

Vascular Flora of Van Horn Woods, Plainfield Township, Will County, IL

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ABSTRACT

The vascular flora at Van Horn Woods Park was surveyed during the 1998-2000 growing seasons. This park is a 30 hectare site located in Plainfield Township, Will County, Illinois (SE1/4 S27 T36N R9E). A total of 246 taxa, representing 160 genera and 67 families, were identified within or immediately adjacent to the park. Seventy-one percent of these taxa were native. Four taxa were collected and submitted to the Morton Arboretum as new county records for Will County. The quality of this site as a natural area was also assessed using quantitative methods based on floral composition and diversity. The site was found to have a mean C value (\bar{C}) of 3.44, a modal C value of 5, and a floristic quality index (I) rating of 45.51. These results indicate that Van Horn Woods is a site adequate enough in natural floristic quality to be worthy of protection and preservation.

INTRODUCTION

Floral inventories provide valuable information on the diversity of natural areas, the types of habitats within natural areas, and the quality of those habitats with respect to their preservation and conservation value. Unfortunately, many natural areas have yet to be adequately inventoried, and those that have are seldom quantitatively assessed for their floristic quality. Methods for conducting such quantitative assessments have been developed and previously used in the Chicago area (see Swink and Wilhelm, 1994; Young, 1994). In this study, I performed a quantitative floral-based assessment of Van Horn Woods Park, Will County, IL. Before this study, no record existed regarding the flora at this site.

MATERIALS AND METHODS

Study Site

Van Horn Woods Park is located west of Interstate 55, north of Caton Farm Road and east of Lily Cache Road in Plainfield Township, Will County, IL (SE1/4 S27 T36N R9E) — not to be confused with Van Horne Woods Forest Preserve, Frankfort Township, Will County, IL. Lily Cache Creek, which empties into the Dupage River, flows through the center of this park, splitting it into east and west regions. The park has a level topography, with very minor and gradual increases in elevation occurring as distance increases from Lily Cache Creek.

The entire site is approximately 30 hectares and is owned and maintained by the Plainfield Township Park District. Areas within the park that are frequently visited include picnic sites, soccer fields, playgrounds, and a one-hectare pond. The wooded areas within the park (approximately 16 hectares) are only infrequently visited. Most of these woods are wet-mesic floodplain woods that border Lily Cache Creek. There are also some mesic woods that lie outside the floodplain, particularly on the east end of the park, as well as some mowed or partially mowed fields and semi-wooded open areas characteristic of transition zones between woodlands and fields.

Some of the land immediately adjacent to the park on the east side of Lily Cache Creek was also included in this study. This land consists of dense mesic woods, wet-mesic floodplain woods, and semi-wooded open areas. Unfortunately, much of this adjacent habitat was recently destroyed as ground was cleared to build houses along the border of the park. Most of this destruction did not take place until nearly two years of successful fieldwork had been conducted within these areas.

Data Collection

I visited Van Horn Woods three to four times each month from the beginning of March to the end of October in 1998 and 1999. Several additional visits were also made during the growing season of 2000. I hiked throughout the park during each visit, locating plants, usually when in flower, and identifying them to the level of species or in some cases variety. All vascular plants exclusive of graminoids (Cyperaceae, Gramineae, and Juncaceae) were identified. Plants that the Plainfield Park District had obviously planted within the park were ignored.

Several books were used to identify or confirm the identification of plant species. The most important of these were Plants of the Chicago Region (Swink and Wilhelm, 1994), Michigan Flora, Parts I, II, and III (Voss, 1972, 1985, and 1996), and Guide to the Vascular Flora of Illinois (Mohlenbrock, 1986). For inventory purposes, all species were listed according to the taxonomic nomenclature used by Swink and Wilhelm (1994).

I also collected voucher specimens for any species or hybrid located within the park that is not currently documented as a part of Will County flora in Plants of the Chicago Region (Swink and Wilhelm, 1994). These specimens were submitted to Floyd Swink at the Morton Arboretum in Lisle, IL.

Data Analysis

The reason for conducting the floral inventory at Van Horn Woods was not only to create a record of the plants growing within the park, but also to quantitatively evaluate the floristic quality of the park, using methods described by Swink and Wilhelm (1994) and Young (1994). The reader is advised to refer to these sources to obtain information on the specifics of these methods, which are based on *C* values that are assigned to plant species. The *C* value is known as the *coefficient of conservatism*, and simply put, it is a measure of how conservative or faithful a plant species is to a natural habitat or natural plant community (Swink and Wilhelm, 1994). A species that grows almost exclusively in undisturbed environments and as a part of a natural plant community has a high value for *C*. In contrast, a species that grows in a variety of environments, and regularly within

areas that are badly degraded or disturbed, has a low value for *C*. Swink and Wilhelm (1994) assign *C* values only to native plants and only within a range from 0-10. Young (1994) lists values for native and non-native plants and assigns numbers that extend below zero to many problematic introduced weeds.

