THE VASCULAR FLORA OF CHOCTAW COUNTY, MISSISSIPPI, U.S.A.

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ABSTRACT

The state of Mississippi is one of the least botanically explored areas in the eastern United States. A floristic survey of Choctaw County, Mississippi, was conducted from November 2009 through November 2017 in order to document the vascular flora and describe its plant communities. The county is located in the central portion of the state within the North Central Plateau physiographic region, an area dominated by dissected uplands with acidic to circumneutral sandy-clay soils. Three major river basins occur in the county, including the Big Black River, Noxubee River, and Pearl River. A total of 950 vascular plant species (958 taxa including varieties, subspecies, and recognized hybrids) was recorded. Three-hundred thirteen of these taxa were new county records. Twenty-eight species of special concern as designated by the Mississippi Natural Heritage Program were documented. Approximately 15 percent of the flora is considered non-native to the United States. Eight primary plant communities are also described.

RESUMEN

El estado de Mississippi es una de las áreas menos exploradas botánicamente del este de los Estados Unidos. Un estudio florístico del condado de Choctaw, Mississippi, se realizó de noviembre de 2009 hasta noviembre de 2017 para documentar la flora vascular y describir sus comunidades vegetales. El condado está localizado en la porción central del estado dentro de la región fisiográfica Meseta Central Norte, un área dominada por tierras altas con suelos árense-calcáreos de ácidos a neutros. Las tres mayores cuencas fluviales están el condado, e incluyen el río Big Black River, el Noxubee, y el Pearl. Se recogieron un total de 950 especies de plantas vasculares (958 taxa incluyendo variedades, subespecies, e híbridos reconocidos). Trescientos trece de estos taxa fueron citas nuevas para el condado. Se documentaron veintiocho especies de preocupación especial designadas por el Mississippi Natural Heritage Program. Aproximadamente el 15 por ciento de la flora se considera alóctona para los Estados Unidos. Se describen también ocho comunidades vegetales primarias.

INTRODUCTION

Mississippi (MS) remains one of the least botanically explored areas in the eastern United States, with only ten of its 82 counties surveyed entirely (Ferrari 1970; Winstead 1990; MacDonald 1996; Alford 2001; Denley et al. 2002; Leidolf et al. 2002; Bryson & Skojac 2011; Majure et al. 2011; Morris & MacDonald 2012; McNair 2015). Some areas have partial surveys but are typically limited to public lands such as National Forests, National Park Service lands, and wildlife management areas, whereas most land in MS is privately owned (Carter 1978; Webster 1978; Meeks 1984; Heather Sullivan, pers. comm., 2009). Collections from MS within the past 12 years have included taxa that were new to the state (Majure 2008; Pruski 2011; Whitson 2011; Urbatsch 2013; McNair & Alford 2014), new to North America (Majure & Bryson 2008), and new to science (Leonard 2006; Schafran et al. 2016). These efforts highlight the importance and validity of botanical surveys which are often viewed as outdated science in the current era of botany dominated by molecular taxonomic studies.

Much like the state of MS, the vascular flora of Choctaw County was poorly documented based on a 2009 search of regional herbaria. The only comprehensive survey conducted within the county was performed at the Choctaw Lake Recreation Area (approximately 238 hectares) in 1974 by Margaret H. Massey (Massey 1974). Additional significant collections from the county were made by Dr. Louis C. Temple from 1967 to 1970, Dr. Sidney T. McDaniel from 1969 to 1981, and Dr. Charles T. Bryson from 1979 to 2010 (SERNEC 2018). The objective of this floristic survey was to document the vascular flora of Choctaw County as thoroughly as possible and to describe the major plant communities that occur within its boundaries.

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STUDY AREA

Choctaw County is located in central MS, lying between 33.53314°N and 33.10919°N latitude and 89.08840°W and 89.45414°W longitude. The county is bordered on the north by Webster County, on the east by Oktibbeha County, on the south by Winston and Attala counties, and on the west by Montgomery County. The county has a total area of approximately 108,730 ha (268,677.7 ac) and is part of three major river basins: the Big Black River (a part of the broader Mississippi River basin), Pearl River, and Noxubee River (a part of the broader Mobile-Tombigbee River basin). Though the county is predominantly upland, numerous streams and associated floodplains occur throughout, with the Big Black River serving as most of the northern boundary. Most of the larger streams within these major river basins, such as the Yockanookany River, Bywy Creek, Middle Bywy Creek, and Besa Chitto, have been channelized or canalized to encourage drainage (McMullen 1986).

Climate.—The climate of Choctaw County is described as temperate, with long hot summers due to persistent coverage by moist tropical air from the Gulf of Mexico, and winters that are short and mild with periodic cold temperatures caused by influxes of polar air from the north (McMullen 1986). The mean annual precipitation is 143.8 cm and is generally distributed throughout the year. The average annual snowfall is 3.8 cm, and mostly occurs in the month of January (USDA, National Water and Climate Center 2000).

Physiography.—Mississippi lies entirely within the Atlantic & Gulf Coastal Plain province, a region extending from Massachusetts to Mexico, developed on relatively young unconsolidated sediments and sedimentary rock strata. The province forms a trailing edge of the westward shifting North American continent and has been worn moderately level by multiple episodes of inundation under shallow seas (Dockery & Thompson 2016). Despite its relatively young age, the province contains hotspots of global biodiversity, an extraordinary number of endemic taxa, and plant communities with high species richness from small to large spatial scales (Noss 2013).

Choctaw County lies entirely within the North Central Plateau, a physiographic region that begins in west-central Tennessee (TN), and extends across MS and Alabama (AL) (Dockery & Thompson 2016). In MS the North Central Plateau occupies the area between the Flatwoods, Jackson Prairie, and Loess Hills (Fig. 1). The eastern boundary drops sharply in elevation, forming the Wilcox cuesta escarpment along the edge of the Flatwoods region, while the western and southern portions grade more slowly into adjacent regions. The sandy-clay loam that dominates the area is highly dissected with ridges and stream valleys, appearing as a dense, dendritic network of tributaries extending from larger river valleys into low order streams of higher elevations (Lowe 1915). Hilgard's account of the natural vegetation during the mid-1800s suggests the region was dominated by *Carya* spp , *Quercus coccinea*, *Q. falcata*, *Q. marilandica*, *Q. stellata*, and *Q. velutina*, with *Castanea dentata* and *Pinus echinata* regarded as common components (Hilgard 1860). By the early 1900s, Lowe (1915) described these forests as a mixture of *Pinus echinata*, *P. taeda*, *Quercus falcata*, *Q. marilandica*, and *Q. stellata*. It is worth noting that Lowe mentions *Liquidambar styraciflua* as a component of upland forests. Earlier accounts by Hilgard and records from Government Land Office (GLO) surveys suggest that this species was once restricted to bottomlands and riparian areas (Hilgard 1860; Brewer 2001; Peacock et al. 2008).

The northeast portion of the county was long considered part of the Flatwoods physiographic region, largely based on its geology, but was recently merged with the North Central Plateau (MARIS 2013; Dockery & Thompson 2016). The overall character of this particular area including topography, soil texture, and dominant vegetation is transitional, making its change in designation somewhat insignificant. The Flatwoods region is as a fairly level band of heavy clay, which shrinks upon drying, becoming condensed and forming large surface cracks. The combination of heavy clay soils and low topographic relief severely impedes drainage. Historic accounts suggest persistent, widespread flooding during wet portions of the year (Hilgard 1860; Lowe 1915). These alternating extreme conditions of prolonged winter/spring flooding, and dry, dense upper soil profiles during summer/autumn are not favorable to agriculture. Consequently, most of the region remains forested with exceptions where drainage improvements and irrigation systems have undoubtedly improved agricultural success. Lowe (1915) described the region as forests dominated by the same upland species he

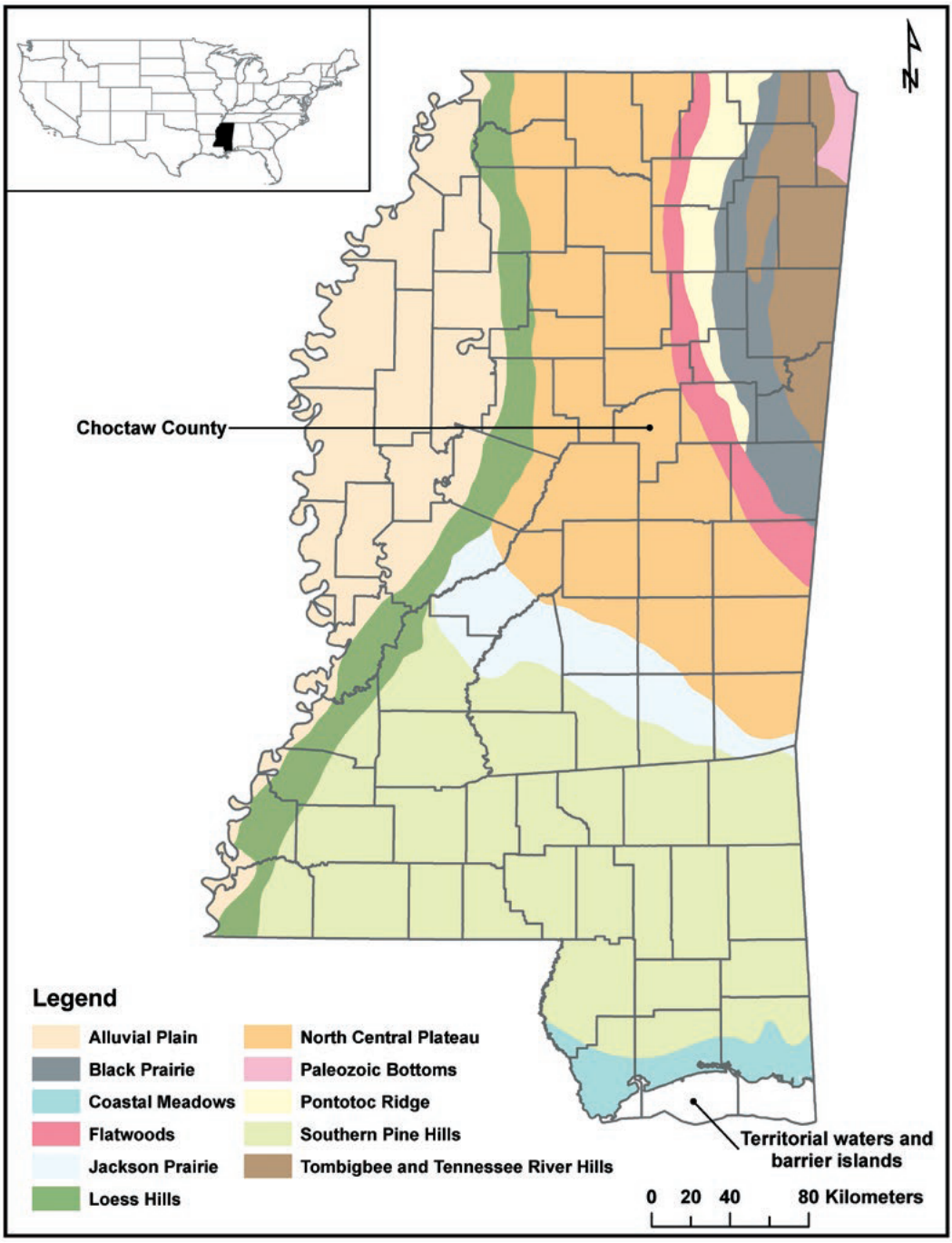

Fig. 1. Location of Choctaw County within the physiographic regions of MS (MARIS 2013).

referenced above for the North Central Plateau with a "grassy understory," and bottomlands dominated by *Carya* spp., *Liquidambar styraciflua*, *Liriodendron tulipifera*, *Quercus nigra*, and *Q. phellos*.

Topography.—Choctaw County is considered to be the highest in mean elevation and topographic relief of central MS counties, and contains features that are among the most rugged terrain found in the Atlantic and Gulf Coastal Plain province (McMullen 1986; MARIS 2018). Elevations range from approximately 64 m (209 ft; USGS 1972) near the Big Black River to a highpoint of approximately 225 m (738 ft) within the Ironstone Hills of the southern panhandle (Fig. 2; MARIS 2018). A similar area of rugged terrain known as the Noxubee Hills occurs in the eastern portion of the county (Fig. 3). Vestal and McCutcheon (1943) described this area of steep hills, valleys, forests, and farmsteads, as "one of the most beautiful regions in the state of Mississippi." An earlier account by Hilgard (1860) is more descriptive though objective in tone: "The country it occupies is considerably broken, and the hillsides are steep; on them, as well as in the gullies, the poplar and ash occur. Occasionally, on higher ridges, we find sandy soils, ferruginous sandstone, etc. with scrubby blackjack and post oak." The range of elevation found within the county is insufficient to effect the distribution of plant communities; however, the variety of topographic relief creates a range of soil textures, moisture gradients, and microclimates that greatly influence vegetation composition (Lowe 1915).

Geology.—The surface geology of the county (Fig. 4) is made up of the Wilcox Group, Claiborne Group, and the Midway Group (McMullen 1986; Thompson 2011). The Wilcox group occupies the majority of the county and is composed of fine to coarse sands, sandstone, and lignitic clays. In MS, it is largely derived from deltaic and fluvial sediments originating from the Piedmont Province (Dockery & Thompson 2016). Mineral content analysis of this group suggests a prehistoric river deposited these sediments during the Eocene epoch as it flowed across MS from the Appalachian region to the Gulf of Mexico (Grim 1936). Wilcox formations and their subordinate members have undergone numerous revisions, and currently reside in a preliminary status, therefore, only the Wilcox Group is shown in Figure 4 (Dockery & Thompson 2016). Lignite or "brown coal" is common in the Wilcox Group and has been mined in Choctaw County since the early 1900s (Vestal & McCutcheon 1943). The deposits developed in freshwater wetlands as woody plant material accumulated under anaerobic conditions and was later buried under sediment. *Taxodium*-like fragments have been observed in some samples (Dockery & Thompson 2016). Large-scale lignite mining continues at the Red Hills Mine near the community of Chester.

The Claiborne Group is derived from alternating sequences of deltaic and marine sediments deposited during the Eocene epoch that include marls, limestone, claystone, lignitic clays, sands, and sandstone (Dockery & Thompson 2016). The Tallahatta formation is the lone representative from this group in the county, occurring near the southern and western boundary. The formation is subdivided into three members: Meridian Sand, Basic City Shale, and Neshoba Sand. The Meridian Sand member is composed of crossbedded quartz sand and is basal within the group, making contact with the Wilcox Group. The Basic City Shale member is composed of clays, claystone, siltstone, and orthoquartzite ledges. These orthoquartzite ledges or "buhrstones" are most prominent in vertical road cuts along Interstate 20 in Lauderdale County, west of Meridian, MS. These stones are responsible for the formation's name, translating to "white rock" in Choctaw (Baca 2007). The Neshoba Sand member is predominantly fine micaceous quartz sand (Dockery & Thompson 2016).

The Midway Group narrowly occurs in the northeastern corner of the county and is predominantly composed of gray, glauconitic sands and heavy shrink-swell clays deposited in a marine environment during the Paleocene. Select formations within this group in MS and AL are mined for production of aggregate and absorbent materials such as cat litter (Dockery & Thompson 2016). The Naheola is the lone formation in the county belonging to this group, and is mostly micaceous sand and bauxitic clays that accumulated near the terminus of a prehistoric river delta, much like the "bird-foot" of the contemporary Mississippi River (Dockery & Thompson 2016).

Ferruginous sandstone, ranging from black to various shades of red, orange, and brown, is frequently found strewn on the soil surface in upland forests across the county. Outcroppings and large boulders of considerable size occur occasionally within the Wilcox Group and Tallahatta formation, typically on ridges,

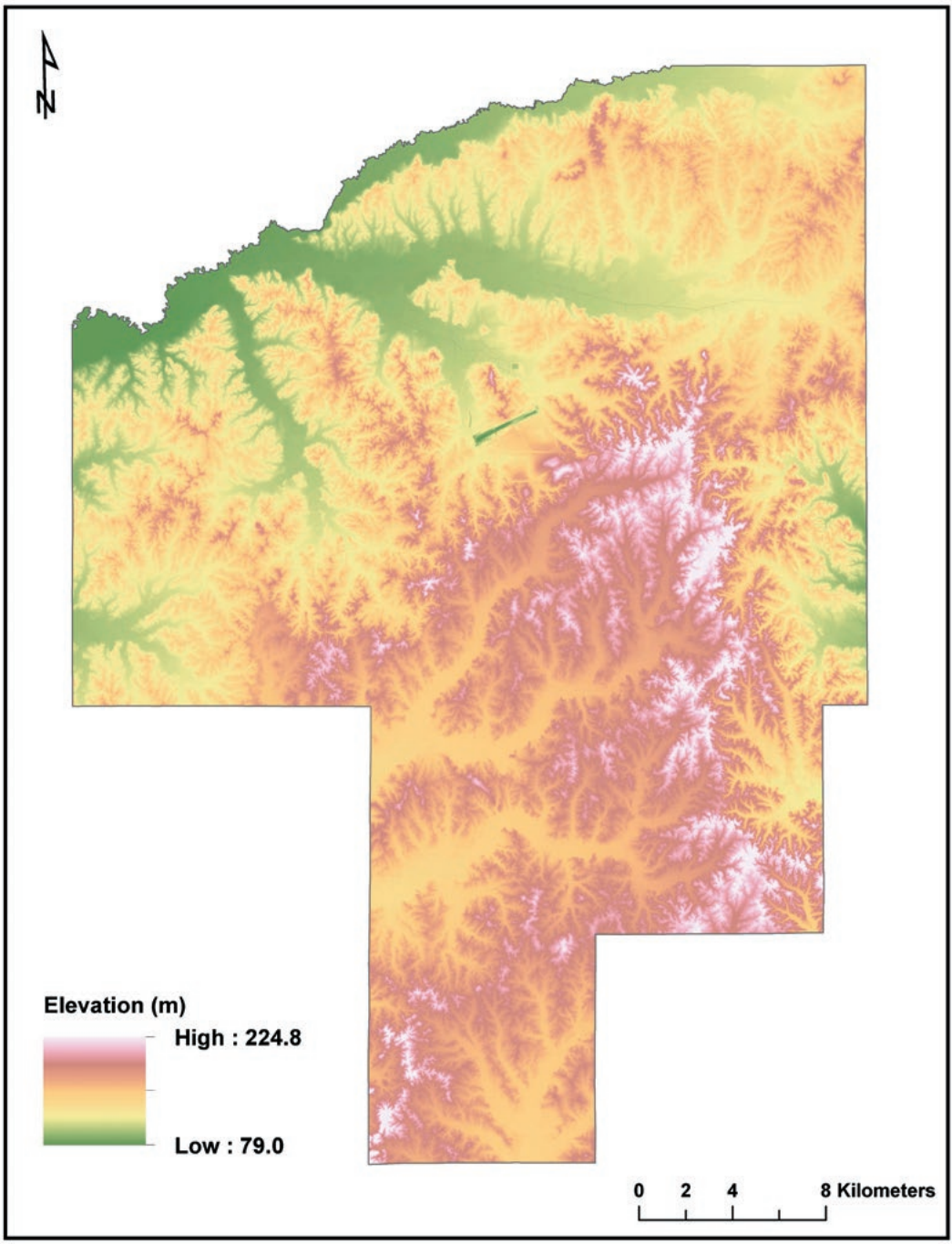

Fig. 2. Elevation model of Choctaw County, MS, based on a composite of 2012 and 2014 LiDAR, (MARIS 2018). The linear, dark green anomaly near the center is an active surface mine.

