
Vascular Plants of the UWM Field Station Area

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Abstract

Since 1967, Field Station staff and volunteers have been assembling a vascular plant species list and herbarium for the Field Station. For the purpose of this list the Field Station area is defined as a 15.5 km² (6 mi²) area that includes all of the Cedarburg Bog, the Sapa Spruce Bog and the uplands surrounding the Field Station and uplands immediately peripheral to the Bog. The vascular plant species list includes 681 taxa (species, varieties, forms, and named hybrids) in 97 families. 455 of these taxa, collected from the area, are contained in the Field Station herbarium. The list is undoubtedly incomplete, but is nevertheless useful to researchers, teachers and students. I hope that publishing and circulating the present list will encourage researchers to update the census and provide appropriate corrections.

The Field Station Area

For the purpose of this list and the herbarium, the Field Station area is defined as a 6 mi² (15.5 km²) area bounded by Cedar-Sauk Road on the south, County Highway Y, Knollwood Road, Birchwood Road, the east-west section line which meets State Highway 33 at Birchwood Road, and a north-south line 1/2 mile west of County Highway I (Figure 1, at the center of this Bulletin). This area includes all of Sections 29, 30, 31 and 32; the east 1/2 of Section 20; and the west 1/2 of Sections 21, 28, and 33, of Town 11 North, Range 21 East; Township of Saukville. The area contains three Wisconsin State Natural Areas: No. 2, the Cedarburg Bog; No. 61, The UWM Field Station Beech-Maple Woods; and No. 208, The Sapa Spruce Bog.

We have categorized the land within this area as supporting one of ten vegetation/habitat types: aquatic, marsh, wet field and meadow, shrub carr, swamp hardwood, conifer swamp, open bog, old field, upland woods, and disturbed lands. A rough breakdown of the number of hectares in each vegetation type is provided in Table 1.

Aquatic (A) habitats are those which support submerged or floating leaved aquatic plants, but which do not have emergent aquatic or wetland plants. These areas generally have water depths greater than 1m and include Big and Little Beimbom Lakes, Watt's Lake, Doughnut Lake, Long Lake, Mud Lake and the Cedarburg Bog outlet stream, as well as some smaller, man-made farm ponds.

Marsh (M) includes both the deep (water depth 15 cm to 1 m) and shallow (water depth 0 to 15 cm) marsh habitats of Eggers and Reed (1987). Both Long and Mud Lakes are surrounded primarily by both deep and shallow marshes. Deep marshes are

dominated by hardstem bulrush (*Scirpus acutus*), pickerelweed (*Pontederia cordata*), giant bur-reed (*Sparganium eurycarpum*), and cattails (*Typha* sp). Shallow marshes are dominated primarily by cattails, arrowhead (*Sagittaria latifolia*) and sedges (*Carex* sp).

Table 1. Amount of ten habitat types in the 6 mi² (15.5 km²) Field Station area and in the section of land (1 mi²) around the Field Station uplands.
1 km² = 100 ha = 247 acres.

Habitat Type	Habitat Designation on List	Total Area (ha)	Section (1 mi ²) Around Field Station (ha)
Conifer Swamp	CS	412.6	19.1
Disturbed	D	395.5	120.9
Swamp Hardwoods	SH	148.6	17.9
Shrub Carr	SC	136.5	4.1
Old Field	FD	115.6	28.1
Marsh	M	101.8	1.3
Open Bog	OB	79.0	1.0
Upland Woods	UW	76.5	61.3
Aquatic	A	59.0	0.3
Wet Field	FW	28.9	5.1
Total		1554.0	259.0

Wet fields and meadows (FW) include the sedge meadows and wet meadows of Eggers and Reed (1987). Sedge meadows are dominated by *Carex* sp. (> 50% cover), while wet meadows are dominated by grasses. Some of the sedge and wet meadows in the Cedarburg Bog are naturally maintained, undisturbed open communities. Most of the sedge and wet meadows outside of, and around the periphery of the Bog are apparently the result of past logging of swamp forest and subsequent farming.

Shrub carrs (SC) in our area are of at least three more or less distinct types. Southern shrub carr is dominated by red osier dogwood (*Cornus stolonifera*) and by several species of willow (*Salix* sp.) with more southerly distributions in North America (Reinartz 1985; 1986). Northern shrub carr is dominated by bog birch (*Betula pumila*) and several willows with northern North American distributions. Bog birch - leather leaf shrub carr is dominated by *Betula pumila*, leather leaf (*Chamaedaphne calyculata*), sage-leaved willow (*Salix candida*) and slender willow (*Salix pedicellaris*). Some of the shrub carr in the Bog appears to be a rather stable natural community along the water gradient, while much of the shrub carr outside of the Bog is apparently the result of previous agricultural use of wetland areas.

Swamp hardwood habitats (SH) are forested swamps dominated by black ash (*Fraxinus nigra*), red maple (*Acer rubrum*), silver maple (*Acer saccharinum*), yellow birch (*Betula alleghaniensis*) and American elm (*Ulmus americana*). Again, some swamp hardwoods near the southern end of the Bog and along the outlet stream, appear to form a natural, undisturbed community. Other swamp hardwood stands in the area appear to be successional communities, the result of disturbance (mainly flooding) of areas that were previously conifer swamp.

Conifer swamp (CS) is of two distinct types. The northern white cedar (*Thuja occidentalis*) - tamarack (*Larix laricina*) swamps in the Cedarburg Bog are found on peat that has a pH which is neutral to slightly basic. These cedar-tamarack swamps do not contain black spruce (*Picea mariana*). Black spruce - tamarack conifer bog is found in the Sapa Spruce Bog and its sister bog just to the west. These bogs have highly acidic soil.

Open bog (OB) is again a general category used for two different, but floristically related habitats. The string bog vegetation located at the center of the Cedarburg Bog (Reinartz 1985; 1986) and the open leather leaf - sphagnum bog at the center of the black spruce bog are both included in this category.

Old field (FD) is a category used for formerly cultivated, abandoned, upland, fields dominated by herbaceous vegetation or young invading trees. Those areas of planted prairie on the Field Station land are also included in this habitat.

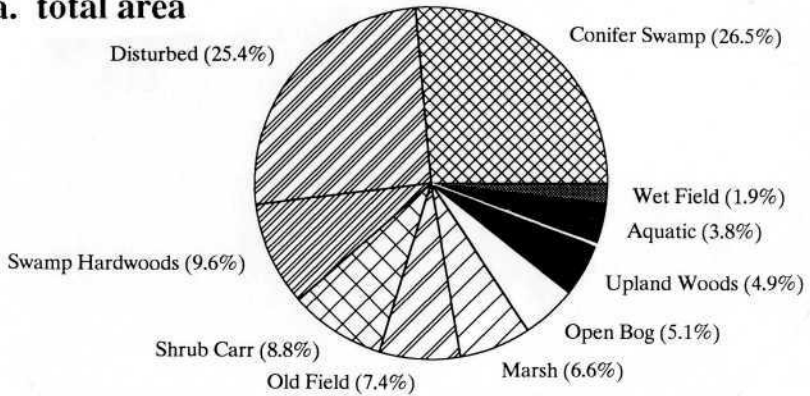
Upland woods habitats (UW) are predominantly beech-maple hardwood forest, relatively undisturbed old growth in the case of the Field Station woods and those privately owned parcels immediately to the west. Other wood lots contained within the area have been more heavily logged in the past.

Disturbed (D) connotes recently disturbed ground, area presently in agriculture, residential development, plantations, and roadsides. It also serves as a habitat designation for those horticultural plantings which are included on the species list.

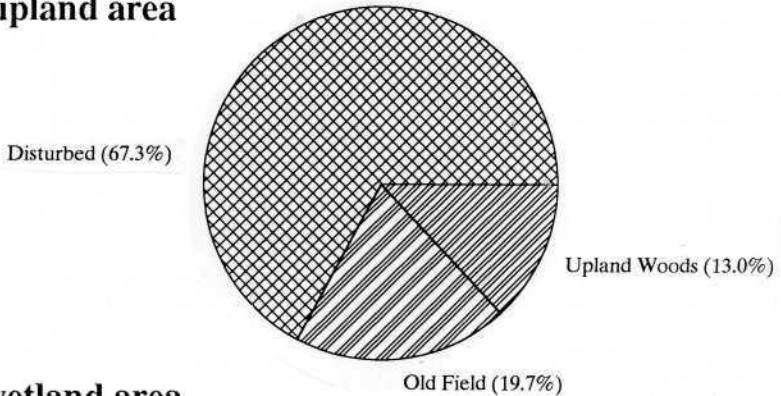
Various (V) is a habitat category used for species found in more than three of the other habitat categories.

The 6 mi² described as the Field Station area includes a large proportion of wetland and aquatic habitat (966 ha, 62%) and a relatively smaller amount of uplands (588 ha, 38%) (Figure 2a). Only 25% of the total area is disturbed (ie. currently in agriculture or residential). Of the uplands, however, 67% are classified as disturbed (Figure 2b). The contiguous block of beech-maple forest, partially owned by the Field Station, accounts for most of the 13% of forested habitat located in the uplands. Forested wetland (conifer swamp and swamp hardwoods) makes up over half of the area in wetland and aquatic habitats (Figure 2c).

a. total area



b. upland area



c. wetland area

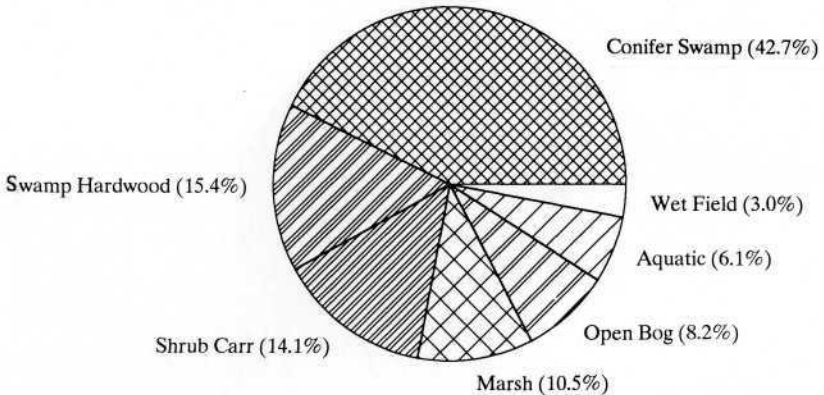


Figure 2. Proportion of land in the Field Station Area in ten different habitat categories, a) total area, b) upland area, c) wetland area.

Methods

Nomenclature used follows Voss (1972) for monocots and Voss (1985) for dicots when the species are included in his manuals. Nomenclature for vascular plant species not included in Voss (1972; 1985) follows Fernald (1970). Information on flowering phenology for the majority of species is based upon original data collected at the Field Station. However, flowering dates for those species for which no Station data are available are adapted from Fernald (1970). The flowering dates in the list can only be considered a rough indication of flowering times. As with other aspects of the list, contributions of more precise data are welcomed.

The Field Station Herbarium concentrates on the same area described in this Bulletin. The herbarium was somewhat more complete before recent insect damage destroyed a large number of specimens. Both the list and the herbarium are noticeably more complete for some groups than for others. For example the sedges (*Carex* spp.) and willows (*Salix* spp.) of the area have received particular attention by some researchers and staff and are therefore better known than some other less studied groups. The species list is now maintained in a computer spreadsheet file for ease of updating and data retrieval.

The Field Station Flora

The vascular plant list includes 681 taxa (653 species, 20 varieties, 4 forms, and 4 named hybrids) in 97 families. The three largest families in our flora (Asteraceae, Cyperaceae, and Poaceae) make up 29% of all our species (Figure 3). The 17 largest families (those comprising over 1.5% of the flora) contribute about two-thirds of our flora.

