephilia hirsuta*  
 Wood Reed, Stout. . . . . *Cinna arundinacea*  
 Wood Sorrel,  
     Common Yellow. . . . . *Oxalis stricta*  
 Wood Sorrel, Tall Yellow. . . . . *Oxalis fontana*  
 Wormwood, Annual. . . . . *Artemisia annua*

**Y**arrow. . . . . *Achillea millefolium*  
 Yellow Cress, Marsh. . . . . *Rorippa palustris*  
 Yellow Cress, Spreading. . . . . *Rorippa sinuata*  
 Yerba de Tajo. . . . . *Eclipta prostrata*  
 Yew, English. . . . . *Taxus baccata*

**Z**oysia. . . . . *Zoysia japonica*