Fig. 3. Noxubee Hills, facing east near 33.34562°N 89.15521°W, Choctaw County, MS (Philley 2013).

capping hilltops, or along streams. Tubular sandstones or "stone pipes" of various lengths and diameters occur sporadically on the soil surface or jutting from hillsides and streambanks. These peculiar stones are sometimes accompanied by circular impressions in the soil that seem to indicate where other tubular stones have fallen away, washed out, or were removed.

Landslides in the Atlantic and Gulf Coastal Plain have received little scientific study but have been documented in the Noxubee Hills of Choctaw County and adjacent Winston County by Pettry et al. (1988), and observed more recently by the author. These slides generally occur on the eastern flank of the Wilcox Group, on or below steep side slopes of ridges and adjacent streams, often after heavy rainfall events. Soil cracks that develop perpendicular to the incline of the steep slopes, and micaceous clay overlying heavy, bedded sands, are believed to be contributing factors that lead to these mass movements (Pettry et al. 1988). Pettry et al. (1988) estimated the size of these landslides to range from approximately 24 to 1,680 m^3 of soil. These slides are sufficient in size and frequency to potentially effect structural integrity of nearby roads, alter local hydrology by blocking streams, and impact local plant communities.

Land Use.—The county is considered rural but has four urban areas, the largest being the town of Ackerman which serves as the county seat with a population of 1510 (U.S. Census Bureau 2010). Other towns include French Camp, Weir, and a portion of Mathiston. With the exception of French Camp, which began as a post on the Natchez Trace in 1810, all can be considered as "railroad towns" (Coleman 1973). The ghost town of Bankston is located in the northwest portion of the county. Several major highways pass through the county including state highways 9, 12, 15, and United States highway 82 across the northeast corner (Fig. 5).

The primary land uses in Choctaw County are timberland, pasture, and agricultural crops such as

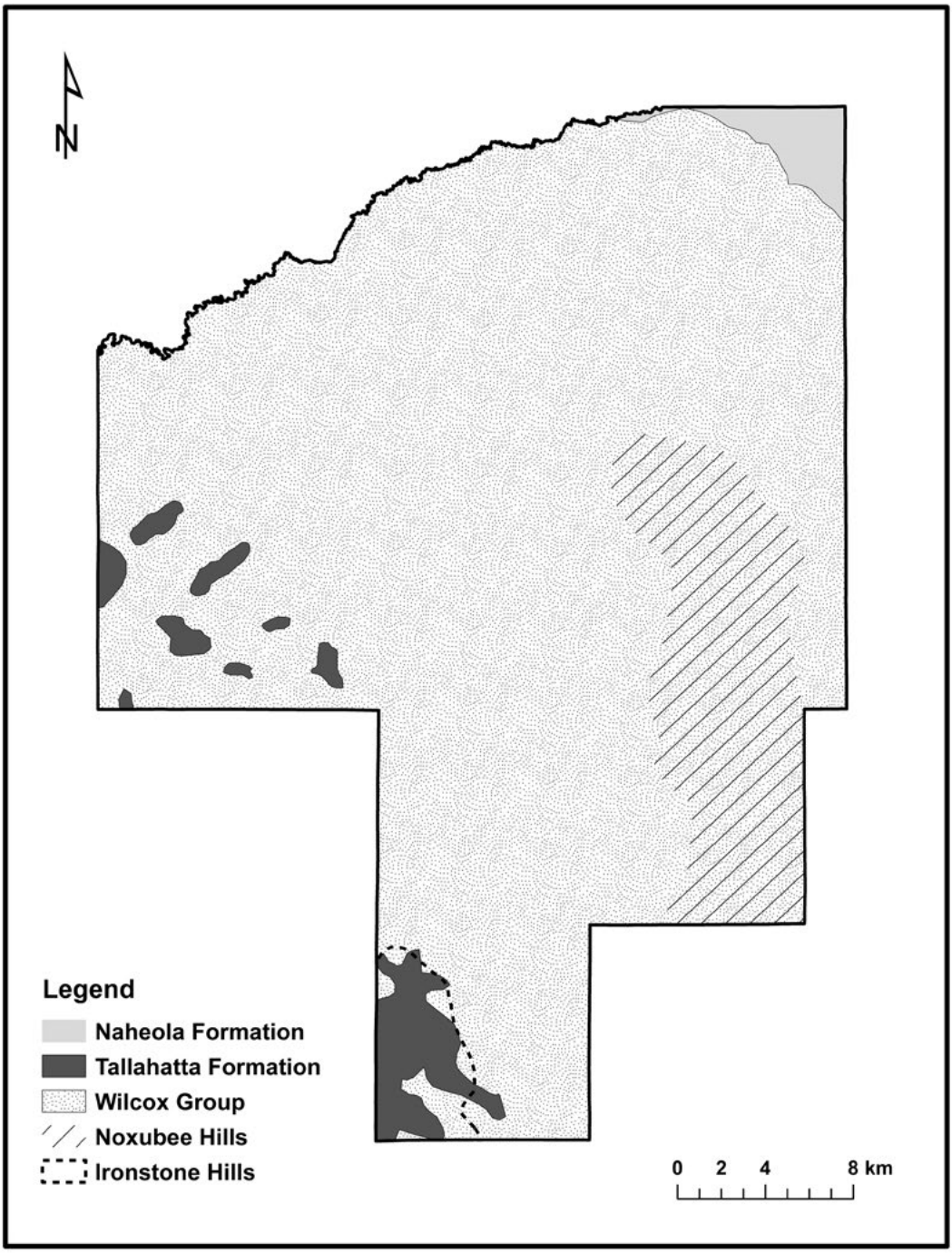

Fig. 4. Surface geology and named features of Choctaw County, MS (McMullen 1986; Thompson 2011).

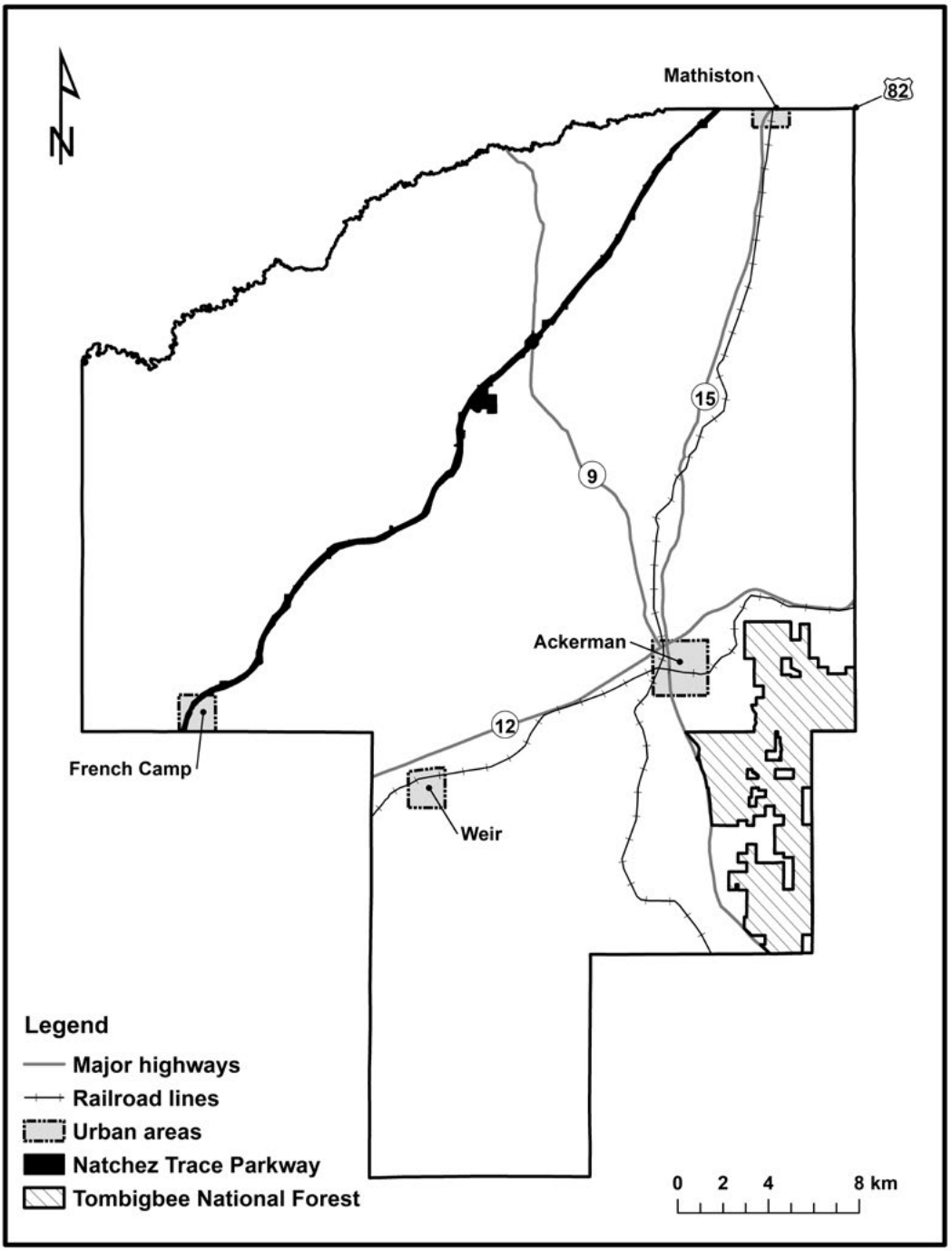

Fig. 5. Major highways, railroad lines, urban areas, National Forest lands, and National Park Service lands in Choctaw County, MS (USGS 1972).

soybeans, cotton, corn, and wheat (McMullen 1986). Forestry and forest products generate approximately 22% of the county's economic output (Mississippi State Extension Service 2013) and have had a large role in altering the floristic composition of the area via large-scale conversion of thousands of hectares of various forest types to near monotypic stands of *Pinus taeda*. Much of the region has experienced heavy and repeated logging activity for over a century. The bulk of merchantable timber had been removed by the early 1900s according to accounts by Lowe (1915). Timber barons from the Northeast and Midwest moved operations into MS around this time and employed large-scale land grabs along with "clear-cut and clear out" tactics, leaving behind depleted stands. Local companies continued operations from these parcels, attempting to extract any marketable wood resources that might have remained (Fickle 2001). Up until 1940, MS tax laws on timbered land were structured to generate maximum revenue; however, they inadvertently penalized landowners who maintained trees on their property. This encouraged indiscriminate extraction of forest resources and disposal of lands for conversion to row crop agriculture or pasture even if they were unsuitable for these uses (Fickle 2001). Vestal and McCutcheon (1943) gave the following description of Choctaw County's forests in the early 1940s: "A fact which thrusts itself upon the attention of any observing person who enters Choctaw County (and the same could be truthfully said of many other counties of Mississippi) is, that the forests, which in years past have provided fuel and housing and numerous other necessities for the people, have been depleted almost to the point of utter destruction." Reforestation efforts began during the 1930s as part of the Civilian Conservation Corps and Soil Conservation Service mission (Fickle 2001). The local economy now depends heavily on the extraction of raw wood supplies for area mills, therefore, most stands are managed intensively on relatively short rotation ages of 25–35 years (Mississippi State Extension Service 2013).

The Red Hills Mine (6475 ha [16,000 ac]) is located near the community of Chester and supports a coal-powered 400-megawatt facility that provides electricity to the Tennessee Valley Authority (TVA). The mine is an open box cut with estimated assets of approximately eight billion tons of lignite. Two of the lignite seams are left intact to protect the aquifer underneath. This practice did not take place at some small-scale mines that historically operated in the county (Dockery & Thompson 2016).

Land in Choctaw County is mostly privately owned, although portions of two large areas of public land occur within its boundaries (Fig. 5). A portion of the Ackerman Unit of the Tombigbee National Forest (TNF) occurs in the eastern part of the county near the town of Ackerman, occupying approximately 4743.6 ha (11721.7 ac), with the remainder in Winston and Oktibbeha counties. The TNF was established in 1959 by the U.S. Forest Service on former Soil Conservation Service lands obtained by the U.S. government in the 1930s and early 1940s (Peacock et al. 2008). These lands occur primarily in the Noxubee Hills area and had largely been cleared for pasture and crops. Despite utilizing techniques such as terracing hillsides, the steep slopes and poor land use practices led to severe erosion and soil degradation (Putnam 2017). After implementing forest management practices, erosion was dramatically reduced, and the lands increased in economic and wildlife value to the point that an unsuccessful attempt was made to transfer the forest back to private ownership (Fickle 2001). The TNF can be described as mostly undulating hills of upland forest interspersed with mesic forest and intermittent streams, with some areas of floodplain forest associated with perennial streams. The Choctaw Lake Recreation Area survey conducted by Massey (1974) is contained within this area.

The Natchez Trace Parkway, administered by the National Park Service, passes through the county in a near diagonal northeast/southwest fashion, beginning in Natchez, MS, and terminating near Nashville, TN. The "Natchez Trace" began as a series of migration paths or "traces" formed by wildlife and utilized by Native Americans. It was used later by boatmen traveling overland, returning to central TN and the Midwest from ports in Natchez, MS, and New Orleans, Louisiana (LA), after floating goods down the Ohio and Mississippi Rivers. The Natchez Trace eventually became obsolete due to the invention of the steam-powered boat that allowed travelers to return to their home ports up river (Daniels 1962; Davis 1995). In the 1930s, the process began of establishing a modern road and parkway approximating the old route (Elliott 2009). Though typically described as a linear feature 714.5 km long, the parkway also has a right-of-way of varying width, with

approximately 938.7 ha (2319.6 ac) in the county. This area contains a wide variety of forests, fields, meadows, streams, and swamps.

MATERIALS AND METHODS

Survey procedures consisted of systematic and random sampling, and collections of voucher specimens. Thirty-two sample plots of indefinite size were implemented and visited numerous times throughout the survey. Collection sites were chosen across the county based on topology, soils, and hydrologic features to survey as many different habitats as possible within all major watersheds (Fig. 6). Collections were also made in anthropogenically disturbed areas to detect ruderal or potentially introduced species. Random collections were also made whenever a species of interest was encountered. Field data that were recorded included: collector identification number, locality (latitude and longitude), co-occurring plant species, habitat type, landform description, and any additional information that was deemed pertinent.

Each specimen and its associated data were processed using standard techniques as outlined by Blake (1932), Smith (1971), and Jones and Luchsinger (1986). The number of specimens collected was the minimum necessary for determining and storing a durable, quality voucher of each taxon (species, subspecies, or variety) encountered. Species of special concern were typically vouchered by collecting material only from the above ground portion of the plant(s). The Mississippi Museum of Natural Science Herbarium (MMNS), Jackson, MS, served as the repository for all voucher specimens. Field work occurred irregularly throughout the survey timeframe from 1 Nov 2009 through 28 Nov 2017, with a total of 58 collecting trips.

Currently no comprehensive guide to the plants of MS exists. Floristic manuals of surrounding states and the southeast region were used in conjunction with family or genera-specific keys published in botanical literature to verify the identification of each specimen (Steyermark 1963; Radford et al. 1968; Wunderlin 1998; Weakley 2015). Taxonomic arrangement and nomenclature predominately follows Weakley (2015), with exceptions for unresolved taxa where the accepted name in USDA, NRCS (2018) is provided. Plant community types were determined based on dominant plant species assemblages.

RESULTS AND DISCUSSION

Field sampling and verification of herbarium specimens resulted in the documentation of 950 species (958 taxa including varieties, subspecies, and recognized hybrids) of vascular plants that occurred within Choctaw County. Of these collections, 313 species represented new county records. Many are considered to be common or occur frequently across MS and the southeastern U.S. yet had remained undocumented in the county. A synoposis of all species documented from Choctaw County is provided in Table 1. Poaceae had the highest number of taxa (113). The remainder of the top ten represented families were: Asteraceae (112), Cyperaceae (78), Fabaceae (66), Rosaceae (28), Lamiaceae (27), Rubiaceae (21), Fagaceae (20), Orchidaceae (17), and Apiaceae (16).

Twenty-eight species that were documented are listed by the Mississippi Natural Heritage Program (MNHP 2018a; 2018b) as "species of special concern" (Table 2). These collections have designated conservation rankings in MS of "S1" (critically imperiled because of extreme rarity; ≤5 occurrences or very few remaining individuals or acres or because of some factor[s] making it vulnerable to extirpation), "S2" (imperiled because of rarity; 6–20 occurrences or few remaining individuals or acres or because of some factor[s] making it vulnerable to extirpation), "S3" (rare or uncommon; 21–100 occurrences), and "S4" (widespread, abundant, and apparently secure, but with reason[s] for concern; >101 occurrences).