Neither Young (1994) nor Swink and Wilhelm (1994), however, use the *C* values of non-native plants when calculating the *floristic quality index (I)* for a natural area. This index is a measure of the quality of a natural area based on the composition and diversity of native plant species. For Van Horn Woods, the *floristic quality index (I)* was calculated using the *C* values and methods described by Swink and Wilhelm (1994) ($I = \bar{C}\sqrt{N}$, where \bar{C} is the mean *C* value and *N* is total number of native species). My calculation, however, did not include the *C* values of graminoids since these plants weren't identified.

RESULTS

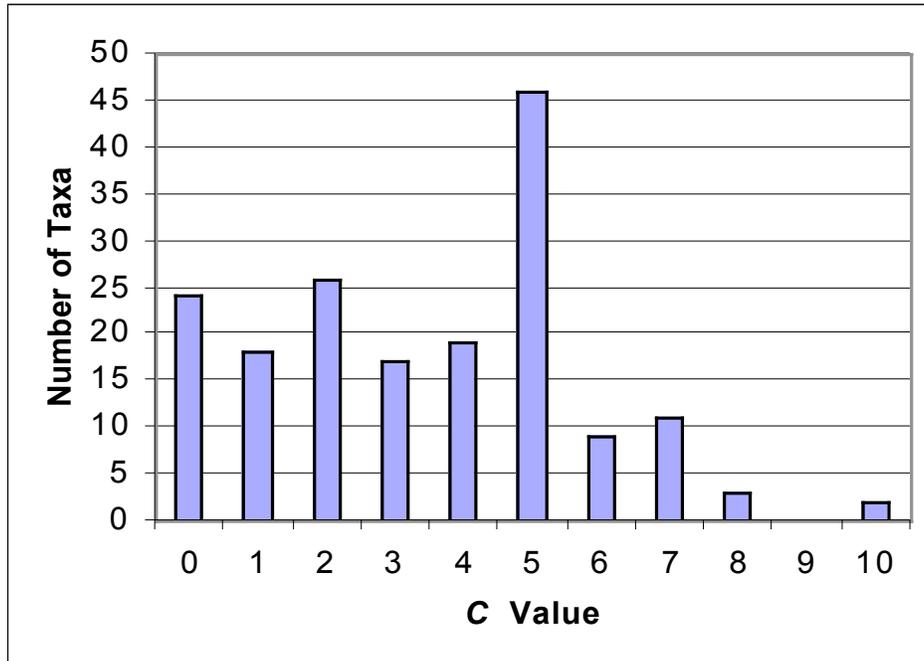
A total of 67 families, 160 genera, and 246 recognized species, varieties or hybrids were located growing at or immediately adjacent to Van Horn Woods Park (see Appendix 1 for a list of all 246 taxa). Additional varieties could easily have been distinguished, but only those varieties assigned their own *C* value by Swink and Wilhelm (1994) were identified. No Illinois endangered or threatened species were located. Four families had more than 10 taxa and these were as follows: Compositae (37), Rosaceae (26), Liliaceae (12), and Cruciferae (11). Twenty-three families were represented by only one species, and 19 families by only two species. Native plants comprised 71% (*n* = 175) of the 246 taxa identified. All but 11 taxa were located within park borders. Nine of the 11 taxa found just outside park borders were growing in the woods to the north of the park on the east side of Lily Cache Creek.

The mean *C* value (\bar{C}) for native plants was 3.44 (*n* = 175) and the mode was 5. All but 25 native plants had *C* values at or below the mode (see Figure 1). Only two plants, *Pontederia cordata* L. and *Silene virginica* L., had a *C* value of 10, and only the former was found growing inside park boundaries. The *floristic quality index (I)* was calculated to be 45.51 (*n* = 175). A value of 45 is equal to or greater than that of 50% of the natural areas assessed by Young (1994) in Kane County Wild Plants & Natural Areas (*n* = 46 areas assessed). If native species growing only outside the borders of the park are excluded, then \bar{C} drops slightly to 3.33 and *I* falls to 42.77 (*n* = 165).

Voucher specimens

Four taxa (one native and three non-native) that are not listed for Will County in Plants of the Chicago Region (Swink and Wilhelm, 1994) were collected from Van Horn Woods. All specimens were donated to Floyd Swink at the Morton Arboretum, Lisle, IL. The four taxa and their dates of collection are follows: *Crataegus chrysocarpa* Ashe (5/14/00), *Duchesnea indica* (Andrews) Focke (5/4/00), *Lonicera morrowii* A. Gray (5/4/00), and *Salix x rubens* Schrank (September 1998). It is worth noting that only one *C. chrysocarpa* and one *L. morrowii* were found within the park.