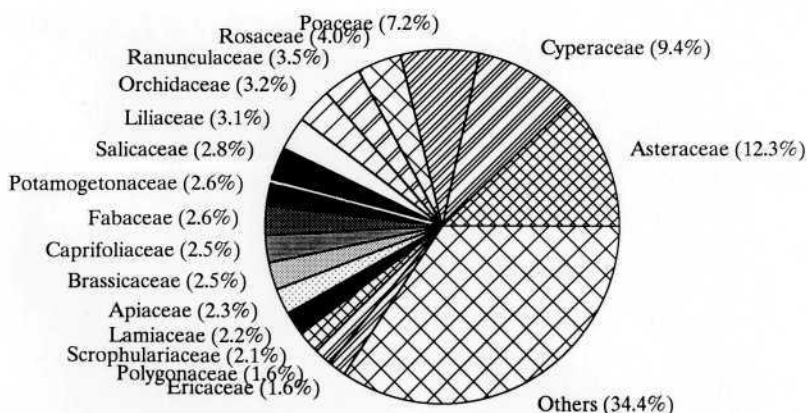


Figure 3. Proportion of taxa in the Field Station Area in 97 different plant families.

Plants in the Field Station area are in flower from March to November with the peak blooming period in June (Figure 4). There are 330 species which flower in June, and 246 and 259 which flower in May and July respectively. In upland old field and disturbed habitats, the peak flowering period is during June and July (Figure 5a). Peak flowering in the upland woods, however, occurs in May and early June. There are also differences among peak flowering times in the wetland habitats (Figure 5b). Flowering in the swamp hardwoods and shrub carr peaks in May but much flowering continues through August. The conifer swamp and open bog have flowering peaks in June, while flowering does not peak until August in wet fields and meadows.

Plant families also differ markedly in their flowering periods (Figures 6a and 6b). The Salicaceae flower in April and May, while the Ranunculaceae and Liliaceae peak in May. The Fabaceae peak in July and the Asteraceae not until August and September.

The upland woods and swamp hardwoods habitats have the largest number of species (165 and 166 respectively) (Figure 7). The three upland habitats have a mean number of species per habitat (137) almost 60% higher than do the wetland habitats (87). While the upland woods and swamp hardwoods both have a large number of species, there are interesting differences in the constancy of species in those habitats (Figure 7). Seventy percent of the species in the upland woods are found only in the upland woods, while only 14% of the species in the swamp hardwoods do not occur in other habitats. Most swamp hardwoods species also occur in either shrub carr or conifer swamp habitats. As expected, species growing in aquatic habitats tend to be found nowhere else (84%). The open bog habitat is a unique community of northern bog plants, 46% of which are not found in other habitats. The mean percentage of species found in only one of the three upland habitats is 52%, while the mean percentage of species found in only one of the six wetland habitats (aquatic not included) is only 21%.

Most of the 12 largest plant families have species primarily in only a certain subset of the habitats at the Field Station (Figures 8a and 8b). The most notable exceptions to this generalization are the Poaceae, Rosaceae and Caprifoliaceae which have species distributed relatively uniformly across a wide range of habitats.

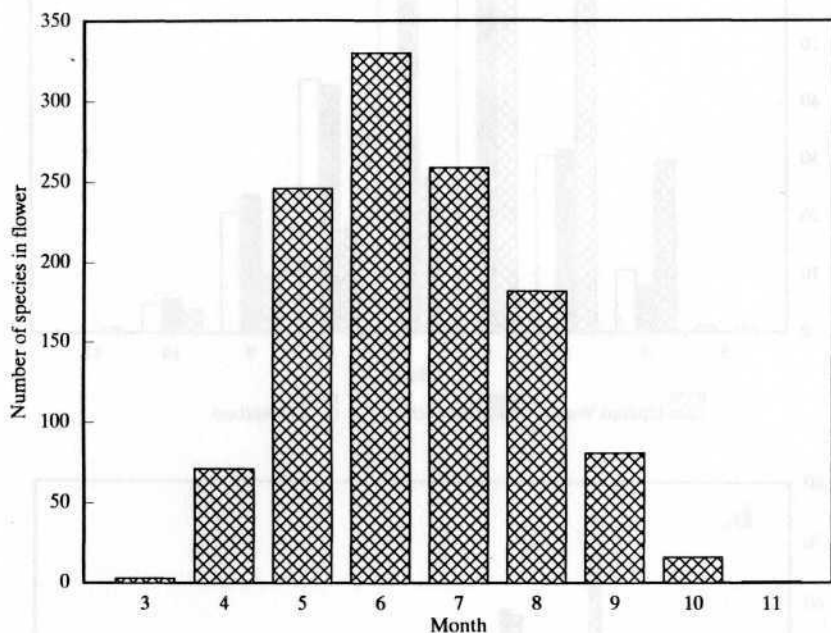


Figure 4. Number of species in flower in the Field Station Area during each month from March through November.

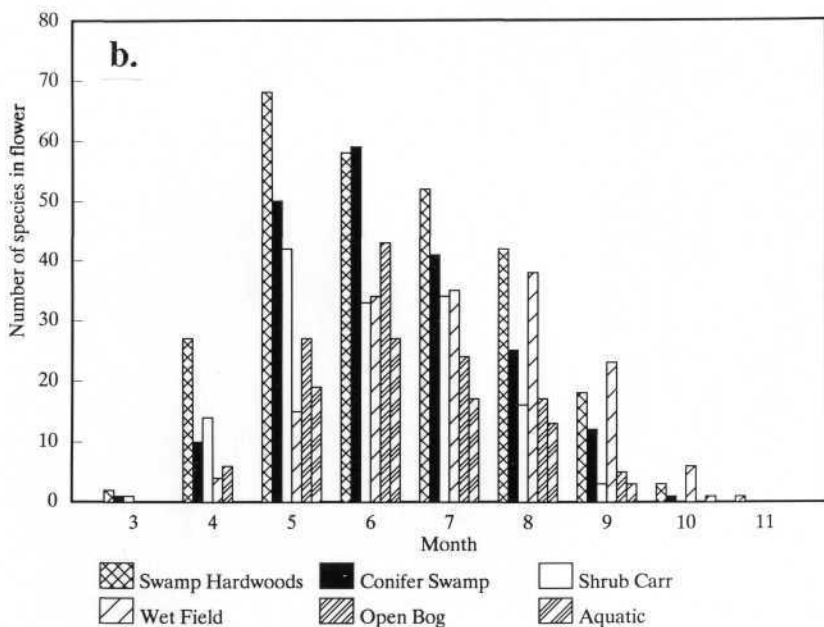
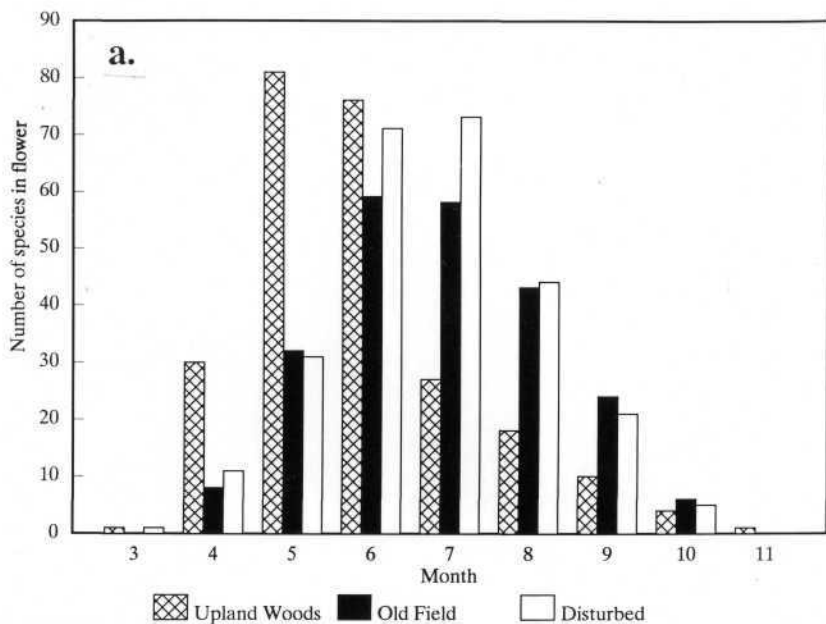


Figure 5. Number of species in flower in different habitats of the Field Station Area during each month from March through November, a) upland habitats, b) wetland habitats.

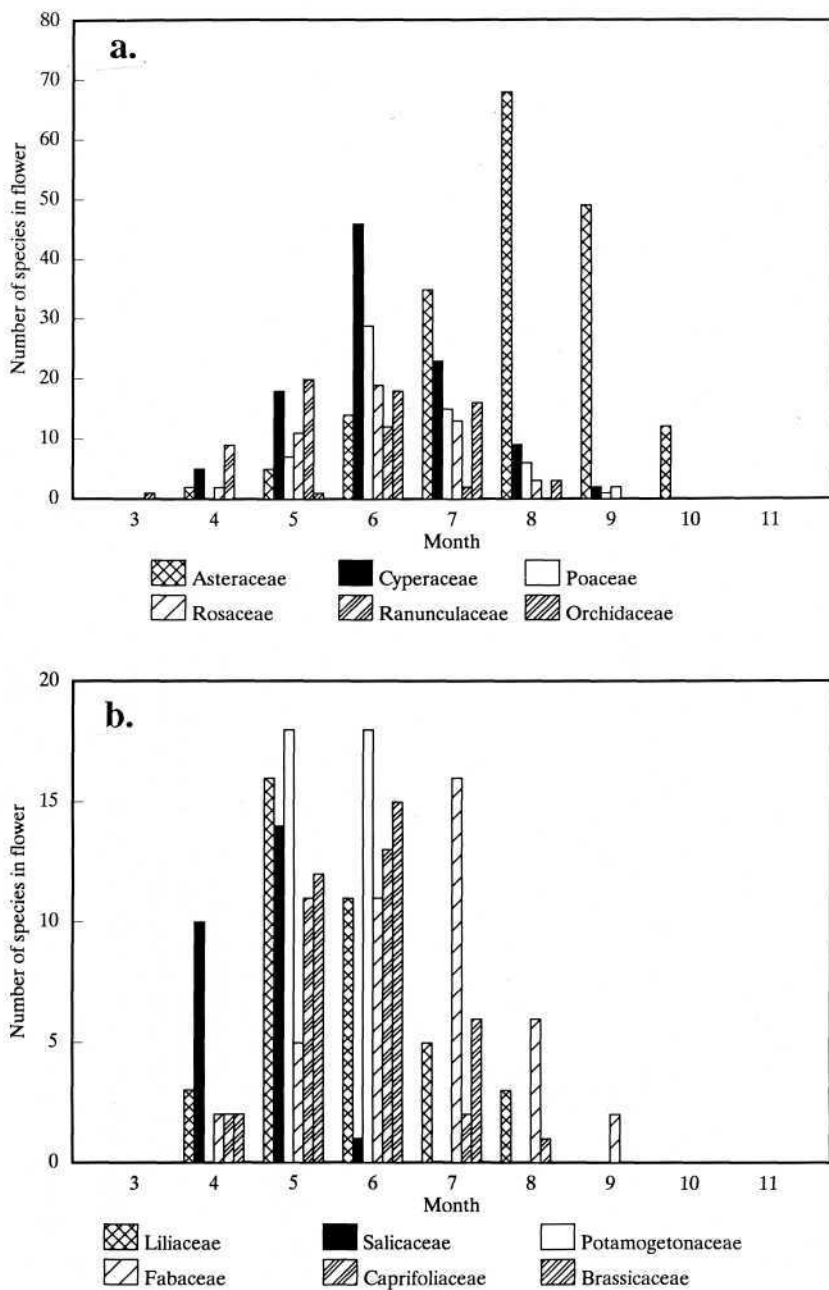


Figure 6. Number of species in flower of the 12 most common plant families during each month from March through November, a) 6 most common families, b) 6 next most common families.