Approximately 15.5% (147) of the species that were documented are considered to be non-native to the United States (Weakley 2015; USDA, NRCS 2018). *Coreopsis tinctoria, Helenium amarum, Oenothera speciosa, Robinia hispida,* and *Robinia pseudoacacia* were collected near roadsides, utility corridors, pastures, and disturbed areas. These species are considered native to the United States but not to MS (Weakley 2015). *Maclura pomifera* was historically a widely planted species and encountered near old homesteads and fencerows. It is considered here as "naturalized," in alignment with most treatments that regard the Red River Valley of Texas,

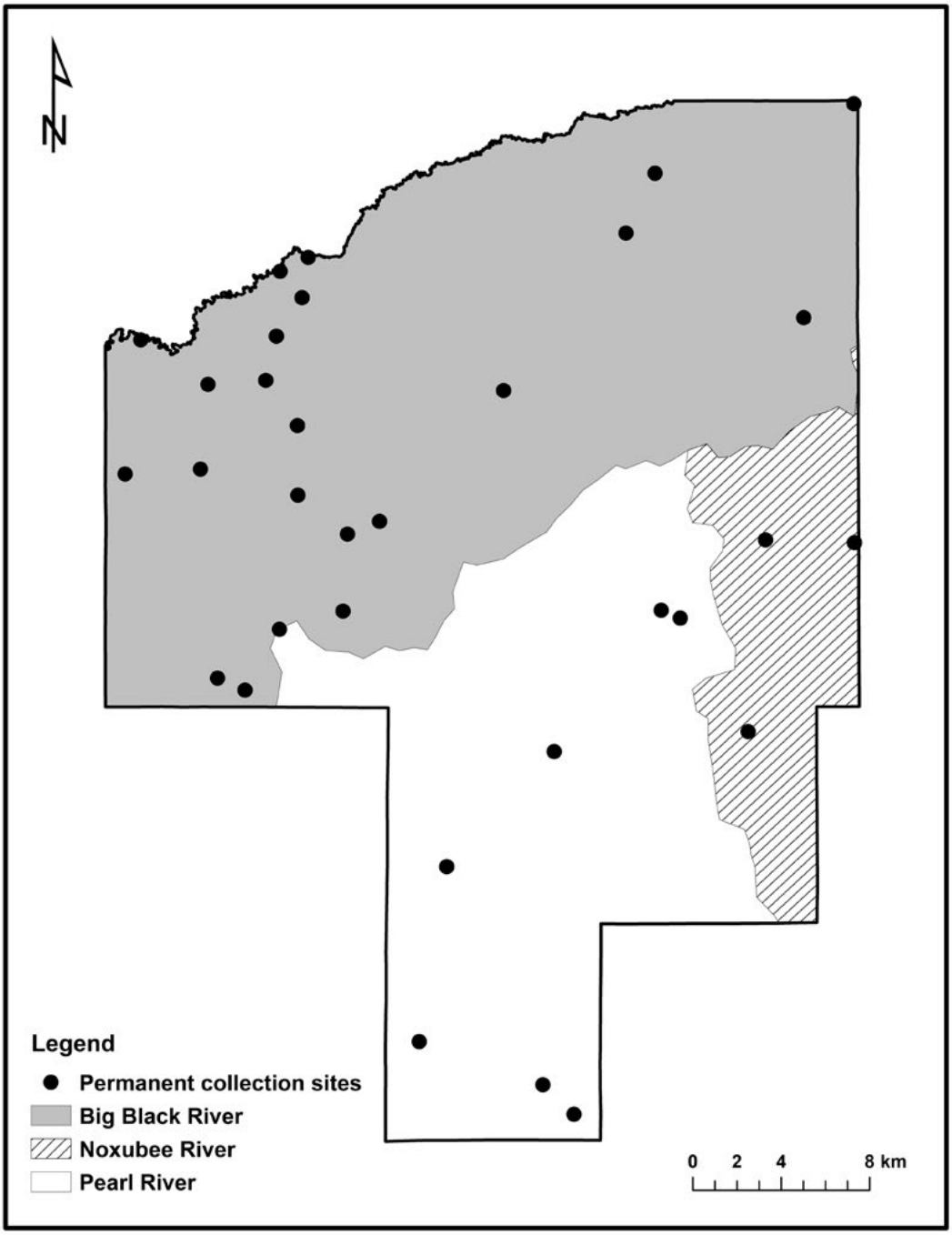

Fig. 6. Permanent collection sites with major river basins, Choctaw County, MS.

Table 1. Synopsis of taxa documented from Choctaw County, Mississippi.

Clade	Families	Genera	Species
Lycopodiophyta	1	1	1
Pteridophyta	15	21	25
Coniferophyta	2	3	6
Magnoliophyta	130	460	918
Total	148	485	950

Table 2. Species documented from Choctaw County, MS, that are listed by the Mississippi Natural Heritage Program as "species of special concern" (MNHP 2018a; 2018b).

Aruncus dioicus S3S4
Asarum reflexum S3
Carex crinita var. *brevicrinis* S3S4
Carex cumberlandensis S2S3
Carex stricta S2
Cardamine angustata S2
Chelone glabra S3
Cubelium concolor S3
Cyperus refractus S1
Cyperus retrofractus S2S3
Cypripedium parviflorum var. *pubescens* S2S3
Hexalectris spicata S2
Isotria verticillata S3
Matelea carolinensis S3
Matelea obliqua S2
Medeola virginiana S3
Mimulus ringens var. *ringens* S1
**Oxalis priceae* S1?
Panax quinquefolius S3
Platanthera lacera S1S2
Platanthera peramoena S2S3
Rhynchosia latifolia S2
Sceptridium lunarioides S2
Spiranthes lacera var. *gracilis* S2
Staphylea trifolia S3
Tiarella cordifolia S2
Triphora trianthophoros S2
Veratrum virginicum S2S3

*Listed in Checklist as *Oxalis macrantha*.

Oklahoma, LA, and Arkansas as its native range (Radford et al. 1968; Weakley 2015). However, fossil evidence indicates that *M. pomifera* and potentially six other species of *Maclura* were once widely distributed in North America (Peacock & Schauwecker 2003). The extinction of these *Maclura* spp., and *M. pomifera*'s contraction in distribution appears to have coincided with the extinction of mammalian megafauna that may have acted as primary seed dispersers (Janzen & Martin 1982; Estes et al. 2007). *Maclura pomifera* is one of the most common trees found in riparian forests of the Black Prairie physiographic region in adjacent and nearby counties, and is accompanied there by localized populations of a moth (*Ceratomia hageni* Grt.) that require it as a larval food source. It has been speculated that horses (*Equus* sp.) may have dispersed *M. pomifera* seeds to suitable areas outside of the Red River Valley, such as the Black Prairie, before the Wisconsin glaciation (~150,000 years before present), and that the current interpretation of its native range is worthy of further investigation (Peacock & Schauwecker 2003).

Pinus virginina is listed as a species of special concern (S2; MNHP 2018a) in MS but was only encountered at an old homestead, appearing to have been planted as a screen/windbreak with seedlings weakly spreading nearby (not included in Table 1). This species primarily occurs in the Paleozoic Bottoms and Tombigbee-Tennessee River Hills regions of northeast MS. Scattered localities across the state have been documented, many of which appear to have originated from plantings and escapes (SERNEC 2018). Planted specimens of *Magnolia grandiflora* were persistent at old homesteads and unmaintained cemetery plots now encroached by forest. This species is a common native tree in the southern half of MS, but was considered non-native to Choctaw County. *Prunus caroliniana* and *Yucca aloifolia* were encountered near old homesteads but are native components of lower Coastal Plain forests and coastal dunes respectively. These species were considered native to MS but not to Choctaw County.

Noteworthy Collections

Eutrochium purpureum was collected at a single location within a rich, mesic forest on a northeast slope. This

species is attributed to 13 counties in MS based on a search of the SERNEC portal (2018). However, some of the digitized specimens outwardly appear to be the uppermost portion of *Eutrochium fistulosum*, a common species found throughout MS. Digitized collections from Clay, Desoto, Holmes, Lauderdale, Simpson, Tallahatchie, Tate, and Tishomingo are seemingly correct. The distribution and abundance of this species in MS may be misrepresented, and worthy of reconsidering its conservation status. Massey (1974) may have collected this species in the county during her survey under the name *Eupatorium purpureum* L.

Hexalectris spicata is a rare species in MS (S2; MNHP 2018a) and was previously known from a single location in Choctaw County; however, two additional populations were discovered in upland oak-hickory forests during this survey. This species is considered rare throughout its range in North America (Weakley 2015). It emerges during late summer when a combination of high humidity and high temperatures typically dominates the region, creating conditions that may prevent all but the hardiest of botanists from going afield. It is a mycoheterotroph that lacks chlorophyll and has a peculiar yellow-tan coloration that blends with leaf litter. These circumstances may contribute to it being under-represented in floristic surveys.

Hypopitys monotropa was collected from an upland oak-hickory dominated forest on a southwest-facing slope. This wide-ranging species is not considered rare in MS and represented by collections from eleven counties. However, recent taxonomic studies suggest that *H. monotropa* contains several cryptic taxa and that at least two species should be recognized in the eastern U.S. based on morphology and timing of anthesis (yellowish-tan in color and flowering in spring versus reddish-pink in color and flowering in autumn; Klooster & Culley 2010). Collections from only four counties, including Choctaw, occurred during autumn (September to November) and suggest that this potentially recognized taxon is rare in MS. Specimens that were yellowish-tan and flowering in spring were observed at a separate site along Stewart-Weir Road but were not collected.

Opuntia humifusa was collected from a xeric ridgetop with surface strewn sandstone, and observed on sandy road embankments in scattered locations. This species is considered disjunct in central MS, with a primary distribution in the Appalachian region (Weakley 2015). *Opuntia cespitosa* Raf. is more common in MS but has long been considered conspecific with *O. humifusa*. Recent morphological and molecular analysis has demonstrated that their separation is warranted (Majure 2014).

Oxalis macrantha was collected from a mesic forest at a site locally known as "Little Mountain" on the Natchez Trace Parkway. Nesom (2009) referred to this species as *Oxalis priceae* Small in his treatment of the yellow-flowered caulescent *Oxalis* of eastern North America. However, Weakley (2015) indicated that *Oxalis macrantha* predates *O. priceae*. This species is tracked by the MNHP as *Oxalis priceae* Small and ranked as "S1?" (MNHP 2018a). Fourteen counties in MS have collections listed as *O. macrantha* or *O. priceae*, suggesting a need for additional clarification on their identification and conservation status (SERNEC 2018).

Parathelypteris noveboracensis was collected at the base of a northeast-facing slope. It was known from only eight counties (Alcorn, Grenada, Itawamba, Lauderdale, Lowndes, Newton, Prentiss, and Tishomingo) in MS prior to this collection.

Platanthera lacera is a rare species in MS (S1S2; MNHP 2018a) that occurred within a floodplain forest community and two separate low fields that were infrequently mowed, often occurring with *Lilium superbum* (S3S4). It was previously known from only four MS counties (Attala, Forrest, Grenada, and Webster).

Quercus imbricaria was collected from an upland mixed pine-hardwood forest. This species is not considered rare in MS but represented by collections from only four other counties (Bolivar, Grenada, Quitman, and Washington). Two of these (Bolivar and Quitman) were attributed to urban areas and likely originated from plantings. Anecdotal exchanges suggest that some observations of this species in MS may be the result of hybridization, with the material approximating the morphology of *Q. imbricaria*.

Rhynchosia latifolia is a rare species in MS (S2; MNHP 2018a) and occurred at a single location on a dry, south-facing slope. This species was previously known from Carroll, Clay, Grenada, Hinds, Lafayette, Pontotoc, Union, and Webster counties. Its primary distribution is west of the Mississippi River in Arkansas, LA, Missouri, and Texas (USDA, NRCS 2018). It appears to be disjunct in central MS, Chester County, TN, and Warren County, Kentucky.

Ruellia nudiflora was collected at a single location along state highway nine. Prior to this collection, it was known from only four counties in MS but has since been found in three additional counties. All of these records appear to be from transportation corridors, suggesting that this species is likely adventive in the state and will continue to expand.

Sceptridium lunarioides was collected from a cemetery on a sandy ridge. It was previously known from only ten counties in MS and listed as an "S2" (MNHP 2018a). This species has an affinity for growing in sandy, somewhat poorly manicured turf grass in MS (Heather Sullivan, pers. comm. 2009). Its growth habit, diminutive size, and emergence in winter may cause it to be overlooked in surveys.

Tillandsia usneoides was collected near the northern county boundary along the Big Black River. This collection appears to represent the northernmost, naturally-occurring population in MS. One collection from Bolivar County is slightly farther north but attributed to an urban area in the city of Cleveland and was likely transplanted for ornamental purposes. This species potentially occurs on the north side of the Big Black River in Webster County.

Plant Communities

There are no standardized methods for describing plant communities in MS; therefore, the eight primary communities that were found within Choctaw County were described based on dominant vegetation and hydrology. Many of these communities graded into each other, with representative species co-occurring in transitional areas. Despite the presence of rock outcroppings, no particular plant community or individual species was restricted to this substrate.

1. Anthropogenically disturbed areas included fields (**F**), transportation and utility corridors (**TU**), areas recently deforested/cleared of pre-existing vegetation and developed areas (**DA**). This community type occurred throughout the county, and often contained many annuals, species that are considered non-native (USDA, NRCS 2018), and species that are promoted by frequent disturbance regimes. Common species found in this community included *Hordeum pusillum*, *Lamium amplexicaule*, *Oenothera biennis*, *O. laciniata*, *Paspalum dilatatum*, *Taraxacum officinale*, *Trifolium incarnatum*, and *T. repens*. This community also includes roadside ditches and other manmade drainages (**DD**) that often contained a mix of species that are found in disturbed areas, floodplain forests, marshes/meadows, impoundments, and stream channels, depending on land use, morphology, and substrate of the individual feature.

2. Floodplain forests (**FF**) were common and occurred adjacent to perennial streams and typically dominated by broadleaf deciduous trees. Species composition varied depending on frequency and duration of inundation, and drainage capacity of the soil substrate. On well- to moderately well-drained areas with infrequent inundation, common species included *Acer rubrum*, *Asimina triloba*, *Carpinus caroliniana*, *Liquidambar styraciflua*, *Pinus taeda*, *Quercus michauxii*, *Q. nigra*, *Q. pagoda*, and *Ulmus americana*. On moderately to poorly drained areas that experience frequent inundation, common species included *Fraxinus pennsylvanica*, *Quercus laurifolia*, and *Q. lyrata*. Sites typically experiencing seasonal to year-round inundation ("swamps") were dominated by *Carya aquatica*, *Cephalanthus occidentalis*, *Nyssa aquatica*, and *Taxodium distichum*.

3. Impoundments (**IMP**) occurred frequently although they represented a small percentage of the total land area. Typically, they were man-made from damming streams for agricultural or recreational purposes but occasionally occurred naturally through dam-building by beavers (*Castor canadensis* Kuhl). Species assemblages varied depending on the average water depth. Emergent aquatic and terrestrial species such as *Cephalanthus occidentalis*, *Eleocharis obtusa*, *Juncus effusus*, *Ludwigia palustris*, *Pluchea camphorata*, *Scirpus cyperinus*, *Sparganium americanum*, and *Typha latifolia* were common along margins and flats. Aquatic species such as *Nymphaea odorata*, *Potamogeton diversifolius*, and *Utricularia gibba* were common in littoral areas of impoundments.

4. Marshes/meadows (**MM**) were uncommon and occurred adjacent to perennial streams on poorly drained soils, frequently with standing water. Most of these areas appear to have originated from historical beaver activity (pers. obs.). Common species included *Carex lurida*, *Cephalanthus occidentalis*, *Juncus effusus*, *Scirpus cyperinus*, and *Typha latifolia*. *Equisetum hyemale* was found exclusively in this community. Fields that

occurred in low landscape positions often contained species assemblages that were similar to naturally occurring marshes/meadows, even though they were maintained periodically through mowing or used for grazing.

5. Mesophytic upland forests (mesic forests; **MF**) occurred frequently throughout the county, usually on north to northeast-facing slopes, and often formed a transitional zone between upland and floodplain forests. Soils are typically well-drained yet retain moisture, in part because of high levels of organic matter and low levels of direct sunlight, therefore affecting the local species composition. Common species found in this community included *Asimina triloba, Carya glabra*, *Fagus grandifolia*, *Liriodendron tulipifera*, *Phegopteris hexagonoptera*, and *Quercus alba*. *Castanea dentata* occasionally occurred in this community as stump or root sprouts, with some individuals reaching approximately eight m in height. Exceptional sites with steep north facing slopes, deep shade, substantial accumulations of organic matter in the upper soil horizon, and low levels of disturbance often contained uncommon and rare species, including *Adiantum pedatum*, *Asarum reflexum*, *Cubelium concolor*, *Cypripedium parviflorum*, *Eutrochium purpureum*, *Huechera americana*, *Matelea carolinensis*, *Panax quinquefolius*, *Sanguinaria canadensis*, and *Silene virginica*. Some of these species are typically found with much greater frequency and abundance in areas outside of MS and the Atlantic and Gulf Coastal Plain Province (Weakley 2015). Their presence in central MS is often viewed as a relic feature of past climate conditions that were cooler and more mesic (Majure et al. 2011).

6. Streams of varying size occurred throughout the county and contained a plant community with two distinct subdivisions: stream channels (**SC**) and stream banks (**SB**). Both exhibited varying levels of disturbance from floodwaters and associated scouring and deposition of sediment, with it being highest in the stream channels. Soils in this community were typically sandy or loamy but occasionally rocky and varied in drainage capacity. Common species within stream channels included *Cyperus strigosus*, *Dysphania ambrosioides*, *Fimbristylis autumnalis*, *Rotala ramosior*, and *Salix nigra*. These species were considered tolerant of frequent disturbance or require it for successful recruitment. In slow-moving stream channels (sloughs), *Forestiera acuminata*, *Ludwigia peploides*, *Planera aquatica*, and *Taxodium distichum* frequently occurred. Stream banks typically contained a higher proportion of perennial and woody species that are less tolerant of the conditions found within stream channels. Common species found on stream banks included *Acer negundo, Campsis radicans, Platanus occidentalis*, *Rhododendron canescens*, *Sambucus canadensis*, and *Symplocos tinctoria*.