Figure 1. Frequency distribution of C values for native plants found at or immediately adjacent to Van Horn Woods.



DISCUSSION

The floristic quality index (I) rating of 45.51 clearly illustrates that Van Horn Woods and its immediate surroundings represent a natural area of significant quality that merits preservation. Swink and Wilhelm (1994, p.14) had the following to say about natural areas in the Chicago region with respect to their \bar{C} values and I values:

Generally, if the \bar{C} value for the site is 3.5 or higher or has an I value of 35 or more, one can be fairly confident that the site has sufficient floristic quality to be at least of marginal natural area quality. If the \bar{C} value is 4.5 or higher, or has an I value of 45 or more, then it is almost certain that the remnant has natural area potential.

We have not arrived at these threshold values arbitrarily. The best efforts of *de novo* ecosystem restoration attempts rarely achieve \bar{C} values higher than 3.5 or I values higher than 35. It then follows that when an area with higher values or indices is destroyed it cannot be replaced by an area of equal value and, therefore, is basically an unmitigable event.

Few words could better underscore the importance of this study and others like it, nor can words better emphasize the importance of protecting Van Horn Woods and its surroundings as a valuable natural area. Unfortunately, much of the adjacent habitat that served as a buffer zone to this park was recently destroyed. The wooded area along the northeast border, containing 9 of 11 species found only outside the park, is now only partially intact. It remains to be seen what effect this loss of adjacent natural habitat will have on the floral diversity within the park. The overall decline in total wooded area and the creation of new woodland edges are likely to generate a change in species composition and a decline in the frequency and diversity of native species (Saunders et al., 1991; Brothers and Spingarn, 1992; Collinge, 1996).

Invasive species pose an additional threat to the diversity of native flora within the park. A few examples of non-native plants at Van Horn Woods that have notorious reputations as invasive weeds are *Lonicera maackii* (Luken and Thieret, 1996; Hutchinson and Vankat, 1997), *Rhamnus cathartica* (Leitner, 1985; Archibold et al., 1997), and *Alliaria petiolata* (Nuzzo, 1993; Anderson et al., 1996). Of these, *Alliaria petiolata* (garlic mustard) is currently the most problematic weed at Van Horn Woods. It is spreading rapidly and has the potential to eliminate many of the native plant species. Efforts should be taken to decrease the prevalence of this weed within the park before too much native floral diversity is lost.

ACKNOWLEDGMENTS

I would like to thank IMSA alumni Matthew Wang and Deneen Zarada for their help in collecting data in the field during their senior year. I am also grateful to Floyd Swink who provided assistance in identifying several plants collected from Van Horn Woods. I would also like to thank my wife, Wendy, for being understanding of my work and for allowing me to use many Saturdays and Sundays to conduct field research. Lastly, I am grateful to the Illinois Mathematics and Science Academy and the Plainfield Township Park District for their continued support of this study.

LITERATURE CITED

- Anderson, R.C., S.S. Dhillon, and T.M. Kelley. 1996. Aspects of the ecology of an invasive plant, garlic mustard (*Alliaria petiolata*), in central Illinois. *Restoration Ecology* 4(2):181-191.
- Archibold, O.W., D. Brooks, and L. Delanoy. 1997. An investigation of the invasive shrub European buckthorn, *Rhamnus cathartica* L., near Saskatoon, Saskatchewan. *Canadian Field-Naturalist* 111(4): 617-621.
- Brothers, T.S. and A. Spingarn. 1992. Forest fragmentation and alien plant invasion of central Indiana old-growth forests. *Conservation Biology* 6(1): 91-100.
- Collinge, S.K. 1996. Ecological consequences of habitat fragmentation: implications for landscape architecture and planning. *Landscape and Urban Planning* 36(1) 59-77.
- Hutchinson, Todd F. and John L. Vankat. 1997. Invasibility and effects of Amur honeysuckle in southwestern Ohio forests. *Conservation Biology* 11(5): 1117-1124.
- Leitner, Lawrence A. 1985. An alien shrub in a changing landscape: the European buckthorn (*Rhamnus cathartica* L.) in southeastern Wisconsin. Ph.D. Dissertation. University of Wisconsin, Milwaukee.
- Luken, James O. and John W. Thieret. 1996. Amur honeysuckle, its fall from grace. *BioScience* 46(1): 18-24.
- Mohlenbrock, Robert H. 1986. Guide to the vascular flora of Illinois. Carbondale and Edwardsville, Illinois: Southern Illinois University Press.
- Nuzzo, V.A. 1993. Current and historic distribution of garlic mustard (*Alliaria petiolata*) in Illinois. *Michigan Botanist* 32(1):23-33.
- Saunders, D.A., R.J. Hobbs, and C. R. Margules. 1991. Biological consequences of ecosystem fragmentation: a review. *Conservation Biology* 5(1): 18-32.
- Swink, Floyd and Gerould Wilhelm. 1994. Plants of the Chicago region (4th ed.). Indianapolis: Indiana Academy of Sciences.
- Voss, Edward, G. 1972. Michigan flora, part I: gymnosperms and monocots. Bloomfield Hills, Michigan: Cranbrook Institute of Science, Bulletin 55 and Ann Arbor, Michigan: University of Michigan Herbarium.
- Voss, Edward, G. 1985. Michigan flora, part II: dicots (Saururaceae-Cornaceae). Cranbrook Institute of Science, Bulletin 59 and Ann Arbor, Michigan: University of Michigan Herbarium.
- Voss, Edward, G. 1996. Michigan flora, part III: dicots (Pyrolaceae-Compositae). Cranbrook Institute of Science, Bulletin 61 and Ann Arbor, Michigan: University of Michigan Herbarium.
- Young, Dick. 1994. Kane County wild plants and natural areas (2nd ed.). Geneva, Illinois: Kane County Forest Preserve District.