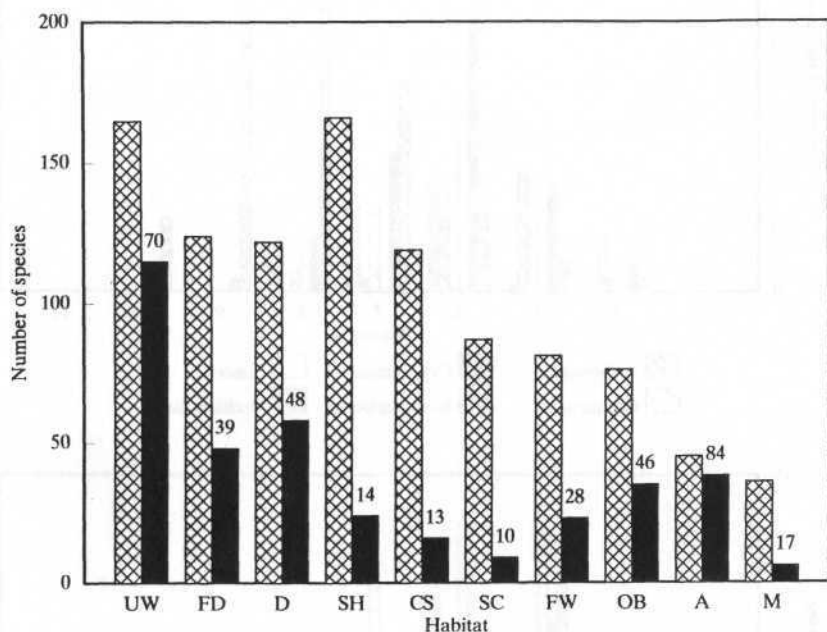


Figure 7. Number of species found in ten habitat types of the Field Station Area. Hatched bars include all taxa found in each habitat; solid bars represent only those species found only in the designated habitats. Percentage of constant species is shown over the solid bars.

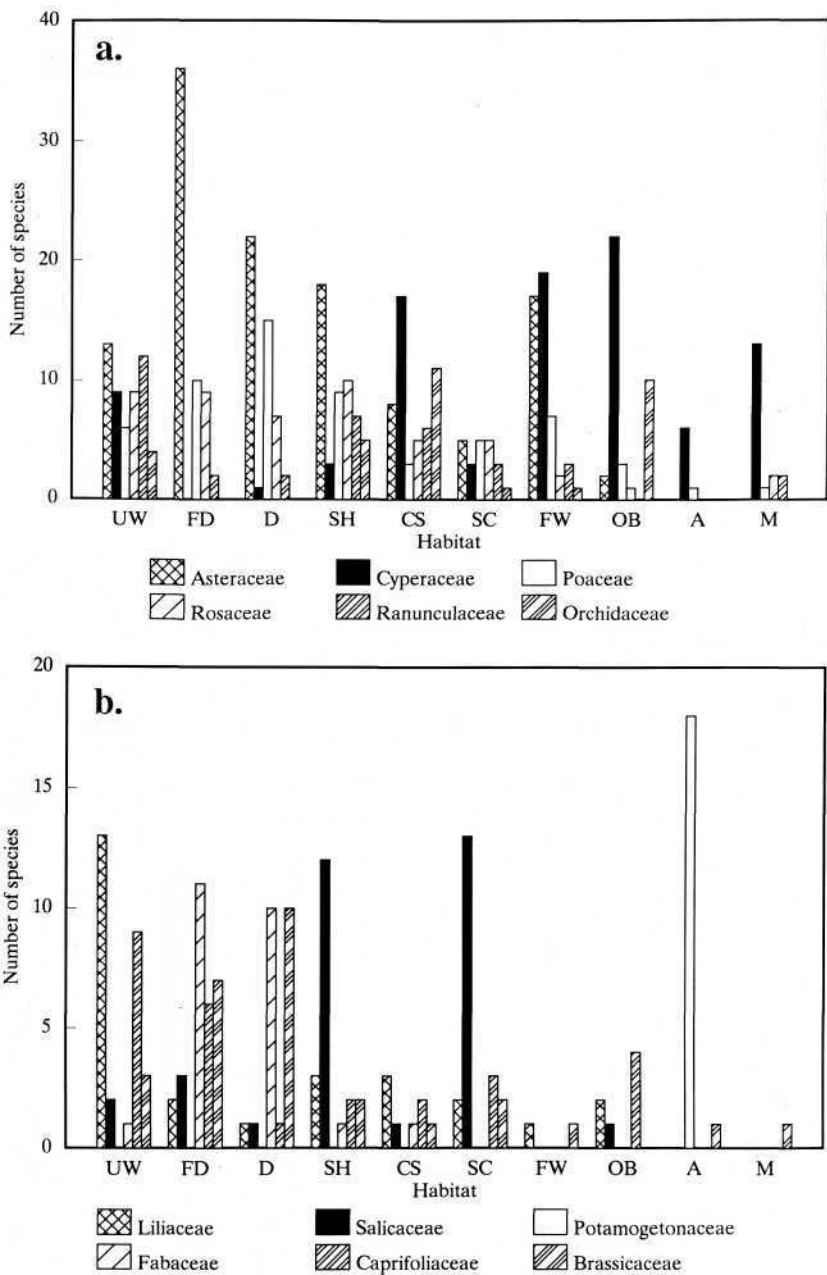


Figure 8. Number of taxa of the 12 most common plant families found in each of ten habitat types, a) 6 most common families, b) 6 next most common families.

Request for Information

We are aware that this list is incomplete and that both habitat and phenology data should be expanded. I encourage those using the research area and any one interested in the flora of these diverse natural areas to take the list in the field and contribute information to the Field Station. When the list is substantially improved and revised, it will be republished.

Acknowledgments

This list and the Field Station herbarium were begun by Paul Matthiae with the assistance of Peter Salamun. Early collections and additions to the list were contributed primarily by Matthiae, Salamun, Leo Bruderle, Nancy Dernehl, Virginia Kutter and Steven Witkin. Over the past few years, the list went through major revisions, corrections and computerization through the labor of Joanne Kline, Margaret Kuch-enreuther and Sarah Remley. A large number of recent collections have been made by those three and by Tim Gerber and Steven Kroeger. Joanne Kline, Lee Olsen, and Kate Redmond provided data on the flowering phenologies of plants in the Field Station area. The list was typed and proofread by Bonnie Leffin. Lee Olsen reviewed the list for omissions based on his experience with the flora. The manuscript was reviewed by Donald Les and Forest Stearns. I also acknowledge the help of many others who have made smaller, but important, contributions to the list and the herbarium.

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Species List

The list is alphabetized by family. Habitat designations and flowering dates are explained in the text. Species with an asterisk following the scientific name are represented in the Field Station Herbarium.

FAMILY/SPECIES	COMMON NAME	HABITATS	FLOWERING DATES
Aceraceae			
<i>Acer negundo</i> *	Box elder	D	Apr
<i>Acer rubrum</i> *	Red maple	SH	Apr
<i>Acer saccharinum</i> *	Silver maple	SH	Apr
<i>Acer saccharum</i> *	Sugar maple	UW	Apr
Alismataceae			
<i>Alisma plantago-aquatica</i>	Water plantain	M CS SH	Jul-Aug
<i>Sagittaria cuneata</i> *	Arrowhead	A M	Aug
<i>Sagittaria latifolia</i> *	Arrowhead	A M SC	Aug
Amaranthaceae			
<i>Amaranthus retroflexus</i>	Pigweed	D	Aug
Anacardiaceae			
<i>Rhus typhina</i> *	Staghorn sumac	FD	Jun-Jul
<i>Toxicodendron radicans</i>	Poison ivy	D FD UW	Jun-Jul
<i>Toxicodendron vernix</i>	Poison sumac	SH CS SC	Jun
Apiaceae			
<i>Cicuta bulbifera</i> *	Bulb bearing water hemlock	SH CS SC	Jul
<i>Cicuta maculata</i> *	Water hemlock	SH CS SC	Jul
<i>Cryptotaenia canadensis</i> *	Honewort	UW	Jun-Jul
<i>Daucus carota</i> *	Wild carrot	FD D	Jul-Aug
<i>Eryngium yuccifolium</i>	Rattlesnake master	FD	Aug
<i>Heracleum maximum</i>	Cow parsnip	UW D SH	Aug
<i>Osmorhiza claytonii</i> *	Sweet cicely	UW	Jun
<i>Osmorhiza longistylis</i> *	Anise root	UW	May-Jun
<i>Oxypolis rigidior</i> *	Cowbane	CS SH	Aug-Sept
<i>Pastinaca sativa</i> *	Wild parsnip	FD D	Jun-Jul
<i>Sanicula gregaria</i> *	Black snakeroot	UW	Jun
<i>Sanicula marilandica</i> *	Snakeroot	UW CS	Jun
<i>Sium suave</i> *	Water parsnip	SH SC CS	Jul-Sept
<i>Taenidia integerrima</i> *	Yellow pimpernel	UW	May-Jun
<i>Zizia aptera</i>	Golden alexander	SH CS	May-Jun
<i>Zizia aurea</i> *	Golden alexander	SH CS	May-Jun

Apocynaceae				
<i>Apocynum</i>				
<i>androsaemifolium</i> *	Dogbane	FD D		Jun-Aug
Aquifoliaceae				
<i>Ilex verticillata</i> *	Winterberry	SH CS SC		Jun-Jul
<i>Nemopanthes mucronatus</i> *	Mountain holly	SH CS OB		May
Araceae				
<i>Arisaema triphyllum</i> var. <i>stewardsonii</i> *	Jack in the Pulpit	UW CS		May
<i>Arisaema triphyllum</i> var. <i>triphyllum</i> *	Jack in the Pulpit	UW		May
<i>Calla palustris</i> *	Calla lily	CS SH SC		May-Jul
<i>Symplocarpus foetidus</i> *	Skunk cabbage	CS SH		Apr
Araliaceae				
<i>Aralia nudicaulis</i>	Wild sarsaparilla	UW		May-Jun
<i>Aralia racemosa</i> *	Spikenard	CS UW		Jul
<i>Panax quinquefolius</i>	Ginseng	UW		Jun-Jul
Asclepiadaceae				
<i>Asclepias exaltata</i>	Poke milkweed	UW		Jun
<i>Asclepias incarnata</i> *	Swamp milkweed	SH SC M		Jul
<i>Asclepias syriaca</i>	Common milkweed	FD		Jun-Jul
<i>Asclepias tuberosa</i>	Butterfly weed	FD		Jul
<i>Asclepias verticillata</i> *	Whorled milkweed	FD D		Aug
Asteraceae				
<i>Achillea millefolium</i> *	Yarrow	FD D		Jun-Sept
<i>Ambrosia artemisiifolia</i> *	Common ragweed	D		Aug
<i>Anaphalis margaritacea</i> *	Pearly everlasting	FD UW		Aug-Sept
<i>Antennaria neglecta</i> *	Pussy toes	FD		Apr-May
<i>Antennaria plantaginifolia</i> *	Plantain-leaved pussy toes	FD UW		May
<i>Arctium minus</i>	Burdock	D		Jul-Aug
<i>Aster azureus</i>	Azure aster	FD		Sept
<i>Aster cordifolius</i> *	Heart-leaved aster	UW		Aug-Oct
<i>Aster ericoides</i>	Heath aster	FD		Aug
<i>Aster junciformis</i> *	Rush aster	FW SH CS		Aug-Oct
<i>Aster laevis</i> *	Smooth aster	FD		Aug-Oct
<i>Aster lateriflorus</i> *	Calico aster	FW UW		Aug-Sept
<i>Aster macrophyllus</i> *	Large-leaved aster	UW		Aug-Sept
<i>Aster novae-angliae</i> *	New England aster	FW FD		Aug-Oct
<i>Aster pilosus</i>	Frost aster	FD D		Aug-Oct
<i>Aster puniceus</i> *	Purple-stemmed aster	FW SH CS		Aug-Sept