7. Springs/seeps/bogs (**SS**) occurred frequently, usually embedded within forest communities on acidic soils. Bogs occurred as wooded bogs dominated by trees and open bogs dominated by herbaceous vegetation and shrubs. Although this community occurred frequently, it represented a scant percentage of the total land area. Degradation of this community type due to anthropogenic activities (e.g. filling, ditching, and road construction) was commonly observed. Common species included *Carex atlantica*, *C. leptalea*, *Decumaria barbara*, *Magnolia virginiana*, *Nyssa biflora*, *Rhododendron canescens*, *Smilax laurifolia*, *Viburnum nudum*, and *Woodwardia areolata*. Uncommon and rare species that were found exclusively in this community included *Chelone glabra*, *Cyperus haspan*, *Ilex verticillata*, *Lyonia ligustrina*, *Xyris difformis*, *X. iridifolia*, and *X. torta*. *Sphagnum* species were often present in this community, typically as a minor component forming small scattered "cushions" but occasionally occurring as large "mats" capable of contributing substantial amounts of peat to the community substrate.

8. Upland forests (**UF**) were the most common forest community, occurring on a variety of well-drained soil types that ranged from gently to steeply sloping. Pine dominated forests were common in the county, much of them a result of land management practices that converted other forest types. Natural pine forests occurred occasionally on ridges and upper slopes, but were largely represented by early to mid-successional stages following retirement of agricultural fields and pastures, or stochastic events such as fires, hurricanes, or tornadoes that reduced or removed the previously dominant vegetation (pers. obs.). Mixed pine-hardwood forests appeared to represent early to mid-successional stages of upland forests, and were dominated by *Liquidambar styraciflua, Pinus echinata*, *P. taeda*, *Quercus alba*, and *Q. stellata*. On xeric sites such as sandy or rocky ridges and outcrops, *Carya pallida*, *Pinus echinata*, and *Quercus marilandica* were dominant. Oak-hickory forests appeared to represent mid- to late-successional upland forests and were dominated by *Carya glabra*, *C.*

tomentosa, *Quercus alba*, *Q. stellata*, and *Q. velutina*. Other species that frequently occurred in oak-hickory forests included *Cornus florida*, *Oxydendrum arboreum*, *Quercus coccinea, Q. rubra*, *Sassafras albidum*, and *Vaccinium arboreum*.

CONCLUSIONS

This survey contributed 313 new records or approximately one-third of the documented vascular flora of Choctaw County. Despite having a land use history marked by periods of highly destructive resource extraction, the county still contains a diverse assemblage of plant species and plant communities. The flora of a given area is largely a product of geology, anthropogenic activities, and both past and contemporary climate. The climate of central MS since the Pleistocene has included bouts of cool, mesic conditions, to warm, drying conditions. Plant species that are representative of these contrasting patterns persist in the county and throughout large portions of MS. The surface geology of the county is fairly uniform, providing little variation in lithological substrate compared to adjacent counties, with no known areas that would support species such as calciphiles or those that require alkaline soils. Widespread disturbance of the natural vegetation has altered the abundance and distribution of both native and non-native species. The growing use of broad-spectrum herbicides for management of roadsides, utility corridors, and urban areas appears to have largely homogenized these plant communities.

The current landscape contrasts sharply with historical accounts. A half-century or more of aggressive fire suppression has allowed multiple sub-canopy strata to develop in most upland forests, shading and diminishing the biomass of the herbaceous layer, and reducing habitat quality for many species of wildlife that utilize forest openings and woodlands. The upland broadleaf forests that once covered this portion of the North Central Plateau region have been replaced to a great extent by pine plantations managed on relatively short rotation ages. The pre-settlement (1830s) forest cover for the area appears to have been dominated by a mixture of deciduous trees, chiefly *Quercus* spp., with *Pinus echinata* on ridge tops and upper slopes, and *Pinus taeda* on mesic flats and terraces. The open woodlands and "blackjack ridges" dominated by oaks such as *Quercus marilandica* and *Q. stellata* that were recorded in the region are largely absent.

ANNOTATED CHECKLIST

The checklist of taxa is arranged by major clade and subsequently by alphabetical order after their particular family. Species that were new county records are preceded with a star (*). A darkened circle (●) denotes an introduced species from areas outside of the United States, based on designations in pertinent literature and the PLANTS Database (Weakley 2015; USDA, NRCS 2018). Species that have uncertain nativity, or occur as a mix of native and non-native genotypes are denoted with a diamond (♦). Species considered native to the United States but not specifically to MS, are denoted by a dagger (†). Species considered native to MS but not specifically to Choctaw County, are denoted by a double-dagger (‡). All collections made by the author were deposited at MMNS. The accepted herbarium acronym is provided in brackets where a species is based on a reference. Collections were not made for three species because of scarcity (*Opuntia drummondii*), prior treatment with herbicide (*Triadica sebifera*), or destructive mowing (*Bothriochloa ischaemum*). Regrettably, the collected material from *Arundo donax, Celtis tenuifolia, Elaeagnus umbellata, Eragrostis curvula,* and *Magnolia grandiflora* is absent, but included here based on observations. Collector number(s), habitat(s) that it occurred in, and frequency of occurrence (rare [1–3 occurrences], uncommon [4–6 occurrences], infrequent [7–10 occurrences], occasional [11–15], frequent [16–20 occurrences], and common [21 or more occurrences]) are provided for each taxon. Collections made by Massey were originally deposited at Mississippi State University (MISSA) but are no longer held there and could not be located for confirmation. A question mark accompanies the herbarium acronym for each reference to a collection made by Massey. Collection numbers were not provided in her unpublished thesis. Designations for species that are listed by the MNHP are provided in bold (MNHP 2018a; MNHP 2018b). Taxonomic arrangement and nomenclature predominately follows Weakley (2015), with exceptions for unresolved taxa where the accepted name in USDA, NRCS (2018) is provided.

LYCOPODIOPHYTA

Selaginellaceae
Lycopodioides apodum (L.) Kuntze—*426*; MM; occasional.

PTERIDOPHYTA

Aspleniaceae
Asplenium platyneuron (L.) Britton, Sterns, & Poggenb.—*582*; FF, MF, UF; common.

Athyriaceae
Athyrium asplenioides (Michx.) A.A. Eaton—*489*; FF, SS; frequent.

Blechnaceae
Lorinseria areolata (L.) C. Presl—*619*; SS; frequent.

Dennstaedtiaceae
Pteridium latiusculum (Desv.) Hieron. ex Fries—*451*; UF, TU; common.

Dryopteridaceae
Polystichum acrostichoides (Michx.) Schott—*200*; MF, UF; common.

Equisetaceae
**Equisetum hyemale* L. ssp. *affine* (Engelm.) Calder & Roy L. Taylor —*601*; MM; rare.

Lygodiaceae
●*Lygodium japonicum* (Thunb.) Sw.—*848*; FF, UF, DA; occasional.

Onocleaceae
Onoclea sensibilis L. var. *sensibilis—576*; FF; frequent.

Ophioglossaceae
Botrypus virginianus (L.) Michx.—*288*; MF, UF; frequent.
Ophioglossum crotalophoroides Walter—*K.E. Rodgers 7737-A* [NCU]; cemetery on a sandy ridge; rare.
**Ophioglossum pycnostichum* (Fernald) Á. Löve & D. Löve—*226*; FF; occasional.
**Sceptridium biternatum* (Savigny) Lyon—*190*; MF; common.
Sceptridium dissectum (Spreng.) Lyon—*191*; MF; uncommon.
Sceptridium lunarioides* (Michx.) Holub—*1249*; cemetery on a sandy ridge; rare. **S2

Osmundaceae
Osmundastrum cinnamomeum (L.) C. Presl—*456*; SS; frequent.
**Osmunda spectabilis* Willd.—*521*; FF, SS; frequent.

Polypodiaceae
Pleopeltis michauxiana (Weath.) Hickey & Sprunt—*197*; epiphytic on trees and occasionally rocks; common.

Pteridaceae
Adiantum pedatum L.—*496*; MF; uncommon.

Salviniaceae
**Azolla caroliniana* Willd.—*1121*; IMP, DD; occasional (locally common).

Thelypteridaceae
*●*Macrothelypteris torresiana* (Gaudich.) Ching—*1451*; FF, SB; uncommon.
**Parathelypteris noveboracensis* (L.) Ching—*962*; MF; rare.
Phegopteris hexagonoptera (Michx.) Fée—*450*; MF; frequent.
Thelypteris kunthii (Desv.) C.V. Morton—*1064*; *1252*; FF, shaded bridge abutments near concrete; uncommon.
**Thelypteris palustris* Schott var. *pubescens* (G. Lawson) Fernald —*1044*; SS (open); rare.

Woodsiaceae
**Woodsia obtusa* (Spreng.) Torr.—*588*; *945*; MF; infrequent.

CONIFEROPHYTA

Cupressaceae
Juniperus virginiana L. var. *virginiana—199*; UF, F; common.
**Taxodium distichum* (L.) Rich.—*889*; FF, SC; frequent.

Pinaceae
Pinus echinata Mill.—*996*; UF; common.
Pinus glabra Walter—*T.E. Smith 446* [MMNS]; UF, FF; rare.
Pinus taeda L.—*994*; FF, UF, F; common (widely planted).
*‡*Pinus virginiana* Mill.—*944*; OH; rare.

MAGNOLIOPHYTA

Acanthaceae
**Justicia ovata* (Walter) Lindau var. *lanceolata* (Chapm.) R.W. Long—*579*; FF, DD, MM; frequent.
Ruellia caroliniensis (J.F. Gmel.) Steud.—*564*; FF, UF, F, TU; occasional.
**Ruellia nudiflora* (Engelm. & Gray) Urban var. *nudiflora—1062*; UF, TU; uncommon.

Adoxaceae
Sambucus canadensis L.—*463*; FF, SB; common.
Viburnum nudum L.—*469*; SS; occasional.
Viburnum rufidulum Raf.—*449*; *1078*; UF, MF, FF; frequent.

Agavaceae
Manfreda virginica (L.) Salisb. ex Rose—*613*; UF (open); occasional.
‡Yucca aloifolia L.—*M.H. Massey* [MISSA?]; OH; infrequent.
**Yucca filamentosa* L.—*515*; UF (open), TU; occasional.
Yucca flaccida Haw.—*T.E. Smith 1384* [IBE]; UF (open), TU; infrequent.

Alismataceae
Sagittaria graminea Michx.—*723*; IMP (margins); uncommon.
**Sagittaria latifolia* Willd. var. *latifolia—718*; FF, IMP (margins), DD, SS; common.

Alliaceae
*●*Allium ampeloprasum* L.—*501*; TU, OH; occasional.
Allium canadense L. var. *canadense—323*; F, TU, FF, UF; common.
●*Allium vineale* L.—*990*; F, TU; frequent.
Nothoscordum bivalve (L.) Britton—*211*; F, TU; common.

Altingiaceae
Liquidambar styraciflua L.—*801*; FF, MF, UF, F; common.

Amaranthaceae
**●Alternanthera philoxeroides* (Mart.) Griseb.—*722*; IMP, DD; infrequent.
**Amaranthus hybridus* L.—*1200*; F, TU, DA; occasional.
●*Amaranthus spinosus* L.—*1469*; F, DA; infrequent.
**♦Dysphania ambrosioides* (L.) Mosyakin & Clemants—*637*; *733*; SB, SC, DA; common.

Amaryllidaceae
**Hymenocallis occidentalis* (LeConte) Kunth var. *occidentalis—1257; 1467*; MF; uncommon.
●*Leucojum aestivum* L.—*240*; OH, TU; uncommon.
*●*Narcissus jonquilla* L.—*220*; OH, TU; occasional.
●*Narcissus pseudo-narcissus* L.—*219*; OH, TU; occasional.

Anacardiaceae
Rhus copallinum L.—*568*; UF; common.
Rhus glabra L.—*531*; UF; common.
**Toxicodendron pubescens* P. Mill.—*557*; UF (xeric); occasional.
Toxicodendron radicans (L.) Kuntze var. *radicans—924*; FF, MF, UF; common.
Toxicodendron vernix (L.) Kuntze—*471*; SS; infrequent.

Annonaceae
Asimina parviflora (Michx.) Dunal—*J.D. Ray, Jr. 4821* [MISSA]; UF; rare.
Asimina triloba (L.) Dunal—*262*; FF, MF; common.

Apiaceae
Angelica venenosa (Greenway) Fernald—*M.H. Massey* [MISSA?]; MF; uncommon.
Chaerophyllum tainturieri Hook.—*210*; F, TU; common.
Cicuta maculata L. var. *maculata—358*; DD, F (low), MM; common.
**Cryptotaenia canadensis* (L.) DC.—*1187*; MF; infrequent.
Cyclospermum leptophyllum (Pers.) Sprague ex Britton & Wilson—*256*; F, DD; infrequent.
●*Daucus carota* L.—*475*; TU, F, DA; occasional.
**Daucus pusillus* Michx.—*612*; TU, DA; occasional.
Eryngium prostratum Nutt. ex DC.—*512*; F (low), DA, DD; occasional.
Eryngium yuccifolium Michx. var. *yuccifolium—482*; F (low), TU; occasional.
Oxypolis rigidior (L.) Raf.—*K.L. Gordon 543* [MMNS]; SS; uncommon.
Ptilimnium capillaceum (Michx.) Raf.—*907*; FF, MM; frequent.
Sanicula canadensis L. var. *canadensis—395*; UF, MF, FF; frequent.
**Sanicula marilandica* L.—*394*; MF; occasional.
Sanicula smallii E.P. Bicknell—*S.T. McDaniel 23980* [MMNS]; MF, FF; occasional.
Thaspium trifoliatum (L.) A. Gray—*359*; *494*; MM, F, (low), FF; infrequent.
**Trepocarpus aethusae* Nutt. ex DC.—*941*; FF, DD; infrequent.

Apocynaceae
Apocynum cannabinum L.—*464*; TU, F; frequent.
Asclepias amplexicaulis Sm.—*438*; TU, UF (open); frequent.
**Asclepias perennis* Walter—*902*; FF, DD; infrequent.
Asclepias tuberosa L. var. *interior* (Woodson) Shinners—*518*; UF, TU; frequent.
Asclepias variegata L.—*356*; UF, TU; frequent.
**Asclepias viridiflora* Raf.—*983*; *1092*; TU, F; uncommon.
**Asclepias viridis* Walter—*373*; TU, F; uncommon.
**Gonolobus suberosus* (L.) R. Br. var. *granulatus* (Scheele) Krings & Q.-Y. Xiang—*441*; FF, MF, UF; occasional.
Matelea carolinensis (Jacq.) Woodson—*364*; MF; rare. **S3**
Matelea obliqua* (Jacq.) Woodson—*492*; UF (xeric), TU; rare. **S2
Thyrsanthella difformis (Walter) Pichon—*503*; FF, MF, UF; frequent.
●*Vinca major* L.—*239*; OH, infrequent.

Aquifoliaceae
Ilex ambigua (Michx.) Torr.—*T.E. Smith 4653; 5966* [MMNS]; UF; uncommon.
Ilex decidua Walter—*765*; FF, MF, UF; common.
Ilex longipes Chapm. ex Trel.—*T.E. Smith 1385* [MMNS]; UF; uncommon.
Ilex opaca Aiton—*817*; MF, UF, FF; frequent.
Ilex verticillata (L.) A. Gray—*882*; SS; uncommon.
**Ilex vomitoria* Aiton—*663*; UF; rare.

Araceae
Arisaema dracontium (L.) Schott—*520*; MF, FF; frequent.
Arisaema triphyllum ssp. *pusillum* (Peck) Huttleston.—*322*; MF, FF; frequent.
Arisaema triphyllum ssp. *triphyllum* (L.) Schott—*R.B. Hudson s.n.* [MISSA]; frequent.
**Lemna minor* L.—*1090*; IMP; occasional.
**Orontium aquaticum* L.—*951*; FF (*Taxodium-Nyssa* dominated); rare.
**Peltandra virginica* (L.) Schott—*1001*; DD, FF; infrequent.
**Spirodela polyrrhiza* (L.) Schleiden—*1091*; IMP, FF (swamps); frequent.

Araliaceae
Aralia spinosa L.—*678*; UF, FF; common.
*●*Hedera helix* L. var. *helix—818*; OH; infrequent.
**Hydrocotyle ranunculoides* L.f.—*820*; IMP; rare.
**Hydrocotyle verticillata* Thunb.—*490*; FF, SS; occasional.
Panax quinquefolius L.—*1143*; MF (rich); rare. **S3**

Arecaceae
Sabal minor (Jacq.) Pers.—*803*; FF; infrequent.

Aristolochiaceae
Asarum reflexum* E.P. Bicknell.—*1146*; MF; rare. **S3
Endodeca serpentaria (L.) Raf.—*401*; *628*; MF, UF; frequent.