Appendix 1. Checklist of the vascular flora of Van Horn Woods and its immediate surroundings (exclusive of graminoids). Plants are identified according to the taxonomic nomenclature used by Swink and Wilhelm (1994). Numbers in parentheses represent the *C* values assigned to native taxa by Swink and Wilhelm. Non-native taxa have no *C* values and are marked with an asterisk.

Aceraceae (Maple Family)

Acer negundo L. [**Box Elder**] (0)
Acer nigrum Michx. f. [**Black Maple**] (5)
Acer saccharinum L. [**Silver Maple**] (0)
Acer saccharum Marshall [**Sugar Maple**] (3)

Alismaceae (Water Plantain Family)

Sagittaria latifolia Willd. [**Common Arrowhead**] (4)

Anacardiaceae (Cashew Family)

Rhus glabra L. [**Smooth Sumac**] (1)
Rhus radicans L. [**Poison Ivy**] (2)

Apocynaceae (Dogbane Family)

Apocynum androsaemifolium L. [**Spreading Dogbane**] (5)
Apocynum sibiricum Jacq. [**Prairie Indian Hemp**] (2)

Araceae (Arum Family)

Arisaema triphyllum (L.) Schott [**Jack-in-the-pulpit**] (4)

Aristolochiaceae (Birthwort Family)

Asarum canadense L. [**Wild Ginger**] (7)

Asclepiadaceae (Milkweed Family)

Asclepias incarnata L. [**Swamp Milkweed**] (4)
Asclepias syriaca L. [**Common Milkweed**] (0)
Asclepias verticillata L. [**Whorled Milkweed**] (1)

Balsaminaceae (Touch-me-not Family)

Impatiens capensis Meerb. [**Orange Jewelweed**] (3)

Berberidaceae (Barberry Family)

Berberis thunbergii* DC. [Japanese Barberry**]
Podophyllum peltatum L. [**May Apple**] (4)

Betulaceae (Birch Family)

Corylus americana Walter [**American Hazelnut**] (5)^a
Ostrya virginiana (Mill.) K. Koch [**Hop Hornbeam**] (5)

Boraginaceae (Borage Family)

Hackelia virginiana (L.) I. M. Johnst. [**Stickseed**] (0)

Mertensia virginica (L.) Pers. [**Virginia Bluebells**] (5)

Campanulaceae (Bluebell Family)

Campanula americana L. [**Tall Bellflower**] (3)

Caprifoliaceae (Honeysuckle Family)

Lonicera x bella* Zabel [Showy Fly Honeysuckle**]
 Lonicera maackii* (Rupr.) Maxim. [Amur Honeysuckle**]
 Lonicera morrowii* A. Gray [Morrow's Honeysuckle**]
Sambucus canadensis L. [**Elderberry**] (1)
Viburnum lentago L. [**Nannyberry**] (5)
 Viburnum opulus* L. [European Highbush Cranberry**]

Caryophyllaceae (Pink Family)

Cerastium vulgatum* L. [Mouse-ear Chickweed**]
 Lychnis alba* Mill. [White Campion**]
Silene virginica L. [**Fire Pink**] (10)^a
 Stellaria media* (L.) Vill. [Common Chickweed**]

Celastraceae (Staff Tree Family)

Euonymus atropurpureus Jacq. [**Burning Bush**] (8)

Chenopodiaceae (Goosefoot Family)