<i>Aster puniceus</i>	Purple-stemmed		
var. <i>firmus</i> *	aster	FW SH CS	Aug-Sept
<i>Aster sagittifolius</i> *	Arrow-leaved aster	FD UW	Aug-Oct
<i>Aster simplex</i> *	Aster	FW SH FD	Aug-Oct
<i>Aster umbellatus</i> *	Flat-topped white aster	FW SH	Aug-Sept
<i>Bidens aristosa</i>	Tickseed sunflower	SH	Aug
<i>Bidens cernua</i> *	Nodding bur marigold	SH CS	Jul-Sept
<i>Bidens connata</i>	Beggar ticks	SH	Aug
<i>Bidens coronata</i> *	Beggar ticks	SH	Aug-Sept
<i>Bidens frondosa</i> *	Beggar ticks	D FW	Aug-Oct
<i>Carduus nutans</i> *	Musk thistle	D FD	Jul-Sept
<i>Chrysanthemum</i> <i>leucanthemum</i> *	Ox eye daisy	FD D	Jun-Jul
<i>Cichorium intybus</i>	Chickory	FD D	Aug-Sept
<i>Cirsium altissimum</i> *	Canada thistle	V	Jul-Sept
<i>Cirsium arvense</i> *	Canada thistle	D FD	Jun-Jul
<i>Cirsium muticum</i> *	Swamp thistle	FW	Jul-Sept
<i>Cirsium vulgare</i> *	Bull thistle	D	Jul-Sept
<i>Coreopsis palmata</i>	Coreopsis	FD	Jun-Sept
<i>Echinacea pallida</i>	Pale purple coneflower	FD	Jun-Oct
<i>Echinacea purpurea</i> *	Purple coneflower	FD	Jul-Aug
<i>Erigeron annuus</i> *	Daisy fleabane	FD	Jul-Aug
<i>Erigeron canadensis</i> *	Horseweed	FD D	Aug-Sept
<i>Erigeron philadelphicus</i> *	Philadelphia daisy	SH	May-Jun
<i>Erigeron pulchellus</i>	Robin's plantain	FW	Apr-Jul
<i>Erigeron strigosus</i> *	Daisy fleabane	FD	Jun-Jul
<i>Eupatorium maculatum</i> *	Joe-pye weed	FW SH	Jul-Aug
<i>Eupatorium perfoliatum</i> *	Boneset	FW SH SC	Jul-Aug
<i>Eupatorium purpureum</i>	Sweet joe-pye weed	FW SH SC	Jul-Aug
<i>Eupatorium rugosum</i> *	White snakeroot	UW	Aug-Sept
<i>Gnaphalium obtusifolium</i> *	Sweet everlasting	FD UW	Jun-Jul
<i>Helianthus giganteus</i> *	Sunflower	FW	Aug
<i>Helianthus grosseserratus</i> *	Saw-toothed sunflower	FD	Jul-Oct
<i>Helianthus hirsutus</i> *	Sunflower	UW	Sept
<i>Helianthus strumosus</i>	Pale-leaved sunflower	UW FD	Aug-Sept
<i>Hieracium aurantiacum</i> *	Orange hawkweed	UW FD	Jun-Jul
<i>Hieracium pratense</i> *	King devil	D	Jun
<i>Kuhnia eupatorioides</i>	False boneset	FD	Aug-Sept
<i>Lactuca canadensis</i> *	Wild lettuce	D	Jul-Sept
<i>Lactuca canadensis</i> var. <i>longifolia</i> *	Wild lettuce	CS	Jul-Sept
<i>Liatris spicata</i> *	Dense blazing star	FD	Jul-Aug

<i>Matricaria maritima</i> *	Scentless chamomille	D	Jul-Aug
<i>Matricaria matricarioides</i> *	Pineapple weed	D	Jun-Sept
<i>Prenanthes alba</i> *	White lettuce	SH CS SC	Aug-Sept
<i>Ratibida pinnata</i> *	Gray-headed coneflower	FD	Jul-Aug
<i>Rudbeckia hirta</i>	Black-eyed Susan	FD	Jul-Aug
<i>Senecio aureus</i> *	Golden ragwort	CS SH	Jun
<i>Silphium integrifolium</i>	Rosinweed	FD	Jul-Sept
<i>Silphium laciniatum</i> *	Compass plant	FD	Aug-Sept
<i>Silphium terebinthinaceum</i> *	Prairie dock	FD	Aug
<i>Solidago altissima</i> *	Tall goldenrod	D FW	Aug-Oct
<i>Solidago canadensis</i> *	Canada goldenrod	V	Jul-Aug
<i>Solidago flexicaulis</i> *	Zigzag goldenrod	UW	Aug-Oct
<i>Solidago gigantea</i> *	Late goldenrod	SC SH	Jul-Aug
<i>Solidago graminifolia</i>	Grass-leaved goldenrod	SH FW	Aug-Sept
var. <i>nuttallii</i> *			Aug
<i>Solidago houghtonii</i>	Goldenrod	OB	Jul-Sept
<i>Solidago missouriensis</i>	Goldenrod	FD	Aug-Sept
<i>Solidago nemoralis</i> *	Gray goldenrod	FD	Aug-Sept
<i>Solidago patula</i> *	Rough-leaved goldenrod	SH SC CS	Aug-Sept
<i>Solidago rigida</i> *	Hard-leaved goldenrod	FD	Aug-Sept
<i>Solidago rugosa</i>	Rough-stemmed goldenrod	FW	Aug-Oct
<i>Solidago speciosa</i> *	Showy goldenrod	V	Aug-Sept
<i>Solidago uliginosa</i> *	Bog goldenrod	OB	Aug-Sept
<i>Solidago ulmifolia</i> *	Elm leaf goldenrod	UW	Aug-Sept
<i>Sonchus arvensis</i>	Field sow thistle	D	Aug
<i>Sonchus arvensis</i> var. <i>glabrescens</i>	Field sow thistle	D	Jul
<i>Sonchus oleraceus</i>	Common sow thistle	D	Jul
<i>Sonchus uliginosus</i>	Sow thistle	D V	Jul-Aug
<i>Taraxacum officinale</i> *	Dandelion	D V	May-Sept
<i>Tragopogon major</i> *	Yellow goats beard	FD D	Jun
Balsaminaceae			
<i>Impatiens capensis</i>	Jewel weed	SH CS	Jul-Aug
Berberidaceae			
<i>Berberis vulgaris</i>	Common barberry	UW FD	Jun
<i>Caulophyllum thalictroides</i> *	Blue cohosh	UW	May
<i>Podophyllum peltatum</i> *	Mayapple	UW	May

Betulaceae

<i>Alnus rugosa</i> *	Speckled alder	SH SC	Mar-Apr
<i>Betula alleghaniensis</i> *	Yellow birch	SH CS	May
<i>Betula papyrifera</i> *	Paper birch	UW SH CS	Apr-May
<i>Betula pumila</i> *	Bog birch	SC SH OB	Apr-May
<i>Betula pumila</i> var. <i>glandulifera</i> *	Bog birch	SC SH OB	May
<i>Betula pumila</i> x <i>sandbergii</i>		SC SH FW	May
<i>Carpinus caroliniana</i> *	Blue beech	UW SH	Apr
<i>Corylus americana</i> *	American hazelnut	UW FD	Apr
<i>Ostrya virginiana</i> *	Ironwood	UW	May

Boraginaceae

<i>Cynoglossum officinale</i> *	Hound's tongue	D	May-Jun
<i>Echium vulgare</i> *	Blueweed	FD D	Jun
<i>Hackelia americana</i>	Nodding stickseed	UW	Aug
<i>Hackelia virginiana</i> *	Stickseed	UW	Aug
<i>Mertensia virginica</i> *	Virginian cowslip	UW	May
<i>Symphytum officinale</i> *	Common comfrey	D	Jun-Jul

Brassicaceae

<i>Arabis canadensis</i> *	Sickle pod	UW	May-Jun
<i>Arabis laevigata</i> *	Rock cress	UW	May-Jun
<i>Barbarea vulgaris</i> *	Winter cress	FD D	May
<i>Berteroa incana</i> *	Hoary alyssum	FD D	Jun-Jul
<i>Capsella bursa-pastoris</i> *	Shepherd's purse	FD D	Apr-Jul
<i>Cardamine bulbosa</i>	Spring cress	SC FW SH	Apr-Jun
<i>Cardamine pratensis</i> var. <i>palustris</i> *	Cuckoo flower	SH CS SC	May-Jun
<i>Dentaria laciniata</i>	Cut-leaved toothwort	UW	May
<i>Erysimum cheiranthoides</i>	Wormseed mustard	FD D	Jun-Jul
<i>Hesperis matronalis</i> *	Dame's rocket	FD D	Jun
<i>Lepidium campestre</i> *	Cow cress	D	May-Jun
<i>Lepidium densiflorum</i> *	Pepper grass	D	May-Jun
<i>Nasturtium officinale</i>	True watercress	M A	Jun
<i>Rorippa palustris</i> var. <i>hispida</i>	Marsh cress	V	Jun-Jul
<i>Sisymbrium altissimum</i> *	Tumble mustard	D FD	May-Jul
<i>Sisymbrium officinale</i> var. <i>leiocarpum</i> *	Hedge mustard	D	May-Jul
<i>Thlaspi arvense</i> *	Pennycress	FD D	May-Jun

Campanulaceae

<i>Campanula aparinoides</i> *	Bedstraw bellflower	M SH CS	Jul-Aug
<i>Lobelia cardinalis</i> *	Cardinal flower	SH	Aug
<i>Lobelia kalmii</i> *	Bog lobelia	OB	Aug-Sept
<i>Lobelia siphilitica</i> *	Great lobelia	FW SH	Jul-Sept