Asteraceae
♦*Achillea millefolium* L.—M.H. Massey [MISSA?]; F, TU; infrequent.
Ageratina altissima R.M. King & H. Rob. var. *altissima—760*; MF; occasional.
Ageratina aromatica (L.) Spach—*M.H. Massey* [MISSA?]; MF; uncommon.
Ambrosia artemisiifolia L.—*713*; F, TU, DA, UF (open); common.
Ambrosia trifida L.—*716*; SB, F (low), TU; occasional.
Antennaria plantaginifolia (L.) Richardson—*248*; UF (open), TU; occasional.
Arnoglossum atriplicifolium (L.) H. Rob.—*589*; UF, MF; frequent.
**Arnoglossum ovatum* (Walter) H. Rob. var. *ovatum—1080*; FF, SB; infrequent.
Baccharis halimifolia L.—*804*; TU, UF, FF, F, DA; frequent.
Bidens aristosa (Michx.) Britton—*M.H. Massey* [MISSA?]; FF, MM; uncommon.
Bidens discoidea (Torr. & A. Gray) Britton—*M.H. Massey* [MISSA?]; FF, MM; uncommon.
Bidens mitis (Michx.) Sherff—*727*; *781*; F (low), FF, MM; common.
**Bidens polylepis* Blake—*810*; SB, F (low), DD; occasional.
Boltonia asteroides (L.) L'Héritier var. *glastifolia* (Hill) Fernald—*645*; F, TU; common.
Boltonia caroliniana (Walter) Fernald—*M.H. Massey* [MISSA?]; F, FF; rare.
Brintonia discoidea (Elliott) Greene—*703*; MF, UF, SB; frequent.
Chrysopsis mariana (L.) Elliott—*779*; UF, TU; occasional.
**Cirsium discolor* (Muhl. ex Willd.) Spreng.—*726*; F, TU; infrequent.
Cirsium horridulum Michx. var. *horridulum—320*; F, TU; common.
Conoclinium coelestinum (L.) DC.—*757*; FF, MM, F (low); common.
Conyza canadensis (L.) Cronquist—*621*; F, TU, DA; common.
Coreopsis lanceolata L.—*340*; *1046*; TU, F, TU; frequent.
Coreopsis pubescens Elliott var. *pubescens—371; 508; 546;* TU, F; frequent.
*†*Coreopsis tinctoria* Nutt. var. *tinctoria—547*; F, TU; uncommon.
Coreopsis tripteris L.—*644*; F, TU; common.
**Croptilon divaricatum* (Nutt.) Raf.—*898*; UF (sandy); infrequent.
Eclipta prostrata (L.) L.—*1116*; TU, DA; occasional.
Elephantopus carolinianus Räuschel—*680*; MF, FF; frequent.
Elephantopus tomentosus L.—*639*; UF; common.
Erechtites hieraciifolius (L.) Raf. ex DC.—*752*; DA; common.
Erigeron annuus (L.) Pers.—*399*; F, TU, DA; common.
Erigeron philadelphicus L. var. *philadelphicus—925*; *942*; F, TU, DA; frequent.
Erigeron pulchellus Michx. var. *pulchellus—1261*; MF; infrequent.
Erigeron quercifolius Lam.—*274*; DA, TU; infrequent.
Erigeron strigosus Muhl. ex Willd. var. *strigosus*.—*459*; *920*; F, TU, UF (open); common.

**Eupatorium altissimum* L.—*772*; UF, F; rare.
Eupatorium capillifolium (Lam.) Small—*787*; F, TU, DA; common.
**Eupatorium hyssopifolium* L.—*664*; *1082*; DA; uncommon.
Eupatorium perfoliatum L.—*864*; FF, SS; frequent.
Eupatorium ×pinnatifidum Elliott.—*L.C. Temple 13772* [MISS]; TU; uncommon.
Eupatorium rotundifolium L.—*641*; UF, TU, F; common.
Eupatorium serotinum Michx.—*683*; FF, F, TU, DA; common.
Eurybia hemispherica (Alexander) G.L. Nesom—*698*; *1067*; UF, TU; frequent.
**Eutrochium fistulosum* (Barratt) E.E. Lamont—*1055*; SB; occasional.
Eutrochium purpureum (L.) E.E. Lamont var. *purpureum*—*1251*; *1494*; MF; rare.
*●*Gamochaeta pensylvanica* (Willd.) Cabrera—*1117*; DA; infrequent.
*●*Gamochaeta coarctata* (Willd.) Kerguélen—*955*; F, DA, UF (open); infrequent.
Gamochaeta purpurea (L.) Cabrera—*294*; F, DA, UF (open); common.
†*Helenium amarum* (Raf.) H. Rock—*517*; TU, F, DA; common.
**Helenium autumnale* L.—*729*; FF, F (low); frequent.
Helenium flexuosum Raf.—*587*; F (low); infrequent.
Helianthus angustifolius L.—*670*; F (low), TU; common.
Helianthus divaricatus L.—*556*; UF, F, TU; occasional.
Helianthus microcephalus Torr. & A. Gray—*782*; UF, F, TU; occasional.
**Helianthus resinosus* Small—*556*; UF (open), uncommon.
Helianthus silphioides Nutt.—*M.H. Massey* [MISSA?]; F, UF; rare.
Hieracium gronovii L.—*674*; UF (open), TU; occasional.
Ionactis linariifolia (L.) Greene—*C.T. Bryson 8440* [GA]; UF, TU; infrequent.
Iva annua L.—*1201*; F, TU, DA; frequent.
Krigia biflora (Walter) S.F. Blake var. *biflora*—*M.H. Massey* [MISSA?]; F, TU; uncommon.
**Krigia caespitosa* (Raf.) K.L. Chambers—*331*; F, TU; common.
**Krigia dandelion* (L.) Nutt.—*269*; F, DA, TU; common.
Krigia virginica (L.)—*C.T. Bryson 23407* [MMNS]; F, TU; occasional.
Lactuca canadensis L.—*L.C. Temple 5357* [MISS]; F, TU; frequent.
Lactuca floridana (L.) Gaertn.—*705*; FF, UF, TU; occasional.
●*Lactuca serriola* L.—*595*; F, TU, DA; common.
*●*Leucanthemum vulgare* Lam.—*375*; F, TU; infrequent.
**Liatris aspera* Michx.—*1231*; TU; uncommon.
**Liatris spicata* (L.) Willd. var. *resinosa* (Nutt.) Gaiser—*640*; F, TU; occasional.
Liatris squarrulosa Michx.—*C.T. Bryson 8438* [CLEMS]; TU, F; infrequent.
Mikania scandens (L.) Willd.—*671*; FF, MM, SB; common.
**Packera anonyma* (Wood) W.A. Weber & Á. Löve—*336*; TU, UF (open); occasional.
Packera glabella (Poir.) C. Jeffrey—*234*; FF, TU, F (low); frequent.
Pityopsis graminifolia (Michx.) Nutt.—*740*; UF, TU; common.
Pluchea camphorata (L.) DC.—*706*; FF, DD, IMP (margins); common.
Prenanthes altissima L.—*805*; MF; infrequent.
Pseudognaphalium helleri (Britton) Anderberg—*783*; UF; occasional.
Pseudognaphalium obtusifolium (L.) Hilliard & Burtt—*700*; UF, TU; common.
Pyrrhopappus carolinianus (Walter) DC.—*454*; F, TU; frequent.
Rudbeckia fulgida Aiton var. *fulgida*—*A.D. Moore 734* [MO]; F; rare.
Rudbeckia hirta L.—*455*; *780*; F, TU; common.
**Rudbeckia laciniata* L. var. *laciniata.*—*797*; FF, SB; common.
Sericocarpus linifolius (L.) Britton, Sterns, & Poggenb.—*L.C. Temple 11574* [MISS]; UF; infrequent.
**Silphium asteriscus* L.—*593*; TU, F; occasional.
Silphium integrifolium Michx.—*A.D. Moore 729* [MMNS]; F, TU; occasional.
Smallanthus uvedalia (L.) Mack.—*534*; MF, SB; occasional.
Solidago altissima L.—*M.H. Massey* [MISSA?]; UF, F, TU; common.
**Solidago arguta* Aiton var. *boottii* (Hook.) Palmer & Steyermark—*633*; UF (open); rare.
Solidago caesia L.—*S.T. McDaniel 24645* [MMNS]; MF; occasional.
Solidago curtisii Torr. & A. Gray—*M.H. Massey* [MISSA?]; MF; rare.
**Solidago gigantea* Aiton—*758*; TU, F; common.
Solidago hispida Muhl. ex Willd.—*L.C. Temple 13745* [MISS]; UF; rare.
Solidago nemoralis Aiton var. *nemoralis*—*L.C. Temple 13774* [MISS]; UF, TU; occasional.
Solidago odora Aiton—*J.D. Ray, Jr. 5881* [MISS]; UF; occasional.
Solidago patula Muhl. ex Willd. var. *strictula* Torr. & A. Gray—*1230*; SS; infrequent.
Solidago rugosa P. Mill.var. *aspera* (Aiton) Fernald—*747*; F, TU; common.
**Solidago tortifolia* Elliott—*754*; UF (open); uncommon.
Solidago ulmifolia Muhl. ex Willd. var. *ulmifolia*—*800*; UF (open); uncommon.
*●*Sonchus asper* (L.) Hill—*247*; TU, DA; common.
**Symphyotrichum cordifolium* (L.) G.L. Nesom—*1564*; MF; infrequent.
Symphyotrichum dumosum (L.) G.L. Nesom var. *dumosum*—*604*; *709*; TU, F; frequent.
Symphyotrichum patens (Aiton) G.L. Nesom var. *gracile* (Hook.) G.L. Nesom.—*C.T. Bryson 8432*; [USMS]; UF, TU; uncommon.
Symphyotrichum patens (Aiton) G.L. Nesom var. *patens*—*776*; TU, F; occasional.
Symphyotrichum pilosum (Willd.) G.L. Nesom var. *pilosum*—*L.C. Temple 13768* [MISS]; F, TU; frequent.
Symphyotrichum undulatum (L.) G.L. Nesom—*L.C. Temple 13761*; *13776* [MISS]; UF, TU, F; frequent.
Symphyotrichum urophyllum (Lindl. ex DC.) G.L. Nesom—*L.C. Temple 13776* [MISS]; TU, F, UF; rare.
●*Taraxacum erythrospermum* Andrz. ex Besser—*824*; DA, TU, F; frequent.
●*Taraxacum officinale* F.H. Wigg.—*208*; DA, TU, F; common.
Verbesina alternifolia (L.) Britton ex Kearney—*673*; FF, SB; occasional.
Verbesina helianthoides Michx.—*485*; UF (open), TU; infrequent.
**Verbesina virginica* L. var. *virginica*—*725*; F (low), FF; occasional.
Vernonia gigantea (Walter) Trel.—*695*; UF (open), F, TU; frequent.
Xanthium strumarium L.—*1198*; F, TU, DA; occasional.

Balsaminaceae
Impatiens capensis Meerb.—*616*; FF; frequent.

Berberidaceae
Podophyllum peltatum L.—*261*; MF; common.

Betulaceae
Alnus serrulata (Aiton) Willd.—*617*; SS, SB; common.
**Betula nigra* L.—*853*; FF, SB; infrequent.
Carpinus caroliniana Walter—*333*; FF, SB; common.
Corylus americana Walter—*636*; MF, UF; infrequent.
Ostrya virginiana K. Koch—*448*; MF, UF; common.

Bignoniaceae
Bignonia capreolata L.—*301*; FF, MF, UF; common.
Campsis radicans (L.) Seem. ex Bureau—*860*; FF, TU, DA; common.
Catalpa bignonioides Walter—*474*; SB; occasional.

Boraginaceae
Cynoglossum virginianum L.—*826*; MF; infrequent.
●*Heliotropium indicum* L.—*1056*; FF, TU, DD; occasional.
**Lithospermum tuberosum* Rugel ex DC.—*831*; MF; uncommon.
Myosotis macrosperma Engelm.—*255*; F, TU; occasional.

Brassicaceae
Abdra brachycarpa (Nutt. ex Torr. & A. Gray) E.L. Greene—*K.E. Rogers 7738-A* [UNC]; DA; rare.
*●*Brassica juncea* (L.) Czern.—*937*; TU; uncommon.
*●*Capsella bursa-pastoris* (L.) Medik.—*236*; TU, F, DA; frequent.

Cardamine angustata* O.E. Schulz—*1255*; MF; rare. **S2
Cardamine bulbosa (Schreb. ex Muhl.) Britton, Sterns, & Poggenb.—*233*; FF, F (low); frequent.
●*Cardamine hirsuta* L.—*209*; F, DA, TU; common.
**Cardamine pensylvanica* Muhl. ex Willd.—*237*; TU, DD, F (low); occasional.
Lepidium virginicum L. ssp. *virginicum*—*443*; *903*; F, TU, DA; common.
**Rorippa sessiliflora* (Nutt. ex Torr. & A. Gray) Hitchc.—*1115*; SC, DA; infrequent.

Bromeliaceae
**Tillandsia usneoides* (L.) L.—*849*; epiphytic on trees near the Big Black River; rare.

Cambombaceae
*Brasenia schreberi J.F. Gmel.—*1548*; IMP; uncommon.

Cactaceae
**Opuntia humifusa* (Raf.) Raf.—*954*; UF (open), TU; occasional.
**Opuntia drummondii* Graham—*observation*; cemetery on a sandy ridge; rare.

Calycanthaceae
Calycanthus floridus L.—*Anne Gunn s.n.* [MISS]; OH, UF; rare.

Campanulaceae
Lobelia cardinalis L.—*693*; FF, SB, DD; frequent.
Lobelia inflata L.—*Howard Horne s.n.* (D. Spaulding, pers. comm. 2017); FF, F (low); uncommon.
Lobelia puberula Michx.—*708*; FF, UF, F; common.
Lobelia siphilitica L.—*M.H. Massey* [MISSA?]; FF; rare.
Lobelia spicata Lam.—*550*; UF; infrequent.
Triodanis biflora (Ruiz & Pav.) Greene—*461*; TU, F; common.
Triodanis perfoliata (L.) Nieuwl.—*M.H. Massey* [MISSA?]; DA, TU; common.
●*Wahlenbergia marginata* (Thunb.) A.DC.—*C.T. Bryson 23406* [MMNS]; TU; uncommon.

Cannabaceae
Celtis laevigata Willd.—*891*; FF, SB; occasional.
**Celtis occidentalis* L.—*1023*; MF; rare.
Celtis tenuifolia Nutt.—*observed*; UF (dry); infrequent.

Caprifoliaceae
*●*Lonicera fragrantissima* Lindl. & Paxton—*245*; OH, TU; uncommon.
●*Lonicera japonica* Thunb.—*203*; UF, MF, FF, TU, F; common.
Lonicera sempervirens L.—*300*; UF; occasional.

Caryophyllaceae
●*Cerastium glomeratum* Thuill.—*1129*; F, TU, DA; common.
*●*Dianthus armeria* L. ssp. *armeria*—*374*; TU; uncommon.
**Sagina decumbens* (Elliott) Torr. & A. Gray—*1250*; DA; occasional.
Silene virginica L. var. *virginica*—*921*; MF; uncommon.
●*Stellaria media* (L.) Vill.—*194*; F, TU, DA; common.

Celastraceae
Euonymus americanus L.—*400*; MF, SB; frequent.

Ceratophyllaceae
**Ceratophyllum demersum* L.—*1025*; IMP; frequent.

Cistaceae
Lechea tenuifolia Michx.—*552*; UF, DA; occasional.

Colchicaceae
**Uvularia grandiflora* Sm.—*493*; MF; uncommon.
Uvularia perfoliata L.—*M.H. Massey* [MISSA?]; MF; uncommon.
Uvularia sessilifolia L.—*R.G. Wieland 8964* [MMNS]; MF, FF; uncommon.

Commelinaceae
*●*Commelina communis* L.—*721*; *1096*; DA, TU, SB; occasional.
*●*Commelina diffusa* Burm. f.—*1118*; SB, DA; infrequent.
Commelina erecta L.—*906*; UF (sandy); uncommon.
**Commelina virginica* L.—*904*; FF, SB; common.
**Tradescantia hirsutiflora* Bush—*997*; TU; occasional.
**Tradescantia ohiensis* Raf.—*341*; DD, TU; occasional.
**Tradescantia virginiana* L.—*913*; MF, TU; occasional.

Convolvulaceae
Cuscuta compacta Juss. ex Choisy—*719*; FF; occasional.
**Dichondra carolinensis* Michx.—*243*; F, DA; occasional.
**Ipomoea hederacea* (L.) Jacq.—*728*; F, TU; common.
**Ipomoea lacunosa* L.—*755*; forest margins, F, TU; common.
Ipomoea pandurata G.F. Mey.—*600*; F, SB, UF (open), TU; common.
*●*Jacquemontia tamnifolia* (L.) Griseb.—*649*; F, TU, DA; occasional.
Stylisma humistrata (Walter) Chapm.—*1045*; UF (sandy, open), TU; uncommon.

Cornaceae
**Cornus drummondii* C.A. Mey.—*1013*; UF (open); rare.
Cornus florida L.—*252*; MF, UF; common.
Cornus stricta Lam.—*355*; FF; frequent.

Cucurbitaceae
Melothria pendula L.—*861*; FF; occasional.

Cyperaceae
Carex abscondita Mack.—*385*; FF, MF; frequent.
Carex albicans Willd. ex Spreng. var. *australis* (L.H. Bailey) Rettig.—*S.T. McDaniel 24998* [MMNS]; UF; rare.
Carex albolutescens Schwein.—*M.H. Massey* [MISSA?]; FF, F (low); occasional.
Carex amphibola Steud.—*1149*; FF, MF; occasional.
Carex aff. *annectens* E.P. Bicknell—*271*; DD; uncommon.
Carex atlantica L.H. Bailey ssp. *capillacea* Reznicek—*279*; *1049*; SS, MM; occasional.
Carex aureolensis Steud.—*1024*; SC, FF; occasional.
Carex basiantha Steud.—*390*; FF, MF; uncommon.
Carex blanda Dewey—*386*; *1144*; FF; frequent.
Carex bromoides Willd. ssp. *bromoides*—*380*; SS; occasional.
Carex caroliniana Schwein.—*325*; FF; frequent.
Carex cephalophora Muhl. ex Willd.—*392*; MF; infrequent.
Carex cherokeensis Schwein.—*266*; FF, TU, F (low); frequent.
Carex complanata Torr. & Hook.—*M.H. Massey* [MISSA?]; FF, F (low); occasional.
Carex crebriflora Wiegand—*382*; FF, MF; infrequent.
Carex crinita Lam. var. *brevicrinis* Fernald—*369*; SS, MM; infrequent. **S3S4**
Carex crus-corvi Shuttlew. ex Kunze—*R.G. Wieland 8946* [MMNS]; FF, MM; rare.
Carex cumberlandensis Naczi, Kral, & Bryson—*C.T. Bryson 15817* [MISS]; MF (rich). **S2S3**
Carex debilis Michx.—*285*; FF, SS; common.
Carex digitalis Willd. var. *digitalis*—*1141*; MF; rare.
Carex digitalis Willd. var. *floridana* (L.H. Bailey) Naczi & Bryson—*966*; *967*; MF; uncommon.
Carex digitalis Willd. var. *macropoda* Fernald—*408*; MF; occasional.
Carex festucacea Schkuhr ex Willd.—*413*; FF, SS, MM; infrequent.
Carex flaccosperma Dewey—*324*; FF, MF; frequent.
Carex glaucescens Elliott—*R.G. Wieland 8944* [MMNS]; MM, SS; rare.
Carex gracilescens Steud.—*M.H. Massey* [MISSA?]; MF; rare.
Carex intumescens Rudge var. *intumescens*—*379*; SS, MM, DD; common.
**Carex kraliana* Naczi & Bryson—*391*; MF; occasional.
Carex leavenworthii Dewey—*R.G. Wieland 8957* [MMNS]; UF; infrequent.
Carex leptalea Wahlenb. var. *harperi* (Fernald) Weath. & Griscom—*417*; SS; frequent.