Chenopodium album* L. [Lamb's Quarters**]
Chenopodium hybridum L. var. *gigantospermum* (Aellen) Rouleau [**Maple-leaved Goosefoot**] (3)
Chenopodium standleyanum Aellen [**Woodland Goosefoot**] (4)

Compositae (Aster Family)

Achillea millefolium* L. [Yarrow**]
Actinomeris alternifolia (L.) DC. [**Wingstem**] (5)
Ambrosia artemisiifolia L. var. *elatior* (L.) Descourt. [**Common Ragweed**] (0)
Ambrosia trifida L. [**Giant Ragweed**] (0)
 Arctium lappa* L. [Great Burdock**]
 Arctium minus* Schkuhr [Common Burdock**]
Aster lateriflorus (L.) Britton [**Side-flowering Aster**] (4)
Aster ontarionis Wiegand [**Ontario Aster**] (4)
Aster pilosus Willd. [**Hairy Aster**] (0)

Aster sagittifolius Willd. var. *drummondii* (Lindl.)
Shinners [**Drummond's Aster**] (2)

Bidens cernua L. [**Nodding Bur Marigold**] (5)^a

Bidens frondosa L. [**Common Beggar's Ticks**]
(1)

Cichorium intybus* L. [Chicory**]

Cirsium arvense* (L.) Scop. [Canada Thistle**]

Cirsium discolor (Muhl.) Spreng. [**Pasture Thistle**] (2)

Cirsium vulgare* (Savi) Ten. [Bull Thistle**]

Erigeron annuus (L.) Pers. [**Annual Fleabane**]
(0)

Erigeron canadensis L. [**Horseweed**] (0)^a

Erigeron philadelphicus L. [**Marsh Fleabane**] (4)

Eupatorium rugosum Houtt. [**White Snakeroot**]
(4)

Eupatorium serotinum Michx. [**Late Boneset**] (0)

Galinsoga ciliata* (Raf.) S. F. Blake [Peruvian Daisy**]

Helianthus strumosus L. [**Pale-leaved Sunflower**]
(5)

Lactuca serriola* L. [Prickly Lettuce**]

Matricaria matricarioides* (Less.) Porter [Pine-apple Weed**]

Rudbeckia hirta L. [**Black-eyed Susan**] (1)

Rudbeckia laciniata L. [**Wild Golden Glow**] (5)

Senecio vulgaris* L. [Common Groundsel**]

Solidago altissima L. [**Tall Goldenrod**] (1)

Solidago canadensis L. [**Canada Goldenrod**] (1)

Sonchus asper* (L.) Hill [Spiny Sow Thistle**]

Sonchus uliginosus* M. Bieb. [Common Sow Thistle**]

Taraxacum officinale* Weber [Common Dandelion**]

Tragopogon dubius* Scop. [Sand Goat's Beard**]

Tragopogon pratensis* L. [Common Goat's Beard**]

Vernonia fasciculata Michx. [**Common Ironweed**] (5)

Xanthium strumarium* L. [Cocklebur**]

Convolvulaceae (Morning Glory Family)

Convolvulus arvensis* L. [Field Bindweed**]

Convolvulus sepium L. [**Hedge Bindweed**] (1)

Cornaceae (Dogwood Family)

Cornus obliqua Raf. [**Blue-fruited Dogwood**] (6)

Cornus racemosa Lam. [**Gray Dogwood**] (1)

Cruciferae (Mustard Family)

**Alliaria petiolata* (M. Bieb.) Cavara & Grande
[**Garlic Mustard**]

Arabis laevigata (Willd.) Poir. [**Smooth Bank Cress**] (5)

Arabis perstellata E. L. Braun var. *shortii* Fern.
[**Toothed Cress**] (6)

Barbarea vulgaris* R. Br. [Winter Cress**]

Capsella bursa-pastoris* (L.) Medik. [Shepherd's Purse**]

Dentaria laciniata Willd. [**Cutleaf Toothwort**]
(5)

Hesperis matronalis* L. [Dame's Rocket**]

Iodanthus pinnatifidus (Michx.) Steud. [**Violet Cress**] (8)

Lepidium campestre* (L.) R. Br. [Field Cress**]

Lepidium virginicum L. [**Common Peppergrass**]
(0)

Rorippa palustris (L.) Besser var. *fernaldiana*
(Butters & Abbe) Stuckey [**Marsh Cress**] (4)

Cucurbitaceae (Gourd Family)

Echinocystis lobata (Michx.) T. & G. [**Wild Cucumber**] (5)

Dioscoreaceae (Yam Family)

Dioscorea villosa L. [**Wild Yam**] (7)

Elaeagnaceae (Oleaster Family)

Elaeagnus angustifolia* L. [Russian Olive**]