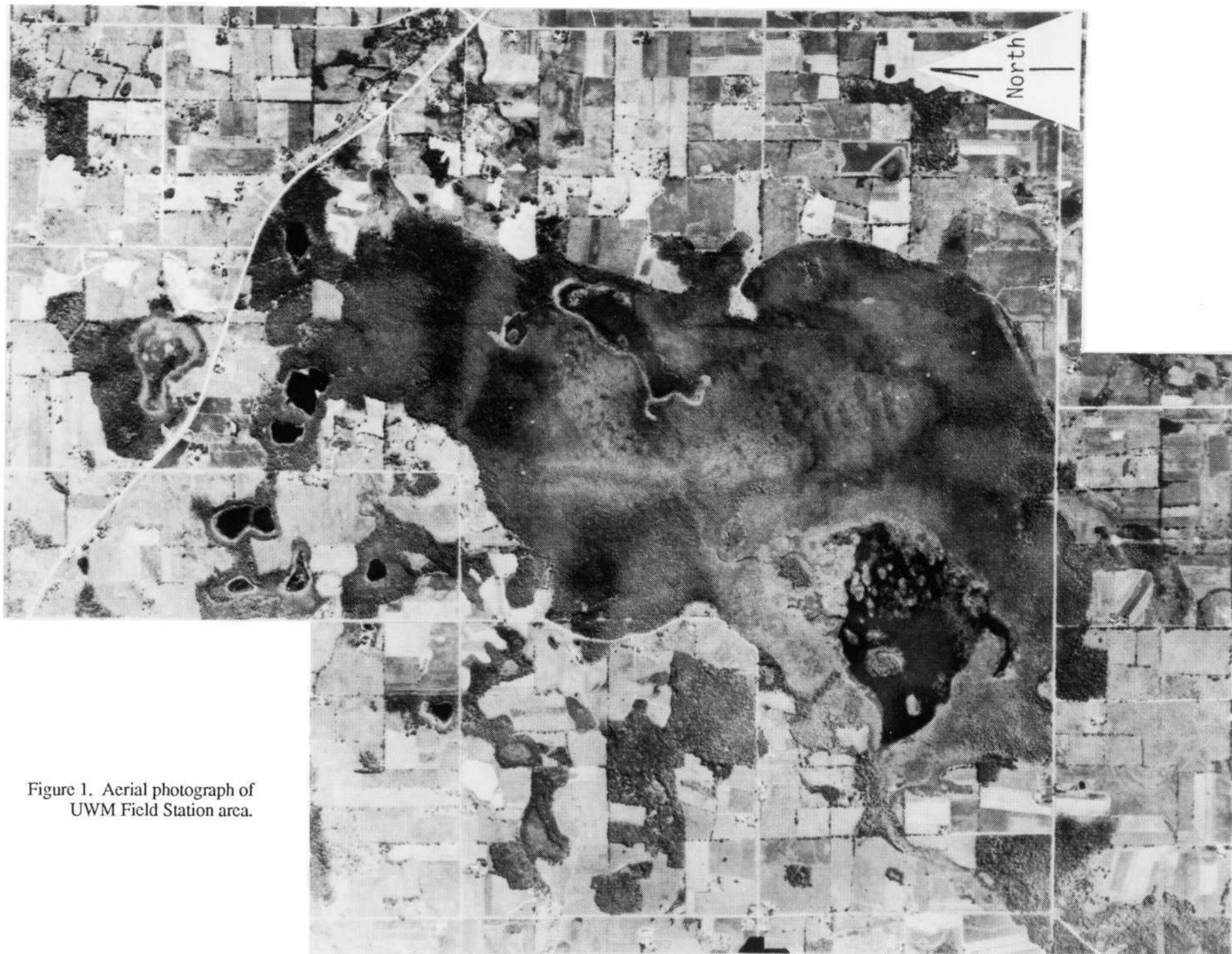


Figure 1. Aerial photograph of
UWM Field Station area.

<i>Lobelia siphilitica</i> f. <i>albiflora</i>	Great lobelia	CS	Aug
Caprifoliaceae			
<i>Diervilla lonicera</i> *	Bush honeysuckle	UW	Jun
<i>Linnaea borealis</i>	Twinflower	CS	Jun-Aug
<i>Lonicera canadensis</i>	Fly honeysuckle	OB	Jun
<i>Lonicera dioica</i> *	Wild honeysuckle	CS	May-Jul
<i>Lonicera morrowi</i> *	Honeysuckle	UW FD D	May-Jun
<i>Lonicera oblongifolia</i> *	Swamp fly honeysuckle	SC OB	May-Jun
<i>Lonicera tatarica</i> *	Tartarian honeysuckle	UW FD	May-Jun
<i>Lonicera villosa</i> *	Mountain fly honeysuckle	OB	Apr-May
<i>Lonicera villosa</i> var. <i>solonis</i> *	Mountain fly honeysuckle	OB SC	May
<i>Sambucus canadensis</i> *	Common elderberry	UW FD	May-Jun
<i>Sambucus pubens</i> *	Red elderberry	UW	Apr-May
<i>Triosteum aurantiacum</i> *	Horse gentian	FD	Jun
<i>Triosteum perfoliatum</i>	Tinker's weed	FD	May-Jun
<i>Viburnum acerifolium</i> *	Maple-leaved viburnum	UW	Jun
<i>Viburnum lentago</i> *	Nannyberry	FD UW SH	May-Jun
<i>Viburnum opulus</i> *	Gelder rose	UW	May-Jun
<i>Viburnum trilobum</i> *	High bush cranberry	UW SC SH	May-Jun
Caryophyllaceae			
<i>Cerastium fontanum</i> *	Mouse-eared chickweed	FD	Jun-Jul
<i>Saponaria officinalis</i>	Bouncing bet	D	Jun-Aug
<i>Silene pratensis</i> *	White campion	FD D	Jun-Aug
<i>Silene vulgaris</i> *	Bladder campion	D	Jul-Aug
<i>Stellaria longifolia</i> *	Long-leaved chickweed	CS SH	May-Jun
Celastraceae			
<i>Celastrus scandens</i> *	Bittersweet	UW FD	May-Jun
Ceratophyllaceae			
<i>Ceratophyllum demersum</i> *	Coontail	A	Jul
Chenopodiaceae			
<i>Chenopodium album</i> *	Lambs quarters	D	Jun-Aug
<i>Chenopodium capitatum</i> *	Strawberry blight	D	May-Aug
Commelinaceae			
<i>Tradescantia ohiensis</i>	Spiderwort	FD	Jul

Convolvulaceae			
<i>Convolvulus arvensis</i>	Field bindweed	D	Jun-Sept
<i>Cuscuta cuspidata</i>	Dodder	SC FW SH	Jul-Aug
<i>Cuscuta gronovii</i>	Dodder	SC FW SH	Jul-Aug
Cornaceae			
<i>Cornus alternifolia</i> *	Alternate-leaved dogwood	UW	May-Jul
<i>Cornus amomum</i>	Silky dogwood	SC	May-Jun
<i>Cornus canadensis</i> *	Bunchberry	CS OB	May-Jun
<i>Cornus foemina</i> *	Gray dogwood	SH UW FD	May-Jun
<i>Cornus rugosa</i> *	Round-leaved dogwood	SH UW	May-Jun
<i>Cornus stolonifera</i> *	Red osier dogwood	V	Jun-Aug
Cucurbitaceae			
<i>Echinocystis lobata</i> *	Wild cucumber	FW D	Jul-Aug
Cupressaceae			
<i>Juniperus communis</i> var. <i>depressa</i> *	Dwarf juniper	FD OB	May
<i>Thuja occidentalis</i> *	White cedar	CS SH	May
Cyperaceae			
<i>Carex albursina</i> *	Sedge	UW	Apr-Jun
<i>Carex aquatilis</i> *	Sedge	A M OB	Jul-Aug
<i>Carex aquatilis</i> var. <i>altior</i>	Sedge	A M	Jul-Aug
<i>Carex aurea</i> *	Sedge	FW SC	May
<i>Carex bebbii</i> *	Sedge	FW	Jun-Aug
<i>Carex brunnescens</i> *	Sedge	CS OB	Jun-Aug
<i>Carex canescens</i> *	Sedge	OB CS	Jun
<i>Carex cephalophora</i> *	Sedge	UW	Jun
<i>Carex chordorrhiza</i> *	Sedge	OB	May-Aug
<i>Carex comosa</i> *	Sedge	FW M	Jun
<i>Carex convoluta</i> *	Sedge	UW	Jun
<i>Carex cristatella</i> *	Sedge	FW M	Jun
<i>Carex deweyana</i> *	Sedge	UW	Jun
<i>Carex disperma</i> *	Sedge	OB CS	Jun
<i>Carex gracillima</i> *	Sedge	FW	May-Jul
<i>Carex granularis</i> *	Sedge	FW	May-Jul
<i>Carex granularis</i> var. <i>haleana</i> *	Sedge	FW	Jun
<i>Carex hirtifolia</i>	Sedge	UW	May-Jun
<i>Carex hystericina</i> *	Sedge	SC SH	Jun
<i>Carex interior</i> *	Sedge	FW	Jun
<i>Carex intumescens</i> var. <i>fernaldii</i> *	Sedge	SH CS	May-Jul
<i>Carex katahdinensis</i>	Sedge	V	Jul-Aug

<i>Carex lacustris</i> *	Sedge	FW M	May-Jul
<i>Carex lasiocarpa</i> var. <i>americana</i> *	Sedge	CS OB	May-Jul
<i>Carex laxiflora</i> var. <i>blanda</i>	Sedge	UW	Apr-Jun
<i>Carex leptalea</i> *	Sedge	OB CS	Jun
<i>Carex limosa</i> *	Sedge	OB	Jun
<i>Carex livida</i>	Sedge	OB	Jun
<i>Carex pauciflora</i>	Sedge	OB	Jun
<i>Carex paupercula</i> *	Sedge	OB	Jun
<i>Carex peckii</i>	Sedge	V CS	May
<i>Carex pedunculata</i> *	Sedge	UW	Apr
<i>Carex pensylvanica</i> *	Sedge	UW	Apr
<i>Carex prairea</i>	Sedge	M	Jun
<i>Carex pseudo-cyperus</i> *	Sedge	M CS SC	Jun
<i>Carex retrorsa</i>	Sedge	FW	Jul
<i>Carex rosea</i>	Sedge	CS	May-Jul
<i>Carex rostrata</i>	Sedge	FW M	Jun
<i>Carex sparganioides</i> *	Sedge	UW	Jun-Jul
<i>Carex stipata</i> *	Sedge	FW SH	Jun-Jul
<i>Carex stricta</i> *	Sedge	FW M	Apr-May
<i>Carex tenuiflora</i> *	Sedge	OB CS	Jun
<i>Carex tetanica</i>	Sedge	OB CS	May
<i>Carex trisperma</i> *	Sedge	CS OB	Jun
<i>Carex vulpinoidea</i> *	Sedge	M	Jun
<i>Cyperus esculentus</i>	Nut grass	FW D	Aug-Sept
<i>Cyperus rivularis</i>	Umbrella sedge	FW	Jun-Jul
<i>Cyperus strigosus</i>	Sedge	FW	Aug
<i>Dulichium arundinaceum</i> *	Three way sedge	A CS	Jul
<i>Eleocharis erythropoda</i>	Spike rush	FW	Jun-Sept
<i>Eleocharis palustris</i> *	Spike rush	OB	Jun-Jul
<i>Eleocharis pauciflora</i> *	Spike rush	M	Jul
<i>Eleocharis smallii</i>	Spike rush	FW OB M	Jun
<i>Eriophorum angustifolium</i> *	Cottongrass	OB CS	May-Jun
<i>Eriophorum virginicum</i> *	Tawny cottongrass	OB CS	Jul
<i>Eriophorum</i> <i>viridi-carinatum</i> *	Cottongrass	OB CS	May-Jul
<i>Rhynchospora alba</i> *	Beak rush	OB	May
<i>Rhynchospora capillacea</i> *	Beak rush	OB	May
<i>Scirpus acutus</i> *	Hardstem bulrush	A	Jun
<i>Scirpus atrovirens</i> *	Bulrush	FW	Jun
<i>Scirpus cyperinus</i> *	Wool grass	OB CS	Jun
<i>Scirpus microcarpus</i> *	Bulrush	M	Jun
<i>Scirpus subterminalis</i> *	Swaying rush	A	Jul
<i>Scirpus validus</i>	Softstem bulrush	A	Jun