**Carex longii* Mack.—*431*; *978*; F (low), DD; occasional.
**Carex lupulina* Muhl. ex Willd.—*483*; SB, DD, MM; occasional.
Carex lurida Wahlenb.—*361*; *960*; SS, MM, DD, FF; common.
Carex muehlenbergii Schkuhr ex Willd. var. *enervis* W. Boott—*C.T. Bryson 13743* [MMNS]; MF, UF; rare.
Carex muehlenbergii Schkuhr ex Willd. var. *muehlenbergii*—*424*; *1015*; MF, UF, F; occasional.
Carex nigromarginata Schwein.—*388*; UF, MF; infrequent.
Carex oxylepis Torr. & Hook. var. *oxylepis*—*C.T. Bryson 15810* [MMNS]; FF; infrequent.
Carex pigra Naczi—*C.T. Bryson 15814* [MMNS]; FF, MF; uncommon.
Carex planispicata Naczi—*281*; MF; uncommon.
Carex retroflexa Muhl. ex Willd.—*384*; FF, MF, UF; frequent.
Carex rosea Schkuhr ex Willd.—*1148* [MMNS]; UF; infrequent.
Carex striatula Michx.—*272*; UF, MF; frequent.
Carex stricta Lam.—*Bried s.n.* [MMNS]; rare. **S2**
Carex styloflexa Buckley—*C.T. Bryson 2870* [MMNS]; FF, SS; uncommon.
Carex texensis (Torr. ex L.H. Bailey) L.H. Bailey—*383*; FF, MF, UF; occasional.
Carex triangularis Boeckeler—*C.T. Bryson 23093* [VSC]; FF, DD; uncommon.
Carex tribuloides Wahlenb. var. *sangamonensis* Clokey—*410*; *1011*; FF, SS; infrequent.
**Carex typhina* Michx.—*1468*; FF; rare.
Carex vulpinoidea Michx.—*414*; *929*; FF, SS, MM, DD; common.
**Cyperus croceus* Vahl—*669*; UF, F, TU; frequent.
**Cyperus echinatus* (L.) Wood—*561*; UF, F, TU; frequent.
Cyperus erythrorhizos Muhl.—*1542*; IMP (margins), DD; occasional.
**Cyperus haspan* L.—*654*; SS (open, sandy); rare.
●*Cyperus iria* L.—*736*; F (low), DD; common.
Cyperus polystachyos Rottb.—*C.T. Bryson 13686* [MISS]; F (low), DD; infrequent.
**Cyperus pseudovegetus* Steud.—*457*; MM, DD, IMP (margins); common.
Cyperus refractus Engelm. ex Boeckeler—*M.H. Massey* [MISSA?]; UF; rare. **S1**
Cyperus retrofractus (L.) Torr.—*591*; UF (xeric, open); infrequent. **S2S3**
**Cyperus retrorsus* Chapm.—*627*; *668*; UF, TU, F; frequent.
**●*Cyperus rotundus* L.—*J.D. Byrd s.n.* [VSC]; DA, F; occasional.
Cyperus strigosus L.—*603*; *624*; MM, F (low), SC, DD; common.
**Dulichium arundinaceum* (L.) Britton var. *arundinaceum*—*1547*; SS, IMP (margins); rare.
Eleocharis obtusa (Willd.) Schult.—*183*; *349*; *1049*; MM, DD, IMP (margins); frequent.
Eleocharis quadrangulata (Michx.) Roem. & Schult.—*863*; IMP (margins); rare.
Eleocharis aff. *tenuis* (Willd.) Schult.—*428*; MM, DD; occasional.
**Eleocharis tuberculosa* (Michx.) Roem. & Schult.—*985*; SS (open, sandy); uncommon.
Fimbristylis autumnalis (L.) Roem. & Schult.—*742*; SC, DD; frequent.
**Fuirena squarrosa* Michx.—*655*; SS (open), MM; occasional.
Isolepis carinata Hook. & Arn. ex Torr.—*918*; FF, F (low); occasional.
**Kyllinga odorata* Vahl—*667*; SS, F (low), MM; occasional.
Kyllinga pumila Michx.—*1243*; DD, FF; infrequent.
**Rhynchospora corniculata* (Lam.) A. Gray—*632*; FF, DD, MM, IMP (margins); frequent.
Rhynchospora glomerata (L.) Vahl var. *glomerata*—*1432*; SS, FF; frequent.
Scirpus atrovirens Willd.—*486*; MM, DD; infrequent.
Scirpus cyperinus (L.) Kunth—*666*; MM, DD, SS, IMP (margins); common.
**Scirpus georgianus* R.M. Harper—*1043*; SS; uncommon.
**Scleria oligantha* Michx.—*432*; FF, MF, UF; frequent.
**Scleria pauciflora* Muhl. ex Willd.—*433*; F (low); uncommon.

Dioscoreaceae

**●*Dioscorea polystachya* Turcz.—*1460*; FF, SB; uncommon.
Dioscorea villosa L.—*407*; FF, MF, UF; frequent.

Ebenaceae

Diospyros virginiana L.—*982*; FF, MF, UF, F; common.

Ericaceae

**Hypopitys monotropa* Crantz—*166*; UF (oak-hickory); uncommon.
**Lyonia ligustrina* (L.) DC. var. *foliosiflora* (Michx.) Fernald—*989*; SS; rare.
Monotropa uniflora L.—*Richard Graves s.n.*; [MISSA]; MF, UF; uncommon.
Oxydendrum arboreum (L.) DC.—*540*; MF, UF; frequent.
Rhododendron canescens (Michx.) Sweet—*278*; SS, SB, MF; frequent.
Vaccinium arboreum Marshall—*788*; UF; common.
Vaccinium elliottii Chapm.—*511*; FF, MF, UF; frequent.
Vaccinium fuscatum Aiton—*470*; MF, SS; frequent.
Vaccinium stamineum L. var. *stamineum*—*855*; UF, MF; common.

Euphorbiaceae

Acalypha gracilens A. Gray—*J.D. Ray, Jr. 4800* [MISSA]; F, TU; occasional.
**Acalypha ostryifolia* Riddell ex J.M. Coulter—*715*; TU, F, DA; infrequent.
**Acalypha rhomboidea* Raf.—*660*; UF, TU, F; frequent.
**Acalypha virginica* L.—*762*; UF; occasional.
●*Croton capitatus* Michx.—*739*; *1103*; UF, TU, DA; common.
**●*Croton glandulosus* L. var. *septentrionalis* Müller Aargau—*1066*; SB (sandy), DA; occasional.
Euphorbia corollata L.—*505*; UF, TU; common.
Euphorbia maculata L.—*856*; TU, DA; common.
**Euphorbia nutans* Lag. (Lag.) Small.—*629*; TU, DA; common.
Tragia cordata Michx.—*1189*; MF; uncommon.
●*Triadica sebifera* (L.) Small—*observation*; TU; rare.

Fabaceae

●*Albizia julibrissin* Durazz.—*522*; UF, OH, DA; occasional.
Amphicarpaea bracteata (L.) Fernald var. *bracteata*—*753*; FF, MF, UF; occasional.
Apios americana Medik.—*672*; UF, FF, SB; frequent.
**Baptisia alba* (L.) Vent.—*844*; F (low), TU; rare.
Baptisia leucantha Torr. & A. Gray.—*M.H. Massey* [MISSA?]; F, TU; infrequent.
Centrosema virginianum (L.) Benth.—*599*; UF (open), TU; common.
Cercis canadensis L. var. *canadensis*—*444*; FF, MF, UF; common.
Chamaecrista fasciculata (Michx.) Greene var. *fasciculata*—*638*; UF, F, TU; common.
Chamaecrista nictitans (L.) Moench var. *nictitans*—*1106*; TU, F; frequent.
Clitoria mariana L. var. *mariana*—*659*; UF, TU; frequent.
Crotalaria rotundifolia Walter ex J.F. Gmel.—*M.H. Massey* [MISSA?]; TU; infrequent.
Crotalaria sagittalis L.—*507*; *972*; UF, TU; frequent.
**●*Crotalaria spectabilis* Roth—*1094*; TU, DA; uncommon.
Desmodium ciliare (Muhl. ex Willd.) DC.—*J.D. Ray, Jr. 5883* [MISSA]; UF; occasional.
Desmodium cuspidatum (Muhl. ex Willd.) DC. ex Loudon var. *cuspidatum*—*R.G. Wieland 9770* [MMNS]; UF, F; uncommon.
Desmodium glabellum (Michx.) DC.—*R.G. Wieland 9776* [MMNS]; F, TU; common.
**Desmodium marilandicum* (L.) DC.—*1107*; UF; occasional.
Desmodium obtusum (Muhl. ex Willd.) DC.—*M.H. Massey* [MISSA?]; UF, F; uncommon.

Desmodium paniculatum (L.) DC. var. *paniculatum*—*R.G. Wieland 9769* [MMNS]; F, TU; common.
Desmodium rotundifolium DC.—*799*; UF; occasional.
Desmodium viridiflorum (L.) DC.—*R.G. Wieland 9768* [MMNS]; F, TU; common.
Galactia volubilis (L.) Britton—*R.G. Wieland 9773* [MMNS]; F, TU; occasional.
Gleditsia triacanthos L.—*651*; FF, UF; frequent.
Hylodesmum glutinosum (Muhl. ex Willd.) H. Ohashi & R.R. Mill.—*1035*; MF; occasional.
Hylodesmum nudiflorum (L.) H. Ohashi & R.R. Mill.—*563*; MF; occasional.
Hylodesmum pauciflorum (Nutt.) H. Ohashi & R.R. Mill—*R.G. Wieland 9764* [MMNS]; MF; occasional.
●*Indigofera tinctoria* L.—*J.R. McDonald 11674* [MO]; TU; rare.
●*Kummerowia striata* (Thunb.) Schindl.—*893*; *1083*; TU, DA; common.
●*Lathyrus hirsutus* L.—*351*; F, TU, DA; common.
●*Lespedeza bicolor* Turcz.—*573*; TU, F; infrequent.
**Lespedeza capitata* Michx.—*710*; UF (open), F, TU; frequent.
●*Lespedeza cuneata* G. Don—*M.H. Massey* [MISSA?]; F, UF, TU, DA; common.
Lespedeza hirta (L.) Hornem. var. *hirta*—*764*; UT; common.
Lespedeza procumbens Michx.—*S.T. McDaniel 12357* [MISSA]; UF, TU; occasional.
Lespedeza repens (L.) W. Barton—*1084-A*; UF, TU; occasional.
Lespedeza virginica (L.) Britton—*A.F. Clewell 2159* [FSU]; UF, TU; occasional.
●*Medicago arabica* (L.) Huds.—*M.H. Massey* [MISSA?]; DA, F, TU; uncommon.
*●*Medicago lupulina* L.—*397*; TU; occasional.
Mimosa microphylla Dryand.—*436*; UF; frequent.
**Orbexilum pedunculatum* (Mill.) Rydb. var. *pedunculatum*—*335*; TU, UF; frequent.
●*Pueraria montana* (Lour.) Merr.—*679*; TU; frequent.
Rhynchosia latifolia* Nutt.—*1037*; UF (mixed pine-hardwood); rare. **S2
**Rhynchosia tomentosa* (L.) Hook. & Arn.—*553*; UF, TU; occasional.
†*Robinia hispida* L. var. *hispida*—*C.T. Bryson 23409* [MMNS]; UF, TU; infrequent.
†*Robinia pseudoacacia* L.—*291*; TU, UF; infrequent.
●*Senna obtusifolia* (L.) H.S. Irwin & Barneby—*1005*; F, TU; occasional.
**Sesbania herbacea* (Mill.) McVaugh—*647*; F, TU, DA; frequent.
Strophostyles umbellata (Muhl. ex Willd.) Britton—*554*; TU, UF; occasional.
Stylosanthes biflora (L.) Britton, Sterns, & Poggenb.—*480*; UF, TU, F; common.
Tephrosia spicata (Walter) Torr. & A. Gray—*509*; UF (open); occasional.
**Tephrosia virginiana* (L.) Pers.—*370*; UF, TU; frequent.
*●*Trifolium arvense* L.—*510*; TU, DA; infrequent.
●*Trifolium campestre* Schreb.—*277*; TU, F; common.
●*Trifolium dubium* Sibth.—*M.H. Massey* [MISSA?]; F, TU, DA; common.
●*Trifolium incarnatum* L.—*276*; TU, F; common.
●*Trifolium pratense* L.—*290*; TU; occasional.
●*Trifolium repens* L.—*246*; DA, TU, F, DA; common.
Vicia caroliniana Walter—*825*; UF, MF; occasional.
●*Vicia grandiflora* Scop.—*C. Turnipseed 6* [MISSA]; TU; uncommon.
●*Vicia hirsuta* (L.) S.F. Gray—*M.H. Massey* [MISSA?]; DA; uncommon.
Vicia minutiflora A. Dietr.—*R.G. Weiland 8988* [MMNS]; UF, TU; uncommon.
●*Vicia sativa* L.—*316*; F, TU; common.
*●*Vicia tetrasperma* (L.) Schreb.—*396*; TU, DA; occasional.
●*Vicia villosa* Roth—*846*; F, TU, DA; infrequent.
**Wisteria frutescens* (L.) Poir.—*936*; SB; occasional.
●*Wisteria sinensis* (Sims) DC.—*302*; OH, TU; occasional.

Fagaceae
Castanea dentata (Marshall) Borkh.—*993*; MF, UF; occasional.
Castanea pumila (L.) Mill.—*406*; MF, UF; occasional.
Fagus grandifolia Ehrh.—*793*; MF; common.
Quercus alba L.—*453*; MF, UF; common.
Quercus coccinea Münchh.—*909*; UF; frequent.
Quercus falcata Michx.—*995*; UF; common.
**Quercus imbricaria* Michx.—*759*; UF; rare.
**Quercus laurifolia* Michx.—*977*; *1006*; FF; common.
**Quercus lyrata* Walter—*850*; FF; common.
Quercus margarettae W.W. Ashe ex Small—*T.E. Smith 335* [MMNS]; UF; infrequent.
Quercus marilandica Münchh. var. *marilandica*—*532*; UF; frequent.
Quercus michauxii Nutt.—*618*; FF, MF; frequent.
**Quercus muehlenbergii* Engelm.—*1034*; MF, UF; infrequent.
Quercus nigra L.—*478*; FF, MF, UF; common.
Quercus pagoda Raf.—*807*; MF, FF; common.
Quercus phellos L.—*516*; FF, UF; common.
Quercus rubra L.—*497*; MF, UF; infrequent.
**Quercus shumardii* Buckley—*707*; FF, SB; occasional.
Quercus stellata Wangenh.—*529*; UF; common.
Quercus velutina Lam.—*402*; UF; common.

Gelsemiaceae
**Gelsemium sempervirens* (L.) St. Hil.—*241*; FF, UF, MF; common.

Gentianaceae
**Bartonia paniculata* (Michx.) Muhl. ssp. *paniculata*—*1787*; SS; rare.
Gentiana villosa L.—*767*; UF; occasional.
Obolaria virginica L.—*232*; MF (rich); infrequent.
Sabatia angularis (L.) Pursh—*584*; F (low), TU; occasional.
Sabatia brachiata Elliott—*J.D. Ray, Jr. 4759* [MISSA]; UF; rare.

Geraniaceae
Geranium carolinianum L.—*264*; F, TU, DA; common.
*●*Geranium dissectum* L.—*318*; F, TU, DA; frequent.

Haloragaceae
*●*Myriophyllum aquaticum* (Vell.) Verdc.—*575*; FF (aquatic); occasional.
**Proserpinaca palustris* L. var. *crebra* Fernald & Griscom—*1449*; SC; rare.

Hamamelidaceae
Hamamelis virginiana L.—*186*; FF, MF, UF; frequent.

Heloniadaceae
**Chamaelirium luteum* (L.) A. Gray—*366*; UF, MF; occasional.

Hemerocallidaceae
●*Hemerocallis fulva* (L.) L.—*548*; TU, OH; occasional

Hyacinthaceae
*●*Muscari neglectum* Gussoni ex Tenore—*231*; F, DA; infrequent.

Hydrangeaceae
Decumaria barbara L.—*452*; SS, SB, MF; frequent.
Hydrangea arborescens L.—*802*; MF, SB; infrequent.
Hydrangea quercifolia W. Bartram—*404*; UF, MF; common.

Hydroleaceae
**Hydrolea uniflora* Raf.—*1022*; FF, DD; frequent.
Hydrolea quadrivalvis Walter—*A.D. Moore 726* [VSC]; MM, IMP; rare.

Hypericaceae
Hypericum drummondii (Grev. & Hook.) Torr. & A. Gray—*1202*; TU (xeric); occasional.

Hypericum gentianoides (L.) Britton—*S.T. McDaniel 12347* [FSU]; TU, UF; infrequent.
Hypericum hypericoides (L.) Crantz—*611*; *761*; *1032*; *1057*; FF, MF, UF; frequent.
Hypericum lobocarpum Gatt.—*T.E. Smith 5967* [MISS]; FF, SB; uncommon.
Hypericum mutilum L.—*574*; *1041*; FF, SS; frequent.
Hypericum prolificum L.—*L.C. Temple 5347* [GA]; DD; rare.
Hypericum punctatum Lam.—*605*; SS, MM, FF; infrequent.
Hypericum stragulum W.P. Adams & Robson—*T.E. Smith 1054* [FSU]; UF; uncommon.
Hypericum tubulosum Walter—*M.H. Massey* [MISSA?]; IMP; rare.
Hypericum walteri J.F. Gmel.—*1099*; FF, SS; frequent.

Hypoxidaceae
**Hypoxis hirsuta* (L.) Coville—*847*; FF, MF, UF; occasional.