Elaeagnus umbellata* Thunb. [Autumn Olive**]

Euphorbiaceae (Spurge Family)

Acalypha rhomboidea Raf. [**Three-seeded Mercury**] (0)

Euphorbia corollata L. [**Flowering Spurge**] (2)

Euphorbia maculata L. [**Eyebane**] (0)

Euphorbia supina Raf. [**Spotted Creeping Spurge**] (0)

Fagaceae (Beech Family)

Quercus alba L. [**White Oak**] (5)

Quercus x hawkinsiae Sudw. [**Hybrid Oak**] (4)^b

Quercus macrocarpa Michx. [**Bur Oak**] (5)

Quercus rubra L. [**Red Oak**] (7)

Quercus velutina Lam. [**Black Oak**] (6)

Geraniaceae (Geranium Family)

Geranium maculatum L. [**Wild Geranium**] (4)

Hydrophyllaceae (Waterleaf Family)

Ellisia nyctelea L. [**Aunt Lucy**] (2)

Hydrophyllum virginianum L. [**Virginia Waterleaf**] (5)

Hypericaceae (St. John's Wort Family)

Hypericum punctatum Lam. [**Spotted St. John's Wort**] (4)^a

Juglandaceae (Walnut Family)

Carya cordiformis (Wangenh.) K. Koch [**Bitternut Hickory**] (7)

Carya ovata (Mill.) K. Koch [**Shagbark Hickory**] (5)

Juglans nigra L. [**Black Walnut**] (5)

Labiatae (Mint Family)

- Agastache nepetoides* (L.) Kuntze [**Yellow Giant Hyssop**] (5)
 Glechoma hederacea* L. [Ground Ivy**]
 Leonurus cardiaca* L. [Motherwort**]
 Nepeta cataria* L. [Catnip**]
 Prunella vulgaris* L. [Lawn Prunella**]
Prunella vulgaris L. var. *lanceolata* (Barton) Fern. [**Self Heal**] (0)
Teucrium canadense L. [**Germander**] (3)

Leguminosae (Pea Family)

- Gleditsia triacanthos* L. [**Honey Locust**] (2)
 Medicago lupulina* L. [Black Medick**]
 Melilotus alba* Medik. [White Sweet Clover**]
 Melilotus officinalis* (L.) Pall. [Yellow Sweet Clover**]
 Trifolium pratense* L. [Red Clover**]
 Trifolium repens* L. [White Clover**]

Liliaceae (Lily Family)

- Allium canadense* L. [**Wild Onion**] (2)
Allium tricoccum Aiton var. *burdickii* Hanes [**Wild Leek**] (6)
 Asparagus officinalis* L. [Asparagus**]
Erythronium albidum Nutt. [**White Trout Lily**] (5)
Polygonatum canaliculatum (Muhl.) Pursh [**Smooth Solomon's Seal**] (3)
Smilacina racemosa (L.) Desf. [**Feathery False Solomon's Seal**] (3)
Smilacina stellata (L.) Desf. [**Starry False Solomon's Seal**] (5)
Smilax ecirrhata (Engelm.) S. Watson [**Upright Carrion Flower**] (5)
Smilax illinoensis Mangaly [**Illinois Carrion Flower**] (5)
Smilax lasioneura Hook. [**Common Carrion Flower**] (5)
Smilax tammoides L. var. *hispida* (Torr.) Fern. [**Bristly Greenbrier**] (5)
Trillium recurvatum L. C. Beck [**Red Trillium**] (5)

Limnanthaceae (False Mermaid Family)

- Floerkea proserpinacoides* Willd. [**False Mermaid**] (8)

Malvaceae (Mallow Family)

- **Abutilon theophrasti* Medik. [**Velvetleaf**]^a
 Hibiscus trionum* L. [Flower-of-an-hour**]

Menispermaceae (Moonseed Family)

- Menispermum canadense* L. [**Moonseed**] (6)

Moraceae (Mulberry Family)

- **Maclura pomifera* (Raf.) C. K. Schneid. [**Osage Orange**]
 Morus alba* L. [White Mulberry**]

Nyctaginaceae (Four O'Clock Family)

- **Mirabilis nyctaginea* (Michx.) MacMill. [**Wild Four O'Clock**]

Nymphaeaceae (Water Lily Family)

- Nuphar advena* (Aiton) W. T. Aiton [**Yellow Pond Lily**] (7)

Oleaceae (Olive Family)

- Fraxinus americana* L. [**White Ash**] (5)
Fraxinus pennsylvanica Marshall [**Red Ash**] (5)
Fraxinus pennsylvanica Marshall var. *subintegerima* (Vahl) Fern. [**Green Ash**] (1)
 Ligustrum vulgare* L. [Common Privet**]