Droseraceae			
<i>Drosera intermedia</i>	Sundew	OB	Jun
<i>Drosera linearis</i>	Linear-leaved sundew	OB	Jul
<i>Drosera rotundifolia</i> *	Round-leaved sundew	OB	Jun-Jul
Equisetaceae			
<i>Equisetum arvense</i> *	Common horsetail	UW D	Mar
<i>Equisetum fluviatile</i> *	Horsetail	SH FW SC	May
Ericaceae			
<i>Andromeda glaucophylla</i> *	Bog rosemary	OB	May
<i>Chamaedaphne calyculata</i> *	Leatherleaf	OB	Apr-May
<i>Gaultheria hispidula</i>	Creeping snowberry	CS	Apr-May
<i>Gaultheria procumbens</i> *	Wintergreen	CS	Jul-Aug
<i>Gaylussacia baccata</i>	Black huckleberry	CS	Jun
<i>Kalmia polifolia</i>	Pale laurel	SC	May-Jul
<i>Ledum groenlandicum</i> *	Labrador tea	OB	May-Jun
<i>Vaccinium angustifolium</i>	Low sweet blueberry	OB	Jun
<i>Vaccinium macrocarpon</i>	Large cranberry	CS OB	Jul-Aug
<i>Vaccinium myrtilloides</i>	Velvet leaf bilberry	CS OB	May
<i>Vaccinium oxycoccus</i> *	Small cranberry	OB CS	Jun
Euphorbiaceae			
<i>Euphorbia corollata</i>	Flowering spurge	FD D	May-Jun
<i>Euphorbia esula</i>	Leafy spurge	FD D	May-Aug
Fabaceae			
<i>Amphicarpa bracteata</i> *	Hog peanut	SH CS	Jul-Aug
<i>Baptisia lactea</i>	False indigo	FD	May-Jul
<i>Coronilla varia</i>	Crown vetch	FD D	Jun-Aug
<i>Dalea purpurea</i>	Purple prairie clover	FD	Jul
<i>Desmodium canadense</i>	Beggar's tick	FD	Jun-Jul
<i>Lathyrus ochroleucus</i>	Vetchling	V	May-Jul
<i>Medicago lupulina</i> *	Black medick	FD D	Jun-Jul
<i>Medicago lupulina</i> var. <i>glandulosa</i>	Black medick	D	Mar
<i>Medicago sativa</i> *	Alfalfa	D	Jun-Jul
<i>Melilotus alba</i> *	White sweet clover	FD D	Jul
<i>Melilotus officinalis</i> *	Yellow sweet clover	FD D	Jul-Aug
<i>Petalostemum candidum</i>	White prairie clover	FD	Jul
<i>Trifolium campestre</i> *	Low hop clover	D	May-Aug
<i>Trifolium dubium</i>	Little hop clover	D	Apr-Sept
<i>Trifolium pratense</i> *	Red clover	FD D	Jun-Jul
<i>Trifolium repens</i> *	White clover	FD D	Jun-Jul
<i>Vicia caroliniana</i>	Wood vetch	FD UW	Apr-Jun
<i>Vicia sativa</i> *	Vetch	D	Jul-Sept

Fagaceae			
<i>Fagus grandifolia</i> *	Beech	UW	Apr-May
<i>Quercus alba</i>	White oak	UW	May
<i>Quercus bicolor</i>	Swamp white oak	SH	May
<i>Quercus macrocarpa</i> *	Bur oak	UW	May
<i>Quercus rubra</i> *	Red oak	UW	May
Gentianaceae			
<i>Gentiana andrewsii</i>	Bottle gentian	FW	Sept
<i>Menyanthes trifoliata</i> var. <i>minor</i>	Buckbean	OB SC	May
Geraniaceae			
<i>Erodium cicutarium</i> *	Stork's bill	D	May-Sept
<i>Geranium maculatum</i> *	Wild geranium	UW	May-Jun
Grossulariaceae			
<i>Ribes americanum</i> *	Wild black currant	SC	May
<i>Ribes cynosbati</i> *	Prickly gooseberry	UW SH SC	Apr-May
<i>Ribes cynosbati</i> f. <i>inermis</i>	Prickly gooseberry	UW SH SC	Apr-May
<i>Ribes hirtellum</i> *	Swamp gooseberry	SH SC CS	Apr-Jul
<i>Ribes hirtellum</i> var. <i>callicola</i> *	Swamp gooseberry	SH SC CS	Apr-Jul
<i>Ribes lacustre</i>	Swamp black currant	SH SC CS	May-Aug
<i>Ribes missouriense</i> *		SH SC	Apr-May
<i>Ribes triste</i> *	Swamp red currant	SH SC	Apr-Jul
Guttiferae			
<i>Hypericum perforatum</i>	Common St. John's wort	FD D	Jul
<i>Triadenum fraseri</i>	Marsh St. John's wort	OB SC	Aug
Haloragaceae			
<i>Myriophyllum spicatum</i> var. <i>exalbescens</i>	Eurasian water milfoil	A	Jul
<i>Myriophyllum verticillatum</i>	Water milfoil	A	Jul
Hamamelidaceae			
<i>Hamamelis virginiana</i> *	Witch hazel	UW SH	Oct-Nov
Hydrocharitaceae			
<i>Vallisneria americana</i> *	Tape grass	A	Jul-Oct
Iridaceae			
<i>Iris versicolor</i> *	Blue flag iris	SH FW	Jun

Juglandaceae			
<i>Carya cordiformis</i> *	Bitternut hickory	UW	May
<i>Carya ovata</i> *	Shagbark hickory	UW	May
<i>Juglans nigra</i>	Black walnut	UW	May
Juncaceae			
<i>Juncus dudleyi</i> *	Rush	OB	Jun-Jul
<i>Juncus tenuis</i> *	Path rush	OB D	Jun-Sept
Juncaginaceae			
<i>Triglochin maritimum</i> *	Arrowgrass	OB	May-Jun
Lamiaceae			
<i>Glechoma hederacea</i>	Ground ivy	D	Apr-Jul
<i>Leonurus cardiaca</i>	Motherwort	D	Jul
<i>Lycopus americanus</i> *	Cut-leaved water horehound	SH M	Jul
<i>Lycopus rubellus</i>	Bugle weed	SH M	Jun-Sept
<i>Lycopus uniflorus</i>	Water horehound	SH SC CS	Jul
<i>Lycopus virginicus</i>	Bugle weed	FW	Jul-Sept
<i>Mentha arvensis</i> *	Wild mint	SH	Jul
<i>Monarda fistulosa</i>	Wild bergamot	FD	Jul
<i>Monarda fistulosa</i> var. <i>albescens</i> *	Wild bergamot	FD	Jul
<i>Nepeta cataria</i>	Catnip	D	Jul
<i>Prunella vulgaris</i> *	Heal all	FW SH	Jul-Aug
<i>Pycnanthemum virginianum</i>	Virginia mountain mint	FD SC	Jul
<i>Scutellaria</i> <i>epilobifolia</i> *	Marsh skullcap	SH M	Jun-Aug
<i>Scutellaria lateriflora</i> *	Mad dog skullcap	SH SC M	Jul
<i>Stachys palustris</i> *	Hedge nettle	FW	Jul-Aug
Lemnaceae			
<i>Lemna minor</i> *	Duckweed	A	
<i>Lemna trisulca</i>	Star duckweed	A	
<i>Spirodela polyrhiza</i>	Greater duckweed	A	
Lentibulariaceae			
<i>Utricularia cornuta</i> *	Horned bladderwort	OB	Jun-Jul
<i>Utricularia intermedia</i> *	Bladderwort	OB	May-Jun
<i>Utricularia purpurea</i>	Purple bladderwort	OB	Jun-Aug
<i>Utricularia vulgaris</i> *	Greater bladderwort	A	Jun-Jul
Liliaceae			
<i>Allium canadense</i>	Wild garlic	UW	Jun-Aug
<i>Allium cernuum</i> *	Nodding wild onion	FD	Jun-Aug
<i>Allium tricoccum</i>	Wild leek	UW	Jun-Jul

<i>Asparagus officinalis</i> *	Asparagus	D FD	Jun
<i>Clintonia borealis</i> *	Blue bead lily	CS SH	May
<i>Erythronium americanum</i> *	Yellow trout lily	UW	May
<i>Lilium michiganense</i> *	Michigan lily	OB FW SC	May-Jun
<i>Maianthemum canadense</i> *	Canada mayflower	CS SH	May-Jun
<i>Medeola virginiana</i>	Indian cucumber root	UW	May
<i>Polygonatum pubescens</i>	Hairy Solomon's seal	UW	May-Jun
<i>Smilacina racemosa</i> *	False Solomon's seal	UW	May-Jun
<i>Smilacina stellata</i> *	Starry false Solomon's seal	UW	May
<i>Smilacina trifolia</i>	Three-leaved false Solomon's seal	CS	May
<i>Smilax ecirrata</i>	Carrion flower	UW	May
<i>Smilax herbacea</i>	Carrion flower	UW	May
<i>Smilax hispida</i> *	Bristly greenbriar	SC SH	May
<i>Streptopus roseus</i>	Rose twisted stalk	UW	Apr-Jul
<i>Tofieldia glutinosa</i> *	False asphodel	OB	Jun-Aug
<i>Trillium cernuum</i> *	Nodding trillium	UW	May
<i>Trillium grandiflorum</i> *	Common trillium	UW	Apr-May
<i>Uvularia grandiflora</i> *	Large-flowered bellwort	UW	Apr-May
Lythraceae			
<i>Decodon verticillatus</i> *	Water willow	M	Jul-Aug
<i>Lythrum salicaria</i>	Purple loosestrife	M D	Jun-Sept
Malvaceae			
<i>Malva neglecta</i>	Common mallow	D	Apr-Aug
Moraceae			
<i>Morus alba</i>	White mulberry	FD D	Jun-Jul
Najadaceae			
<i>Najas flexilis</i> *	Naiad	A	Jul-Aug
Nymphaeaceae			
<i>Brasenia schreberi</i> *	Water shield	A	Jun-Aug
<i>Nuphar advena</i> *	Bullhead lily	A	Aug-Sept
<i>Nuphar variegata</i> *	Bullhead lily	A	Jun-Jul
<i>Nymphaea odorata</i> *	Water lily	A	Jun-Sept
Oleaceae			
<i>Fraxinus americana</i> *	White ash	UW	May
<i>Fraxinus nigra</i> *	Black ash	SH CS	May
<i>Fraxinus pennsylvanica</i> *	Red ash	SH CS	May
<i>Fraxinus pennsylvanica</i> var. <i>subintegerrima</i> *	Green ash	SH CS	May

Onagraceae			
<i>Circaea alpina</i>	Small enchanter's nightshade	UW	Jun
<i>Circaea lutetiana</i> *	Enchanter's nightshade	UW	Jul
<i>Epilobium ciliatum</i>	Northern willow herb	SC SH	Jul-Aug
<i>Epilobium ciliatum</i> ssp. <i>glandulosum</i>	Northern willow herb	SC SH	Jul-Aug
<i>Epilobium coloratum</i>	Willow herb	SC CS SH	Jul
<i>Epilobium leptophyllum</i> *	Narrow-leaved willow herb	SH SC	Jul-Aug
<i>Epilobium palustre</i> *	Willow herb	SC SH	Jul-Aug
<i>Oenothera biennis</i>	Common evening primrose	FD D	Jul
Ophioglossaceae			
<i>Botrychium virginianum</i> *	Rattlesnake fern	UW	
Orchidaceae			
<i>Aplectrum hyemale</i>	Puttyroot	UW	Jun-Jul
<i>Arethusa bulbosa</i>	Dragon's mouth	OB	Jun-Jul
<i>Calopogon tuberosus</i> *	Grass pink	OB	Jun-Jul
<i>Corallorhiza odontorhiza</i>	Fall coral root	UW	Jun-Jul
<i>Corallorhiza trifida</i>	Early coral root	UW	Jun-Jul
<i>Cypripedium acaule</i>	Moccasin flower	CS OB	Jun
<i>Cypripedium arietinum</i>	Ramshead lady's slipper	CS	Jun
<i>Cypripedium calceolus</i> var. <i>parviflorum</i> *	Small yellow lady's slipper	CS SH	Jun-Jul
<i>Cypripedium reginae</i>	Showy lady's slipper	CS SH SC	Jun-Jul
<i>Epipactis helliborine</i>	Helliborine	UW	Jul
<i>Habenaria dilatata</i> *	Tall white bog orchid	OB	Jun-Aug
<i>Habenaria hyperborea</i>	Northern green orchid	CS SH OB	Jun-Jul
<i>Habenaria lacera</i>	Ragged-fringed orchid	OB CS	Jun-Aug
<i>Habenaria leucophaea</i>	Prairie white- fringed orchid	OB	Jul
<i>Habenaria obtusata</i>	Blunt leaf orchid	CS	Jun-Jul
<i>Habenaria psycodes</i>	Small purple- fringed orchid	CS OB	Jun
<i>Liparis liliifolia</i>	Purple twayblade	SH	Jun
<i>Liparis loeselii</i>	Green twayblade	OB CS	Jun
<i>Malaxis monophylla</i> var. <i>brachypoda</i>	White adder's mouth	CS	Jun