Iridaceae
●*Gladiolus ×gandavensis* Van Houtte—*538*; OH, TU; infrequent.
Iris cristata Aiton—*953*; MF; infrequent.
**Iris virginica* L. var. *virginica*—*845*; FF; occasional.
Sisyrinchium albidum Raf.—*1147*; MF, FF; occasional.
**Sisyrinchium angustifolium* Mill.—*330*; *917*; FF, F (low); frequent.
**Sisyrinchium nashii* E.P. Bicknell—*321*; TU, F; infrequent.
**Sisyrinchium rosulatum* E.P. Bicknell—*319*; F, TU, DA; infrequent.

Iteaceae
Itea virginica L.—*368*; FF, SS; frequent.

Juglandaceae
**Carya aquatica* (Michx. f.) Elliott—*1050*; FF; occasional.
Carya carolinae-septentrionalis (W.W. Ashe) Engler & Graebner—*1033*; MF, UF; occasional.
Carya cordiformis (Wangenh.) K. Koch—*1073*; MF, FF, SB; occasional.
Carya glabra (P. Mill.) Sweet—*1009*; MF, FF, UF; common.
Carya illinoinensis (Wangenh.) K. Koch—*1052*; OH, SB (flowing from urban areas); occasional.
Carya ovata (P. Mill.) K. Koch—*M.H. Massey* [MISSA?]; FF, MF; occasional.
Carya pallida (W.W. Ashe) Engler & Graebner—*661*; *998*; UF (xeric); common.
Carya tomentosa (Lam.) Nutt.—*1123*; UF, MF; common.
Juglans nigra L.—*976*; MF(rare), OH; uncommon.

Juncaceae
Juncus biflorus Elliott—*956*; F (low), MM, DD; frequent.
**Juncus diffusissimus* Buckley—*957*; SS, DD, IMP (margins); occasional.
Juncus effusus L. ssp. *solutus* (Fernald & Wiegand) Hämet-Ahti—*1125*; IMP (margins), F (low) MM, DD; common.
Juncus elliottii Chapm.—*R.G. Wieland 8948* [MMNS]; IMP, DD; infrequent.
**Juncus marginatus* Rostk.—*1016*; SS, MM, F (low), DD; frequent.
**Juncus polycephalos* Michx.—*360; 1002*; F (low), MM, DD, SS; frequent.
Juncus tenuis Willd.—*958*; TU, F, DA; common.
Juncus validus Coville—*184*; F (low), MM, DD; frequent.
Luzula acuminata* Raf. var. *carolinae* (S. Watson) Fernald—*268*; MF; rare. **S3
**Luzula bulbosa* (Wood) Smyth & Smyth—*223*; MF; infrequent.
Luzula echinata (Small) F.J. Hermann—*212*; MF, UF, TU, F; frequent.

Lamiaceae
*●*Ajuga reptans* L.—*837*; TU; infrequent.
Blephilia ciliata (L.) Benth.—*M.H. Massey* [MISSA?]; F, UF; rare.
Callicarpa americana L.—*L.C. Temple 11565* [MISS]; UF, DA; common.
**Collinsonia canadensis* L.—*775*; MF (rich); uncommon.
Collinsonia tuberosa Michx.—*796*; MF; uncommon.
*●*Glechoma hederacea* L.—*823*; F, TU, DA; occasional.
Hedeoma hispida Pursh—*427*; F; occasional.
●*Lamium amplexicaule* L.—*213*; TU, DA, F; common.
*●*Lamium purpureum* L.—*235*; TU, DA; occasional.
**Lycopus americanus* Muhl. ex W.P.C. Barton—*1060*; DD, MM, FF; frequent.
Lycopus rubellus Moench—*M.H. Massey* [MISSA?]; IMP; infrequent.
Lycopus virginicus L.—*697*; FF, MM, DD; common.
*●*Melissa officinalis* L.—*1054*; TU; rare.
Monarda fistulosa L.—*533*; UF (open), TU; common.
●*Perilla frutescens* (L.) Britton—*763*; TU, OH; occasional.
Physostegia angustifolia Fernald—*481*; TU, F (low); frequent.
Prunella vulgaris L. var. *lanceolata* (W. Barton) Fernald—*332*; F, TU; common.
Pycnanthemum albescens Torr. & A. Gray—*658*; UF, TU; occasional.
Pycnanthemum tenuifolium Schrad.—*527*; F (low); frequent.
Salvia lyrata L.—*263*; UF, F, TU; common.
Scutellaria elliptica Muhl. ex Spreng. var. *elliptica*—*581*; UF; uncommon.
Scutellaria incana Biehler—*B. Robertson s.n.* [MISSA]; UF; rare.
Scutellaria integrifolia L.—*353*; MF, UF, F, TU; common.
Scutellaria ovata Hill.—*M.H. Massey* [MISSA?] MF, UF; uncommon.
Scutellaria parvula Michx.—*M.H. Massey* [MISSA?]; habitat unknown; rare.
**Teucrium canadense* L. var. *canadense*—*732*; FF, SB, F (low); occasional.
**Trichostema dichotomum* L.—*1113*; UF (open); infrequent.

Lauraceae
Lindera benzoin (L.) Blume—*217*; SS, FF; frequent.
Sassafras albidum (Nutt.) Nees—*571*; FF, MF, UF; common.

Lentibulariaceae
**Utricularia gibba* L.—*585*; IMP; common.

Liliaceae
Lilium superbum L.—*610*; MF, SB, F (low); occasional. **S3S4**
Medeola virginiana L.—*287*; MF, SS; uncommon. **S3**

Linaceae
Linum medium (Planch.) Britton var. *texanum* (Planch.) Fernald—*473*; *938*; *971*; TU, F; frequent.
Linum striatum Walter—*1040*; SS; occasional.

Linderniaceae
Lindernia dubia (L.) Pennell—*580*; FF, MM, DD; occasional.
Micranthemum umbrosum (J.F. Gmel.) Blake—*961*; MM, DD, IMP (margins); occasional.

Loganiaceae
Spigelia marilandica (L.) L.—*365*; FF, MF, UF; frequent.

Lythraceae
*●*Cuphea carthagenensis* (Jacq.) J.F. MacBride—*857*; DD, F (low); infrequent.
*●*Lagerstroemia indica* L.—*885*; OH; infrequent.
**Lythrum lanceolatum* Elliott—*625*; DD, MM; frequent.
**Rotala ramosior* (L.) Koehne—*734*; MM, F (low), SC, DD; common.

Magnoliaceae
Liriodendron tulipifera L.—*313*; MF, UF; common.
Magnolia acuminata L.—*862*; MF, UF; occasional.
‡*Magnolia grandiflora* L.—observed; OH; infrequent.
Magnolia virginiana L. var. *australis* Sarg.—*472*; FF, SS; common.

Malvaceae
**Hibiscus laevis* All.—*738*; FF, DD; infrequent.
**Hibiscus lasiocarpos* Cav.—*714*; MM, FF, DD; occasional.
**Modiola caroliniana* (L.) G. Don—*514*; DA, MM, F (low); occasional.

**Sida rhombifolia* L.—*1114*; TU, F, DA; occasional.
**●Sida spinosa* L.—*1463*; DA, TU; infrequent.
**Tilia americana* L. var. *caroliniana* (Mill.) Castiglioni—*1127*; MF; infrequent.

Melanthiaceae
Veratrum virginicum (L.) Aiton—*K.L. Gordon 2004* [MMNS]; SS; rare. **S2S3**

Melastomataceae
Rhexia mariana L. var. *mariana*—*1029*; SS, DD, F (low); common
**Rhexia virginica* L.—*691*; SS, DD, F (low); common.

Meliaceae
**●Melia azedarach* L.—*523*; UF, TU, OH; uncommon.

Menispermaceae
Calycocarpum lyonii (Pursh) A. Gray—*894*; FF, SB; uncommon.
Cocculus carolinus (L.) DC.—*773*; FF, MF, UF; occasional.

Molluginaceae
**●Mollugo verticillata* L.—*608*; TU, DD; frequent.

Montiaceae
**Claytonia virginica* L.—*216*; FF, F, TU, DA; common.

Moraceae
●Broussonetia papyrifera (L.) Vent.—*940*; OH, TU; infrequent.
**†Maclura pomifera* (Raf.) C.K. Schneid.—*952*; OH; occasional.
Morus rubra L.—*445*; FF, MF, UF; common.

Myricaceae
Morella caroliniensis (Mill.) Small—*T.E. Smith 518* [MMNS]; UF, TU; uncommon.
**Morella cerifera* (L.) Small—*196*; UF, TU; infrequent.

Nymphaeaceae
**Nuphar advena* (Aiton) R. Br. ex Aiton f—*1008*; IMP, SC; occasional.
**Nymphaea odorata* Aiton ssp. *odorata*—*476*; IMP; uncommon.

Nyssaceae
**Nyssa aquatica* L.—*1007*; FF (swamps); frequent.
Nyssa biflora Walter—*415*; FF, SS; frequent.
Nyssa sylvatica Marshall—*446*; FF, MF, UF; common.

Oleaceae
**Forestiera acuminata* (Michx.) Poir.—*931*; FF (swamps), SC; frequent.
Fraxinus americana L.—*378*; MF, UF; frequent.
Fraxinus pennsylvanica Marshall—*1051*; FF; common.
●Ligustrum sinense Lour.—*193*; FF, OH, DA; frequent.
●Ligustrum vulgare L.—*M.H. Massey* [MISSA?]; OH; rare.

Onagraceae
Ludwigia alternifolia L.—*743*; *1065*; MM, DD, SC; common.
Ludwigia decurrens Walter—*1075*; MM, DD, SC; common.
**Ludwigia glandulosa* Walter—*1455*; FF, SC, DD; common.
**Ludwigia leptocarpa* (Nutt.) Hara—*1540*; IMP (margins); uncommon.
**Ludwigia palustris* (L.) Elliott—*620*; DD, MM; common.
**●Ludwigia peploides* (Kunth) Raven var. *glabrescens* (Kuntze) Shinners—*905*; SC, DD, IMP; occasional.
**Oenothera biennis* L.—*676*; DA, TU, F; frequent.
Oenothera filipes (Spach) W.L. Wagner & Hoch—M.H. Massey [MISSA?]; TU, F, DA; infrequent.
**Oenothera fruticosa* L. var. *fruticosa*—*477*; F; occasional.
**Oenothera gaura* W.L. Wagner & Hoch—*699*; *1061*; TU, F; frequent.
Oenothera laciniata Hill—*312*; F, TU, DA; frequent.
Oenothera simulans (Small) W.L. Wagner & Hoch—M.H. Massey [MISSA?]; F, TU; occasional.
†Oenothera speciosa Nutt.—*352*; TU; occasional.

Orchidaceae
Corallorhiza odontorhiza (Willd.) Poir.—*M.H. Massey* [MISSA?]; UF; rare.
Cypripedium parviflorum Salisb. var. *pubescens* (Willd.) Knight—*830*; MF, FF; uncommon. **S2S3**
Hexalectris spicata (Walter) Barnhart—*646*; UF (oak-hickory); rare. **S2**
Isotria verticillata (Muhl. ex Willd.) Raf.—*K.L. Gordon 2009* [MMNS]; MF; rare. **S3**
Listera australis Lindl.—*225*; MF, FF; occasional.
Malaxis unifolia Michx.—*K.L. Gordon 2003* [MMNS]; UF; rare.
Platanthera ciliaris (L.) Lindl.—*J.D. Ray, Jr. 8646* [MISSA]; FF, SB; rare.
Platanthera clavellata (Michx.) Luer—*614*; SS; frequent.
Platanthera lacera* (Michx.) G. Don—*430*; FF, F (low); rare. **S1S2
Platanthera peramoena (A. Gray) A. Gray—*L.C. Temple 11572* [MISS]; MM, F (low); rare. **S2S3**
**Spiranthes cernua* (L.) Rich.—*791*; SS, MM; occasional.
Spiranthes lacera* (Raf.) Raf. var. *gracilis* (Bigelow) Luer—*1105*; UF (fire-maintained); rare. **S2
**Spiranthes praecox* (Walter) S. Watson—*367*; MF, UF; infrequent.
Spiranthes tuberosa Raf.—*597*; UF; occasional.
Spiranthes vernalis Engelm. & A. Gray—*502*; F, TU; frequent.
Tipularia discolor (Pursh) Nutt.—*635*; UF, MF; frequent.
Triphora trianthophoros (Sw.) Rydb. var. *trianthophoros*—*895*; FF; rare. **S2**

Orobanchaceae
Agalinis fasciculata (Elliott) Raf.—*1102*; F, UF (open), TU; frequent.
Agalinis tenuifolia (Vahl) Raf.—*M.H. Massey* [MISSA?]; UF; rare.
Aureolaria flava (L.) Farw.—*908*; UF, MF; frequent.
**Buchnera floridana* Gand.—*528*; F; occasional.
**Epifagus virginiana* (L.) W. Barton—*794*; MF (under *Fagus*); frequent.
Pedicularis canadensis L.—*292*; MF, F, margins; occasional.

Oxalidaceae
Oxalis dillenii Jacq.—*M.H. Massey* [MISSA?]; DA, F; frequent.
Oxalis macrantha* (Trel.) Small—*1030*; UF, MF; rare. Tracked as *Oxalis priceae* Small **S1?
Oxalis stricta L.—*317*; TU, DA; frequent.
Oxalis violacea L.—*280*; MF, UF; frequent.

Papaveraceae
**Sanguinaria canadensis* L.—*822*; MF; rare (locally common).

Passifloraceae
Passiflora incarnata L.—*541*; UF (open), F, TU; common.
Passiflora lutea L.—*602*; FF, MF, UF; frequent.

Paulowniaceae
●Paulownia tomentosa (Thunb.) Steud.—*1142*; TU, DA; uncommon.

Penthoraceae
**Penthorum sedoides* L.—*886*; FF, SB, MM; occasional.

Phrymaceae
**●Mazus pumilus* (Burm. f.) Steenis—*1256*; DA, TU; occasional.
Mimulus alatus Aiton—*694*; MM, IMP (margins), FF, DD; frequent.
Mimulus ringens L. var. *ringens*—*M.H. Massey* [MISSA?]; IMP (margins); rare. **S1**
Phryma leptostachya L.—*562*; MF; infrequent.

Phyllanthaceae
**Phyllanthus caroliniensis* Walter ssp. *caroliniensis*—*901*; FF, F (low); infrequent.
**●Phyllanthus urinaria* L. ssp. *urinaria*—*1464*; DA, TU; infrequent.

Phytolaccaceae
Phytolacca americana L.—*690*; FF, SB, TU, DA; common.

Plantaginaceae

**Callitriche heterophylla* Pursh var. *heterophylla—833*; FF, DD; occasional.

Callitriche peploides Nutt.—*S.T. McDaniel 23997* [MMNS]; DD; uncommon.

Chelone glabra L.—*1104*; SS; uncommon. **S3**

Gratiola neglecta Torr.—*513*; FF, MM; occasional.

Gratiola virginiana L.—*284*; FF, SS, DD; frequent.

**Mecardonia acuminata* (Walter) Small var. *acuminata—684*; MM, DD; occasional.

**Nuttallanthus canadensis* (L.) D.A. Sutton—*251*; *544*; F, TU; common.

**Penstemon digitalis* Nutt. ex Sims—*372*; TU, F (low); occasional.

**Penstemon laxiflorus* Pennell—*555*; *947*; UF (open); occasional.

Plantago aristata Michx.—*504*; F, TU, DA; common.

●*Plantago lanceolata* L.—*900*; F, TU, DA; common.

Plantago rugelii Decne.—*565*; F, TU, DA; common.

Plantago virginica L.—*229*; F, TU, DA; common.

**Sophronanthe pilosa* (Michx.) Small—*652*; SS (open); rare.

●*Veronica arvensis* L.—*206*; F, TU, DA; common.

**Veronica peregrina* L. var. *peregrina—214*; F, TU, DA; common.

Poaceae

Agrostis hyemalis (Walter) Britton, Sterns, & Poggenb.—*346*; F, TU; common.

Agrostis perennans (Walter) Tuck.—*730*; FF, DD; common.

●*Aira elegans* Willd. ex Roem. & Schult.—*297*; F, TU; frequent.

**Andropogon gerardii* Vitman—*1087*; TU, F; infrequent.

**Andropogon glomeratus* (Walter) Britton, Sterns, & Poggenb.—*808*; F, TU; common.

**Andropogon ternarius* Michx.—*785*; TU, F, UF (open); occasional.

Andropogon virginicus L. var. *virginicus—1108*; TU, F, UF (open); common.

*●*Anthoxanthum aristatum* Boiss.—*310*; TU, F; uncommon.

Aristida dichotoma Michx.—*S.T. McDaniel 12376* [MO]; UF (open), TU; infrequent.

Aristida longespica Poir.—*A.B. Seymour s.n.* [DUKE]; TU; infrequent.

Aristida oligantha Michx.—*789*; UF, F, TU; frequent.

**Aristida purpurascens* Poir.—*814*; UF, TU; occasional.

*●*Arthraxon hispidus* (Thunb.) Makino var. *hispidus—792*; FF, SB, DD; occasional.

Arundinaria gigantea (Walter) Muhl.—*1058*; FF, MF, SB; common.

●*Arundo donax* L.—*observation*; TU; rare.

Axonopus compressus (Sw.) P. Beauv.—*A.B. Seymour s.n.* [DUKE]; F, DA; rare.

Axonopus fissifolius (Raddi) Kuhlm.—*M.H. Massey* [MISSA?]; TU, DA; infrequent.

●*Bothriochloa ischaemum* (L.) Keng var. *songarica* (Rupr. ex Fisch. & C.A. Mey.) Celarier & Harlan—*observation*; TU; rare.

●*Bothriochloa laguroides* (DC.) Herter ssp. *torreyana* (Steud.) Allred & Gould—*720*; TU, DA; occasional.

Brachyelytrum erectum (Schreb. ex Spreng.) P. Beauv.—*1199*; MF; infrequent.

●*Briza minor* L.—*270*; F, TU; occasional.

●*Bromus catharticus* Vahl var. *catharticus—M.H. Massey* [MISSA?]; TU, F, DA; frequent.

Bromus pubescens Muhl. ex Willd.—*R.G. Wieland 9102*; [MISS]; UF; uncommon.