Onagraceae (Evening Primrose Family)

- Circaea lutetiana* L. var. *canadensis* L. [**Enchanter's Nightshade**] (1)
Gaura biennis L. var. *pitcheri* Pickering [**Common Gaura**] (2)
Oenothera biennis L. [**Common Evening Primrose**] (0)

Oxalidaceae (Wood Sorrel Family)

- Oxalis europaea* Jord. [**Tall Wood Sorrel**] (0)
Oxalis stricta L. [**Common Wood Sorrel**] (0)

Papaveraceae (Poppy Family)

- Sanguinaria canadensis* L. [**Bloodroot**] (6)^a

Pinaceae (Pine Family)

- Juniperis virginiana* L. var. *crebra* Fern. & Griscom [**Red Cedar**] (2)

Plantaginaceae (Plantain Family)

- **Plantago lanceolata* L. [**English Plantain**]
 Plantago major* L. [Common Plantain**]
Plantago rugelii Decne. [**Red-stalked Plantain**] (0)

Polemoniaceae (Phlox Family)

- Phlox divaricata* L. [**Blue Phlox**] (5)
Polemonium reptans L. [**Jacob's Ladder**] (5)

Polygonaceae (Buckwheat Family)

- **Polygonum arenastrum* Boreau [**Sidewalk Knotweed**]
Polygonum pensylvanicum L. [**Pinkweed**] (0)
Polygonum punctatum Elliott [**Smartweed**] (6)
Polygonum scandens L. [**Climbing False Buckwheat**] (1)

Polygonum virginianum L. [**Woodland Knotweed**] (2)

Rumex altissimus A. W. Wood [**Pale Dock**] (2)

Rumex crispus* L. [Curly Dock**]

Pontederiaceae (Pickereel Weed Family)

Pontederia cordata L. [**Pickereel Weed**] (10)

Portulacaceae (Purslane Family)

Claytonia virginica L. [**Spring Beauty**] (2)

Portulaca oleracea* L. [Purslane**]

Primulaceae (Primrose Family)

Lysimachia nummularia* L. [Moneywort**]

Ranunculaceae (Crowfoot Family)

Anemone quinquefolia L. [**Wood Anemone**] (7)^a

Ranunculus abortivus L. [**Small-flowered Buttercup**] (0)

Ranunculus septentrionalis Poir. [**Swamp Buttercup**] (5)

Thalictrum revolutum DC. [**Waxy Meadow Rue**] (6)

Rhamnaceae (Buckthorn Family)

Rhamnus cathartica* L. [Common Buckthorn**]

Rosaceae (Rose Family)

Agrimonia gryposepala Wallr. [**Tall Agrimony**] (2)

Agrimonia pubescens Wallr. [**Soft Agrimony**] (5)

Crataegus chrysoarpa Ashe [**Fireberry Hawthorn**] (6)

Crataegus coccinea L. [**Scarlet Hawthorn**] (4)

Crataegus crus-galli L. [**Cockspur Hawthorn**] (2)

Crataegus mollis (T. & G.) Scheele [**Downy Hawthorn**] (2)

Crataegus punctata Jacq. [**Dotted Hawthorn**] (2)

Duchesnea indica* (Andrews) Focke [Indian Strawberry**]

Fragaria virginiana Duchesne [**Wild Strawberry**] (1)

Geum canadense Jacq. [**White Avens**] (1)

Geum laciniatum Murray var. *trichocarpum* Fern. [**Rough Avens**] (2)

Geum vernum (Raf.) T. & G. [**Spring Avens**] (5)

Malus ioensis (A. W. Wood) Britton [**Iowa Crab**] (3)

Malus pumila* Mill. [Apple**]^c

Potentilla norvegica L. [**Rough Cinquefoil**] (0)

Potentilla recta* L. [Sulfur Cinquefoil**]

Potentilla simplex Michx. [**Common Cinquefoil**] (4)

Prunus americana Marshall [**Wild Plum**] (5)

Prunus serotina Ehrh. [**Wild Black Cherry**] (1)

Prunus virginiana L. [**Choke Cherry**] (3)

Pyrus communis* L. [Pear**]^c

Rosa carolina L. [**Pasture Rose**] (5)

Rosa multiflora* Thunb. [Multiflora Rose**]

Rubus allegheniensis Porter [**Common Blackberry**] (3)

Rubus occidentalis L. [**Black Raspberry**] (2)

Rubus pensilvanicus Poir. [**Yankee Blackberry**] (3)

Rubiaceae (Madder Family)

Galium aparine L. [**Cleavers**] (1)

Galium concinnum T. & G. [**Shining Bedstraw**] (5)^a

Rutaceae (Rue Family)