<i>Malaxis unifolia</i>	Green adder's mouth	CS SH	Jul
<i>Pogonia ophioglossoides</i> *	Rose pogonia	OB	May-Jul
<i>Spiranthes cernua</i>	Ladies' tresses	FW	Jul-Aug
Orobanchaceae			
<i>Conopholis americana</i> *	Squawroot	UW	Jun
<i>Epifagus virginiana</i> *	Beechdrops	UW	Jun
Osmundaceae			
<i>Osmunda cinnamomea</i> *	Cinnamon fern	SH	
<i>Osmunda claytoniana</i> *	Interrupted fern	UW	
<i>Osmunda regalis</i> *	Royal fern	SH CS	
Oxalidaceae			
<i>Oxalis fontana</i> *	Sorrel	D	Jun-Jul
<i>Oxalis stricta</i> *	Sorrel	D	Apr-Jul
Papaveraceae			
<i>Sanguinaria canadensis</i> *	Bloodroot	UW	Apr
Phrymaceae			
<i>Phryma leptostachya</i> *	Lopseed	UW	Jul-Aug
Pinaceae			
<i>Larix laricina</i> *	Tamarack	CS SH	Apr-May
<i>Picea glauca</i>	White spruce	OB	Apr-May
<i>Picea mariana</i> *	Black spruce	CS OB	Apr-May
<i>Pinus banksiana</i> *	Jack pine	FD D	Apr-May
<i>Pinus strobus</i> *	White pine	D	Apr-May
<i>Pinus sylvestris</i> *	Scotch pine	D	Apr-May
Plantaginaceae			
<i>Plantago lanceolata</i> *	Ribgrass	FD D	Jul
<i>Plantago major</i>	Common plantain	D	Jul
<i>Plantago rugelii</i>	Plantain	D	Jul
Poaceae			
<i>Agropyron repens</i> *	Quack grass	D	Jul
<i>Agrostis gigantea</i> *	Bentgrass/Redtop	V	Jun
<i>Agrostis perennans</i>	Bentgrass	V	Jun
<i>Agrostis stolonifera</i>	Bentgrass	V	Jun
<i>Andropogon gerardii</i> *	Big bluestem	FD	Aug
<i>Andropogon scoparius</i>	Little bluestem	FD	Aug
<i>Avena sativa</i> *	Oats	D	Jul
<i>Bouteloua curtipendula</i>	Gramma grass	FD	Jul
<i>Bromus ciliatus</i> *	Fringed brome	FW SH CS	Jul
<i>Bromus inermis</i> *	Brome grass	FD	May-Jun
<i>Bromus pubescens</i>	Canada brome	UW	Jun

<i>Calamagrostis canadensis</i> *	Blue joint grass	FW SH	Jun
<i>Cinna arundinacea</i>	Wood reedgrass	SH	Jul
<i>Digitaria ischaemum</i>	Small crabgrass	D	Jun
<i>Digitaria sanguinalis</i> *	Crabgrass	D	Jun
<i>Echinochloa crusgalli</i>	Barnyard grass	D	Jul
<i>Echinochloa muricata</i>	Barnyard grass	V	Jul
<i>Elymus canadensis</i>	Wild rye	FD	Jul
<i>Elymus villosus</i>	Wild rye	SH	Jun
<i>Elymus virginicus</i>	Wild rye	SH	Jul
<i>Eragrostis cilianensis</i> *	Stink grass	D	Jun
<i>Festuca obtusa</i> *	Nodding fescue	UW	May-Jun
<i>Festuca pratensis</i>	Meadow fescue	D V	Jun
<i>Glyceria grandis</i>	Manna grass	SH CS	May-Jun
<i>Glyceria striata</i> *	Fowl manna grass	SH CS	May-Jun
<i>Hordeum jubatum</i> *	Squirrel tail grass	D	Jun
<i>Hystrix patula</i> *	Bottle brush grass	UW SH	Jun
<i>Leersia oryzoides</i> *	Rice cutgrass	FW SH	Jun
<i>Lolium perenne</i>	Ryegrass	D	Jun
<i>Milium effusum</i>	Millet grass	SC	Jun
<i>Muhlenbergia glomerata</i>	Marsh wild timothy	FW OB	Aug
<i>Muhlenbergia mexicana</i>	Muhly	FW OB SC	Aug
<i>Oryzopsis asperifolia</i> *	Rice grass	UW	Jun
<i>Oryzopsis racemosa</i> *	Rice grass	UW	Jun
<i>Panicum capillare</i> *	Old witch grass	D FD	Jul
<i>Panicum virgatum</i>	Switchgrass	FD V	Jul
<i>Phalaris arundinacea</i> *	Reed canary grass	FW SC D	Jun-Jul
<i>Phleum pratense</i> *	Timothy	D	Jun
<i>Phragmites australis</i> *	Reed grass	SC OB	Jul
<i>Poa compressa</i> *	Canada bluegrass	FD	May
<i>Poa palustris</i>	Fowl meadow grass	FW	May-Jun
<i>Poa pratensis</i>	Kentucky bluegrass	D	May-Jun
<i>Schizachne purpurascens</i> *	False melic	UW SC	Jun
<i>Setaria glauca</i>	Yellow foxtail	D	Jun
<i>Setaria viridis</i> *	Green foxtail	D FD	Jun
<i>Sorghastrum nutans</i>	Indian grass	FD	Aug-Sept
<i>Spartina pectinata</i>	Cordgrass	M	Jul
<i>Sphenopholis intermedia</i>	Wedgegrass	V	Jun
<i>Zizania aquatica</i> var. <i>angustifolia</i>	Wild rice	A	Jul-Aug
Polemoniaceae			
<i>Polemonium reptans</i> *	Jacob's ladder	UW SH	May-Jun
Polygalaceae			
<i>Polygala paucifolia</i> *	Flowering wintergreen	CS	May

Polygonaceae

<i>Polygonum amphibium</i> var. <i>stipulaceum</i>	Water smartweed	SH	Jun
<i>Polygonum convolvulus</i> *	Black bindweed	D	May
<i>Polygonum hydropiper</i> *	Common smartweed	SH	Aug
<i>Polygonum lapathifolium</i>	Nodding smartweed	FW D	Jun-Jul
<i>Polygonum pensylvanicum</i>	Pinkweed	FW D	Jun-Jul
<i>Polygonum persicaria</i> *	Lady's thumb	D	Jun-Jul
<i>Polygonum punctatum</i>	Water smartweed	SH CS	Aug
<i>Polygonum sagittatum</i> *	Tear thumb	FW M	Aug
<i>Polygonum scandens</i> *	False buckwheat	SC	Aug
<i>Rumex crispus</i> *	Curly dock	FW	Jul
<i>Rumex orbiculatus</i>	Great water dock	FW	Jun

Polypodiaceae

<i>Adiantum pedatum</i> *	Maidenhair fern	UW	
<i>Athyrium filix-femina</i> *	Lady fern	FW SH	
<i>Cystopteris bulbifera</i> *	Bulblet fern	UW	
<i>Cystopteris fragilis</i> *	Fragile fern	UW	
<i>Dryopteris cristata</i> var. <i>clintoniana</i>	Shield fern	SH CS	
<i>Dryopteris spinulosa</i> *	Spinulose wood fern	SH CS	
<i>Dryopteris thelypteris</i> var. <i>pubescens</i> *	Marsh fern	SH CS	
<i>Onoclea sensibilis</i> *	Sensitive fern	SH CS	
<i>Pteridium aquilinum</i> *	Bracken fern	UW	

Pontederiaceae

<i>Pontederia cordata</i> *	Pickerel weed	A	Jul-Aug
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Portulacaceae

<i>Claytonia virginica</i> *	Spring beauty	UW	May
<i>Portulaca oleracea</i>	Purslane	D	Jun-Oct

Potamogetonaceae

<i>Potamogeton alpinus</i> *	Pondweed	A	May-Jun
<i>Potamogeton amplifolius</i>	Pondweed	A	May-Jun
<i>Potamogeton berchtoldii</i>	Pondweed	A	May-Jun
<i>Potamogeton berchtoldii</i> var. <i>acuminatus</i> *	Pondweed	A	May-Jun
<i>Potamogeton berchtoldii</i> var. <i>lacunatus</i>	Pondweed	A	May-Jun
<i>Potamogeton berchtoldii</i> var. <i>tenuissimus</i>	Pondweed	A	May-Jun
<i>Potamogeton foliosus</i> *	Pondweed	A	May-Jun
<i>Potamogeton gramineus</i>	Pondweed	A	May-Jun
<i>Potamogeton gramineus</i> var. <i>myriophyllus</i>	Pondweed	A	May-Jun

<i>Potamogeton illinoensis</i> *	Pondweed	A	May-Jun
<i>Potamogeton natans</i> *	Floating leaf pondweed	A	May-Jun
<i>Potamogeton nodosus</i> *	Pondweed	A	May-Jun
<i>Potamogeton obtusifolius</i> *	Pondweed	A	May-Jun
<i>Potamogeton pectinatus</i>	Sago pondweed	A	May-Jun
<i>Potamogeton pulcher</i>	Pondweed	A	May-Jun
<i>Potamogeton richardsonii</i>	Pondweed	A	May-Jun
<i>Potamogeton robbinsii</i>	Robbins' pondweed	A	May-Jun
<i>Potamogeton zosteriformis</i> *	Flat-stemmed pondweed	A	May-Jun
Primulaceae			
<i>Lysimachia ciliata</i> *	Fringed loosestrife	SH	Jul
<i>Lysimachia thyrsoiflora</i> *	Tufted loosestrife	CS SH	May-Jun
<i>Trientalis borealis</i> *	Starflower	SH CS	May
Pyrolaceae			
<i>Moneses uniflora</i>	One-flowered pyrola	SH CS	Jun-Aug
<i>Monotropa uniflora</i>	Indian pipe	UW	Jun-Aug
<i>Pyrola asarifolia</i> *	Pink pyrola	SH CS	Jun-Jul
<i>Pyrola elliptica</i> *	Shin leaf pyrola	UW	Jun
<i>Pyrola rotundifolia</i>	Round-leaved pyrola	UW	Jun
<i>Pyrola secunda</i>	One-sided pyrola	V	Jun
Ranunculaceae			
<i>Actaea pachypoda</i> *	White baneberry	UW	May-Jun
<i>Actaea rubra</i> *	Red baneberry	UW	May
<i>Anemone canadensis</i>	Canada anemone	FW M D	May
<i>Anemone cylindrica</i> *	Thimbleweed	FD	May-Jul
<i>Anemone quinquefolia</i> *	Wood anemone	UW	Apr-May
<i>Anemone riparia</i> *	Thimbleweed	UW	Jun
<i>Anemone virginiana</i> *	Thimbleweed	FD UW	Jun
<i>Anemonella thalictroides</i> *	Rue anemone	UW SH	Apr-Jun
<i>Aquilegia canadensis</i> *	Columbine	UW	May-Jun
<i>Caltha palustris</i> *	Marsh marigold	SH CS SC	Apr-Jun
<i>Clematis virginiana</i> *	Virgin's bower	SH CS SC	May
<i>Coptis trifolia</i> var. <i>groenlandica</i> *	Goldthread	CS	May-Jul
<i>Hepatica acutiloba</i> *	Sharp-lobed hepatica	UW	Apr-May
<i>Hepatica americana</i>	Round leaf hepatica	UW	Apr
<i>Hydrastis canadensis</i> *	Golden seal	UW	Apr
<i>Ranunculus abortivus</i> *	Kidney leaf buttercup	UW	May
<i>Ranunculus acris</i> *	Tall buttercup	V	May-Jun
<i>Ranunculus flabellaris</i>	Yellow water crowfoot	SH	May

<i>Ranunculus hispidus</i> var. <i>caricetorum</i> *	Swamp buttercup	SH CS	Mar-May
<i>Ranunculus hispidus</i> var. <i>nitidus</i>	Swamp buttercup	SH CS	Apr-May
<i>Ranunculus recurvatus</i> *	Hooked crowfoot	SH CS D	May-Jun
<i>Ranunculus sceleratus</i> *	Cursed crowfoot	FW	May-Jun
<i>Thalictrum dasycarpum</i>	Purple meadow rue	FW M SC	May-Jun
<i>Thalictrum dioicum</i> *	Early meadow rue	UW	Apr-May
Rhamnaceae			
<i>Rhamnus alnifolia</i> *	Alder-leaved buckthorn	SH SC CS	Jun
<i>Rhamnus cathartica</i> *	Common buckthorn	FD	May-Jun
<i>Rhamnus frangula</i> *	Glossy buckthorn	V	May-Aug
Rosaceae			
<i>Agrimonia gryposepala</i> *	Agrimony	UW	Jul-Aug
<i>Amelanchier arborea</i> *	Juneberry	UW	Apr-May
<i>Aronia prunifolia</i> *	Chokeberry	SH CS OB	May-Jun
<i>Cragaegus</i> sp.	Hawthorne	FD D	May
<i>Fragaria vesca</i> *	Wood strawberry	UW FD	May-Jun
<i>Fragaria virginiana</i> *	Wild strawberry	UW FD	May-Jun
<i>Geum aleppicum</i> var. <i>strictum</i> *	Avens	FD FW	Jun-Jul
<i>Geum canadense</i> *	White avens	UW	Jun-Jul
<i>Geum rivale</i> *	Water avens	SH	Jun
<i>Malus pumila</i> *	Apple	D	Apr-Jun
<i>Potentilla norvegica</i> *	Rough cinquefoil	FD D	Jun-Sept
<i>Potentilla palustris</i> *	Marsh cinquefoil	SH SC M	Jun-Jul
<i>Potentilla recta</i> *	Erect cinquefoil	FW D	Jun-Jul
<i>Potentilla simplex</i> *	Common cinquefoil	FD UW	May-Jun
<i>Prunus serotina</i> *	Black cherry	FD UW	May
<i>Prunus virginiana</i> *	Choke cherry	UW	May
<i>Rosa blanda</i> *	Wild rose	D	Jun-Jul
<i>Rosa carolina</i>	Pasture rose	FD D	Jul
<i>Rosa multiflora</i> *	Multiflora rose	FD D	Jun
<i>Rosa palustris</i> *	Swamp rose	SH SC M	Jul
<i>Rubus hispidus</i>	Dewberry	SH CS	Jun-Sept
<i>Rubus idaeus</i> *	Swamp dewberry	SH SC CS	Jun
<i>Rubus occidentalis</i> *	Black raspberry	UW	May-Jul
<i>Rubus pubescens</i> *	Dwarf raspberry	SH CS	May-Jun
<i>Rubus strigosus</i> *	Red raspberry	SH CS	Jul
<i>Sorbus americana</i>	American mountain ash	SH SC	Jun
<i>Spiraea alba</i> *	Meadowsweet	SH SC	Jun-Jul

Rubiaceae

<i>Galium aparine</i> *	Cleavers	UW	May
<i>Galium boreale</i> *	Northern bedstraw	UW FD D	Jun
<i>Galium circaezans</i> *	White wild licorice	UW	Jun
<i>Galium concinnum</i> *	Bedstraw	UW	Jun-Jul
<i>Galium labradoricum</i> *	Bedstraw	UW CS	Jun
<i>Galium lanceolatum</i>	Bedstraw	UW SH	Jun
<i>Galium tinctorium</i> *	Bedstraw	SH SC	Jun
<i>Galium trifidum</i> *	Bedstraw	SH	May-Jun
<i>Galium triflorum</i> *	Fragrant bedstraw	UW SH	May-Jun
<i>Mitchella repens</i> *	Partridge berry	CS	May-Jun

Rutaceae

<i>Xanthoxylum americanum</i> *	Prickly ash	FD	Jun
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Salicaceae

<i>Populus alba</i> *	White poplar	FD D	Apr
<i>Populus deltoides</i>	Cottonwood	SH	Apr
<i>Populus grandidentata</i> *	Big-toothed aspen	SH UW FD	Apr
<i>Populus tremuloides</i> *	Quaking aspen	FD UW	Apr
<i>Salix alba</i>	White willow	SH	Apr
<i>Salix amygdaloides</i> *	Peach leaf willow	SH	Apr-May
<i>Salix bebbiana</i> *	Bebb's willow	SC SH	May
<i>Salix bebbiana</i> x <i>petiolaris</i> *		SC SH	May
<i>Salix candida</i> *	Sage-leaved willow	SH SC	May
<i>Salix candida</i> f. <i>denudata</i> *	Sage-leaved willow	SH SC	May
<i>Salix candida</i> x <i>petiolaris</i> *		SC CS	May
<i>Salix discolor</i> *	Pussy willow	SC SH	Apr-May
<i>Salix discolor</i> var. <i>latifolia</i> *	Pussy willow	SC SH	Apr-May
<i>Salix exigua</i> *	Sandbar willow	SC	May
<i>Salix lucida</i>	Shining willow	SC	May-Jun
<i>Salix pedicellaris</i> *	Bog willow	OB SH SC	Apr-May
<i>Salix pedicellaris</i> var. <i>hypoglauca</i> *	Bog willow	SC	Apr-May
<i>Salix petiolaris</i> *	Slender willow	SC SH	May
<i>Salix serissima</i> *	Autumn willow	SC	May

Sarraceniaceae

<i>Sarracenia purpurea</i> *	Pitcher plant	OB CS	Jun
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Saxifragaceae

<i>Miella diphylla</i> *	Bishop's cap	SH CS	May-Jun
<i>Miella nuda</i> *	Miterwort	SH CS	May

<i>Parnassia glauca</i>	Grass of parnassus	OB FW	Aug
<i>Penthorum sedoides</i>	Ditch stonecrop	FW SC	Jul
<i>Saxifraga pensylvanica</i>	Swamp saxifrage	SH SC	May-Jun
Scrophulariaceae			
<i>Chelone glabra</i> *	Turtlehead	SH FW CS	Aug-Sept
<i>Gerardia paupercula</i> *	Gerardia	OB	Aug-Sept
<i>Gerardia purpurea</i> var. <i>parviflora</i>	Small-flowered gerardia	OB	Jul-Sept
<i>Linaria vulgaris</i> *	Butter and eggs	FD D	Jul-Sept
<i>Mimulus ringens</i> *	Monkey flower	FW M	Jul-Sept
<i>Pedicularis canadensis</i> *	Common lousewort	UW	May-Jun
<i>Pedicularis lanceolata</i> *	Swamp lousewort	CS SH FW	Aug-Sept
<i>Penstemon digitalis</i>	Foxglove beardtongue	FD	May-Jun
<i>Scrophularia marilandica</i>	Carpenter's square	UW	Jul-Aug
<i>Verbascum densiflorum</i> *	Mullein	FD	Jul-Aug
<i>Veronica</i> <i>anagallis-aquatica</i>	Water speedwell	A	May-Aug
<i>Veronica arvensis</i> *	Corn speedwell	D	May-Jul
<i>Veronica officinalis</i> *	Common speedwell	UW FD	May-Jun
<i>Veronica serpyllifolia</i> *	Thyme-leaved speedwell	FD	May
Solanaceae			
<i>Lycium chinense</i> *	Matrimony vine	D	Jul-Oct
<i>Solanum dulcamara</i> *	Purple nightshade	V	Jun-Aug
<i>Solanum dulcamara</i> f. <i>albiflorum</i> *	White-flowered night shade	V	Jul-Aug
<i>Solanum nigrum</i> *	Deadly nightshade	D	May-Aug
Sparganiaceae			
<i>Sparganium americanum</i>	Bur reed	M A	Aug
<i>Sparganium eurycarpum</i>	Bur reed	A	Jun-Jul
Staphyleaceae			
<i>Staphylea trifolia</i> *	Bladdernut	SH SC	May
Taxaceae			
<i>Taxus canadensis</i> *	American yew	UW	May
Thymelaeaceae			
<i>Dirca palustris</i> *	Leatherwood	UW	Apr-May
Tiliaceae			
<i>Tilia americana</i> *	Basswood	UW SH	July

Typhaceae			
<i>Typha angustifolia</i> *	Narrow-leaved cattail	M FW SC	Jun-Jul
<i>Typha latifolia</i> *	Common cattail	M FW SC	Jun-Jul
<i>Typha x glauca</i>	Hybrid cattail	M FW SC	Jun-Jul
Ulmaceae			
<i>Celtis occidentalis</i>	Hackberry	UW	May
<i>Ulmus americana</i> *	American elm	UW	May
<i>Ulmus rubra</i> *	Slippery elm	UW SH	May
Urticaceae			
<i>Boehmeria cylindrica</i> *	False nettle	UW V	Jul
<i>Laportea canadensis</i>	Wood nettle	UW	Jul
<i>Parietaria pensylvanica</i> *	Pellitory	UW V	Jun-Aug
<i>Pilea pumila</i> *	Clearweed	FW SH	Aug-Sept
<i>Urtica dioica</i>	Stinging nettle	FW D	Jun
Verbenaceae			
<i>Verbena hastata</i> *	Blue vervain	FW	Jul-Sept
<i>Verbena urticifolia</i> *	White vervain	FW V	Jun-Sept
Violaceae			
<i>Viola conspersa</i> *	American dog violet	SH FW	Apr-May
<i>Viola cucullata</i> *	Blue marsh violet	SH SC	May-Jun
<i>Viola macloskeyi</i> var. <i>pallens</i> *	Smooth white violet	UW	Apr-May
<i>Viola missouriensis</i> *	Missouri violet	SH	May
<i>Viola pubescens</i> *	Yellow violet	UW	Apr-May
<i>Viola renifolia</i> *	Kidney-leaved violet	SH CS	May
<i>Viola septentrionalis</i> *	Violet	UW	May
<i>Viola sororia</i> *	Common blue violet	UW	Apr-May
Viscaceae			
<i>Arceuthobium pusillum</i>	Dwarf mistletoe	CS	Jun
Vitaceae			
<i>Parthenocissus inserta</i>	Virginia creeper	V	Jun
<i>Parthenocissus</i> <i>quinquefolia</i> *	Virginia creeper	V	Jun
<i>Vitis riparia</i> *	River grape	V	Jun