Ptelea trifoliata L. [**Wafer Ash**] (7)

Xanthoxylum americanum Mill. [**Prickly Ash**] (3)

Salicaceae (Willow Family)

Populus deltoides Marshall [**Eastern Cottonwood**] (2)

Salix amygdaloides Andersson [**Peach-leaved Willow**] (5)

Salix eriocephala Michx. [**Heart-leaved Willow**] (5)

Salix interior Rowlee [**Sandbar Willow**] (1)

Salix nigra Marshall [**Black Willow**] (4)

Salix x rubens* Schrank [Hybrid Crack Willow**]

Saxifragaceae (Saxifrage Family)

Ribes americanum Mill. [**Wild Black Currant**] (7)

Ribes missouriense Nutt. [**Wild Gooseberry**] (5)

Scrophulariaceae (Figwort Family)

Penstemon digitalis Nutt. [**Foxglove Beard Tongue**] (4)^a

Scrophularia marilandica L. [**Late Figwort**] (4)

Verbascum blattaria* L. [Moth Mullein**]

Verbascum thapsus* L. [Common Mullein**]

Veronica arvensis* L. [Corn Speedwell**]

Solanaceae (Nightshade Family)

Physalis subglabrata Mack. & Bush [**Tall Ground Cherry**] (0)

Solanum americanum Mill. [**Black Nightshade**] (0)

Solanum carolinense* L. [Horse Nettle**]

Solanum dulcamara* L. [Bittersweet Nightshade**]

Staphyleaceae (Bladdernut Family)

Staphylea trifolia L. [**Bladdernut**] (7)^a

Tiliaceae (Linden Family)

Tilia americana L. [**Basswood**] (5)

Typhaceae (Cattail Family)

Typha angustifolia L. [**Narrow-leaved Cattail**]
(1)^d

Ulmaceae (Elm Family)

Celtis occidentalis L. [**Hackberry**] (3)
Ulmus americana L. [**American Elm**] (3)
**Ulmus x notha* G. Wilh. & G. Ware, *ined.*
[**Hybrid Elm**]
Ulmus pumila* L. [Siberian Elm**]
Ulmus rubra Muhl. [**Slippery Elm**] (4)

Umbelliferae (Parsley Family)

Angelica atropurpurea L. [**Great Angelica**] (7)
Chaerophyllum procumbens (L.) Crantz
[**Streambank Chervil**] (5)
Cryptotaenia canadensis (L.) DC. [**Honewort**] (2)
Daucus carota* L. [Queen Anne's Lace**]
Heracleum maximum W. Bartram [**Cow Parsnip**]
(5)
Osmorhiza longistylis (Torr.) DC. [**Smooth Sweet
Cicely**] (3)
Pastinaca sativa* L. [Wild Parsnip**]

Sanicula gregaria E. P. Bicknell [**Clustered
Black Snakeroot**] (2)
Zizia aurea (L.) W. D. J. Koch [**Golden Alex-
anders**] (7)

Urticaceae (Nettle Family)

Boehmeria cylindrica (L.) Sw. [**False Nettle**] (2)
Laportea canadensis (L.) Wedd. [**Wood Nettle**]
(3)
Pilea pumila (L.) A. Gray [**Clearweed**] (5)
Urtica procera Willd. [**Tall Nettle**] (2)

Verbenaceae (Vervain Family)

Verbena urticifolia L. [**Hairy White Vervain**] (5)

Violaceae (Violet Family)

Viola pubescens Aiton [**Yellow Violet**] (5)
Viola sororia Willd. [**Common Blue Violet**] (3)

Vitaceae (Grape Family)

Parthenocissus quinquefolia (L.) Planch. [**Vir-
ginia Creeper**] (2)
Vitis riparia Michx. [**Riverbank Grape**] (2)

^a Located in areas immediately adjacent to Van Horn Woods, but not found within the park.

^b Identification tentative, pending the examination of acorns. One tree of this type was located within the park. It has leaves that are slightly smaller, darker and more deeply lobed than those of typical *Q. rubra*, and also has buds that are somewhat angled, glabrous at the base, and pubescent at the tip. This hybrid is not presently documented as a part of Will County flora in Plants of the Chicago Region (Swink and Wilhelm, 1994), although the authors do comment that it is "rather frequent."

^c May have been planted.

^d Although the flowers are those of *T. angustifolia*, these plants do show characteristics which suggest possible hybridization with the common cattail, *T. latifolia* L. More specifically, many have leaves and/or pistillate spikes that exceed the maximum sizes given for *T. angustifolia* in the Chicago region by Swink and Wilhelm (1994). Hybrids are known as *T. x glauca* Godr. and are not currently documented in Will County by Swink and Wilhelm (1994).