●*Bromus japonicus* Thunb.—*265*; TU, DA; common.

Chasmanthium latifolium (Michx.) Yates—*577*; FF, SB; common.

**Chasmanthium laxum* (L.) Yates—*578*; FF; common.

Chasmanthium sessiliflorum (Poir.) Yates var. *sessiliflorum—L.C. Temple 6004* [MISS]; MF, FF; common.

*●*Chloris virgata* Sw.—*1205*; TU, DA; occasional.

**Cinna arundinacea—217*; FF; rare.

Coleataenia anceps (Michx.) Soreng ssp. *anceps—586*; TU, F; frequent.

**Coleataenia rigidula* (Bosc ex Nees) LeBlond ssp. *rigidula—731*; F (low), MM, DD; frequent.

●*Cynodon dactylon* (L.) Pers.—*1124*; TU, DA; infrequent.

●*Dactylis glomerata* L.—*348*; F, TU; infrequent.

Danthonia sericea Nutt.—*337*; TU, UF; frequent.

Dichanthelium acuminatum (Sw.) Gould & Clark.—*M.H. Massey* [MISSA?]; UF, TU; common.

Dichanthelium boscii (Poir.) Gould & C.A. Clark—*389*; MF, UF; frequent.

Dichanthelium commutatum (Schult.) Gould var. *commutatum —296*; MF, UF; frequent.

Dichanthelium depauperatum (Muhl.) Gould—*315*; UF; occasional.

Dichanthelium dichotomum (L.) Gould var. *dichotomum—583*; UF, MF, F, TU; common.

Dichanthelium laxiflorum (Lam.) Gould—*377*; MF, UF, TU; common.

Dichanthelium polyanthes (Schult.) Mohlenbrock—*S.T. McDaniel 23937* [MMNS]; TU; occasional.

**Dichanthelium ravenelii* (Scribn. & Merr.) Gould—*567*; UF (xeric); infrequent.

**Dichanthelium scabriusculum* (Elliott) Gould & Clark—*412*; *418*; FF, SB; infrequent.

Dichanthelium scoparium (Lam.) Gould—*530*; F (low), DD, TU; common.

Dichanthelium sphaerocarpon (Elliott) Gould—*M.H. Massey* [MISSA?]; UF, F; common.

Digitaria ciliaris (Retzius) Köler—*A.B. Seymour s.n.* [DUKE]; habtitat; frequent.

●*Digitaria sanguinalis* (L.) Scop.—*M.H. Massey* [MISSA?]; DA, TU; frequent.

●*Digitaria violascens* Link—*M.H. Massey* [MISSA?]; DA, TU; frequent.

● *Echinochloa crusgalli* (L.) P. Beauv. var. *crusgalli—865*; DA, DD, F, TU; common.

**Echinochloa muricata* (P. Beauv.) Fernald var. *muricata—737*; F (low), MM, DD, IMP (margins); frequent.

●*Eleusine indica* (L.) Gaertn.—*657*; F, TU, DA; frequent.

Elymus virginicus L. var. *virginicus—526*; FF, UF, F, TU; common.

**Eragrostis capillaris* (L.) Nees—*896*; TU, F; frequent.

*●*Eragrostis cilianensis* (All.) Vignolo ex Janch.—*1204*; TU, DA; occasional.

Eragrostis pectinacea (Michx.) Nees ex Steud. var. *pectinacea—A.B. Seymour s.n.* [DUKE]; DA; rare.

●*Eragrostis curvula* (Schrad.) Nees—*observation*; TU; infrequent.

*●*Eragrostis pilosa* (L.) P. Beauv. var. *pilosa—948*; TU, DA; frequent.

Eragrostis spectabilis (Pursh) Steud.—*897*; F, UF(open), TU; frequent.

*●*Eremochloa ophiuroides* (Munro) Hackel—*815*; TU, F; occasional.

**Glyceria striata* (Lam.) Hitchc. var. *striata—409*; FF, SS, DD; frequent.

**Gymnopogon ambiguus* (Michx.) Britton, Sterns, & Poggenb.—*899*; UF (xeric); infrequent.

*●*Holcus lanatus* L.—*539*; F, TU; uncommon.

Hordeum pusillum Nutt.—*273*; TU, F, DA; common.

*●*Imperata cylindrica* (L.) P. Beauv.—*487*; TU; uncommon.

Leersia oryzoides (L.) Sw.—*1111*; FF, SS, DD; frequent.

Leersia virginica Willd.—*704* [MMNS]; FF, SB; occasional.

●*Lolium perenne* L. var. *aristatum* Willd.—*338*; F, TU; common.

●*Lolium perenne* L. var. *perenne—M.H. Massey* [MISSA?]; F, TU; common.

●*Lolium temulentum* L. ssp. *temulentum—M.H. Massey* [MISSA?]; DA, F; rare.

Melica mutica Walter—*258*; UF, MF, FF; frequent.

*●*Microstegium vimineum* (Trin.) A. Camus—*1112*; FF, MF; occasional.

Panicum dichotomiflorum Michx. var. *dichotomiflorum—786*; FF, MM, DD, IMP (margins); common.
Panicum verrucosum Muhl.—*C.T. Bryson 10364* [USMS]; SC; infrequent.
●*Paspalum dilatatum* Poir. ssp. *dilatatum—460*; TU, F, DA; common.
Paspalum floridanum Michx.—*M.H. Massey* [MISSA?]; FF; uncommon.
**Paspalum laeve* Michx. var. *leave—569*; TU, F; common.
●*Paspalum notatum* Flügge—*536*; TU, F, DA; common.
Paspalum setaceum Michx.—*M.H. Massey* [MISSA?]; UF; occasional.
●*Paspalum urvillei* Steud.—*542*; TU, F, DA; common.
**Phalaris caroliniana* Walter—*883*; F (low), TU; common.
**Phanopyrum gymnocarpon* (Elliott) Nash—*1079*; DD, FF; occasional.
*●*Phleum pratense* L. ssp. *pratense—1458*; TU; uuncommon.
*●*Phyllostachys aurea* Carrière ex A. & C. Rivière—*1086*; OH; infrequent.
Piptochaetium avenaceum (L.) Parodi—*309*; UF; uncommon.
*●*Poa annua* L.—*215*; F, TU; common.
Poa autumnalis Muhl. ex Elliott—*1150*; UF, F; occasional.
Poa chapmaniana Scribn.—*259*; *267*; F, TU, DA; common.
●*Poa pratensis* L. ssp. *pratensis—M.H. Massey* [MISSA?]; TU, DA; frequent.
Saccharum alopecuroides (L.) Nutt.—*746*; *1109*; F, TU; frequent.
Saccharum brevibarbe (Michx.) Pers. var. *contortum* (Elliott) R. Webster.—*M.H. Massey* [MISSA?]; MM, DD; infrequent.
Saccharum giganteum (Walter) Pers.—*M.H. Massey* [MISSA?]; MM, DD; occasional.
●*Schedonorus arundinaceus* (Schreb.) Dumortier—*M.H. Massey* [MISSA?]; TU; common.
Schizachyrium scoparium (Michx.) Nash var. *scoparium—798*; F, TU, UF (open); common.
Setaria parviflora (Poir.) Kerguélen—*609*; TU, F; frequent.
●*Setaria pumila* (Poir.) Roem. & Schult. ssp. *pumila—623*; TU, F; frequent.
**Sorghastrum elliottii* (C. Mohr) Nash—*774*; UF (open, xeric), TU; rare.
Sorghastrum nutans (L.) Nash—*M.H. Massey* [MISSA?]; TU, UF, F; uncommon.
●*Sorghum halepense* (L.) Pers.—*570*; TU, F, DA; common.
Sphenopholis intermedia (Rydb.) Rydb.—*S.T. McDaniel 23580* [MMNS]; MF; uncommon.
Sphenopholis nitida (Biehler) Scribn.—*393*; *559*; FF, F (low); infrequent.
Sphenopholis obtusata (Michx.) Scribn.—*M.H. Massey* [MISSA?]; TU, F; uncommon.
Sporobolus indicus (L.) R. Br.—*A.B. Seymour s.n.* [DUKE]; TU; infrequent.
**Steinchisma hians* (Elliott) Nash—*1466*; FF, M, F (low); occasional.
Stenotaphrum secundatum (Walter) Kuntze—*M.H. Massey* [MISSA?]; TU; frequent.
Tridens flavus (L.) Hitchc.—*712*; F, TU; common.
**Tridens strictus* (Nutt.) Nash—*735*; TU, F (low); occasional.
Tripsacum dactyloides L.—*572*; TU, F, UF (open); frequent.
*●*Triticum aestivum* L.—*914*; TU; infrequent.
*●*Urochloa platyphylla* (Munro ex C. Wright) R.D. Webster—*892*; TU, F; infrequent.
*●*Urochloa ramosa* (L.) Nguyen—*1093*; TU, DA; infrequent.
**Vulpia elliotea* (Raf.) Fernald—*347*; F, TU, DA; frequent.
●*Vulpia myuros* (L.) K.C. Gmel.—*852*; TU, DA; frequent.
Vulpia octoflora Rydb.—*R.G. Wieland 8993* [MMNS]; TU, DA, F; common.

Polemoniaceae

Phlox carolina L.—*439*; FF, F (low); infrequent.
Phlox divaricata L.—*827*; MF; occasional.
Phlox paniculata L.—*H.M. Sullivan 12.4316* [MMNS]; TU, F (low); rare.
**Phlox pilosa* L. ssp. *pilosa* L.—*308*; UF, F, TU; common.

Polygalaceae

**Polygala incarnata* L.—*543*; UF (open), TU; occasional.
Polygala mariana P. Mill.—*425*; UF (open), TU, F; frequent.
**Polygala nana* (Michx.) DC.—*185*; UF (sandy), TU; occasional.
Polygala sanguinea L.—*L.C. Temple 5343* [MISS]; TU; uncommon.
**Polygala verticillata* L.—*1027*; UF (fire-maintained); rare.

Polygonaceae

**Brunnichia ovata* (Walter) Shinners—*622*; FF, F (low), DD; common.
**Fallopia cristata* (Engelm. & A. Gray) Holub—*1539*; DA; uncommon.
Persicaria hydropiperoides (Michx.) Small—*631*; *692*; DD, FF, IMP; common.
Persicaria glabra (Willd.) M. Gómez.—*M.H. Massey [MISSA?]; FF; rare.*
Persicaria punctata (Elliott) Small—*S.T. McDaniel 24641* [MMNS]; FF; frequent.
**Persicaria sagittata* (L.) Gross ex Nakai—*744*; SB, MM; occasional.
Persicaria setacea (Baldwin) Small—*M.H. Massey* [MISSA?]; FF; occasional.
Persicaria virginiana (L.) Gaertn.—*642*; FF, MF; frequent.
*●*Polygonum aviculare* L.—*981*; F, TU, DA; common.
Rumex altissimus Alph. Wood—*M.H. Massey* [MISSA?]; FF; infrequent.
●*Rumex crispus* L. ssp. *crispus—257*; *1003*; F, TU, DA; common.
Rumex hastatulus Baldwin—*943*; F, TU; occasional.
*●*Rumex pulcher* L.—*991*; F, TU, DA; common.

Portulacaceae

**♦Portulaca oleracea* L.—*1203*; F, TU, DA; occasional.

Potamogetonaceae

Potamogeton diversifolius Raf.—*686*; IMP, SC; common.

Primulaceae

Lysimachia ciliata L.—*959*; FF, F (low); uncommon.
Lysimachia lanceolata Walter—*1188*; MF; infrequent.
**Samolus parviflorus* Raf.—*881*; FF, F (low); occasional.

Ranunculaceae

Actaea pachypoda Elliott—*829*; MF; uncommon.
**Clematis crispa* L.—*922*; FF, DD; occasional.
*●*Clematis terniflora* DC.—*675*; TU, DA; uncommon.
**Clematis virginiana* L.—*687*; FF, SB, DD; frequent.
●*Consolida ajacis* (L.) Schur.—*Anne Gunn s.n.* [MISS]; TU; rare.
Ranunculus abortivus L.—*230*; FF, F; common.
●*Ranunculus parviflorus* L.—*192*; F, TU, DA; occasional.
**Ranunculus pusillus* Poir.—*283*; MM, DD, FF, SS; common.
Ranunculus recurvatus Poir. var. *recurvatus—307*; FF, F (low); frequent.
*●*Ranunculus sardous* Crantz—*254*; F, DA, TU; common.
Thalictrum dioicum L.—*357*; FF, UF, F; frequent.
Thalictrum revolutum DC.—*C.T. Bryson 8963* [GA]; TU, DD; uncommon.
**Thalictrum thalictroides* (L.) Eames & B. Boivin—*491*; MF; occasional.

Rhamnaceae

Berchemia scandens (Hill) K. Koch—*519*; FF, MF, UF; common.
Ceanothus americanus L.—*435*; UF; occasional.
Frangula caroliniana (Walter) A. Gray—*795*; MF; occasional.

Rosaceae

**Agrimonia microcarpa* Wallr.—*1100*; MF; frequent.
**Agrimonia parviflora* Aiton—*650*; F (low), SB; infrequent.
**Agrimonia pubescens* Wallr.—*806*; MF, UF; infrequent.
Amelanchier arborea (Michx. f.) Fernald—*821*; UF; frequent.
Aronia arbutifolia (L.) Pers.—*988*; SS; occasional.
Aruncus dioicus (Walter) Fernald—*S.T. McDaniel 24646* [MMNS]; MF; rare. **S3S4**
●*Chaenomeles speciosa* (Sweet) Nakai—*M.H. Massey* [MISSA?]; OH; infrequent.

**Crataegus crus-galli* L. var. *crus-galli.—973*; FF, MF, UF; occasional.
Crataegus marshallii Eggl.—*447*; FF, MF, UF; frequent.
**Crataegus pruinosa* (H.L. Wendl.) K. Koch—*992*; MF, UF; uncommon.
Crataegus spathulata Michx.—*M.H. Massey* [MISSA?] FF, UF; infrequent.
Crataegus viridis L.—*930*; FF; occasional.
●*Elaeagnus umbellata* Thunb.—*observation*; DA; infrequent.
Fragaria virginiana Mill.—*M.H. Massey* [MISSA?]; F, TU; rare.
Geum canadense Jacq.—*854*; FF, SB; frequent.
●*Potentilla indica* (Andrews) T. Wolf—*836*; DA, F, TU; common.
Potentilla simplex Michx.—*304*; FF, UF; frequent.
**Prunus angustifolia* Marshall—*551*; UF (open), TU; infrequent.
*‡*Prunus caroliniana* (Mill.) Aiton—*819*; UF, OH; uncommon.
Prunus mexicana S. Watson—*1021*; UF; frequent.
Prunus serotina Ehrh. var. *serotina—835*; FF, MF, UF, F; common.
*●*Pyrus calleryana* Decne.—*1017*; UF, FF; uncommon.
Rosa carolina L. ssp. *carolina—462*; *1039*; UF; common.
●*Rosa multiflora* Thunb. ex Murray—*484*; TU; occasional.
**Rosa palustris* Marshall—*884*; FF (open); uncommon.
Rubus pensilvanicus Poir.—*916*; FF, UF, F, TU; common.
Rubus trivialis Michx.—*915*; FF, SB, TU, F; common.
*●*Spiraea thunbergii* Siebold ex Blume—*244*; OH; uncommon.

Rubiaceae

Cephalanthus occidentalis L.—*598*; IMP, FF, SC, MM, F (low); common.
Diodella teres (Walter) Small—*535*; UF, TU, F, DA; common.
Diodia virginiana L.—*630*; FF, DD, F; common.
**Galium aparine* L.—*242*; FF, TU, F, DA; common.
Galium circaezans Michx.—*343*; UF; common.
**Galium obtusum* Bigelow var. *obtusum—919*; FF, F (low), MM; occasional.
**Galium orizabense* Hemsl. ssp. *laevicaule* (Weath. & Blake) Dempster —*506*; UF; occasional.
●*Galium parisiense* L.—*926*; TU; occasional.
Galium pilosum Aiton—*1433*; TU, UF; occasional.
**Galium tinctorium* (L.) Scop.—*928*; MM, DD, FF; frequent.
Galium triflorum Michx.—*S.T. McDaniel 24156; 23975* [MMNS]; SS, FF; occasional.
Galium uniflorum Michx.—*403*; MF, UF; frequent.
Houstonia caerulea L.—*M.H. Massey* [MISSA?]; UF; rare.
**Houstonia lanceolata* (Poir.) Britton—*416*; MF, UF, TU; infrequent.
**Houstonia micrantha* (Shinners) Terrell—*221*; DA, F, TU; infrequent.
**Houstonia purpurea* L.—*500*; FF, F; occasional.
**Houstonia pusilla* Schopf.—*222*; UF (open), F, TU; common.
Mitchella repens L.—*344*; UF, MF; common.
**Oldenlandia boscii* (DC.) Chapm.—*634*; MM, F (low), DD; occasional.
**Oldenlandia uniflora* L.—*1076*; SC; infrequent.
*●*Galium sherardia* E.H.L. Krause—*189*; F, TU; common.

Ruscaceae

Maianthemum racemosum (L.) Link ssp. *racemosum—329*; MF, UF; occasional.
**Polygonatum biflorum* (Walter) Elliott—*841*; MF; uncommon.

Rutaceae

●*Citrus trifoliata* L.—*745*; FF, OH; infrequent.
Zanthoxylum clava-herculis L.—*M.H. Massey* [MISSA?]; UF, SB; rare.

Salicaceae

●*Populus alba* L.—*M.H. Massey* [MISSA?]; OH, DA; rare.
**Populus deltoides* W. Bartram ex Marshall ssp. *deltoides—1095*; FF, SB; uncommon.
Salix nigra Marshall—*440*; FF, SB, DD; common.

Santalaceae

Phoradendron leucarpum (Raf.) Reveal & M.C. Johnst.—*204*; FF, UF, MF; common.

Sapindaceae

**Acer drummondii* Hook. & Arn. ex Nutt.—*834*; FF; infrequent.
Acer floridanum (Chapm.) Pax—*843*; MF; occasional.
**Acer negundo* L. var. *negundo—842*; FF, F, SB; common.
Acer rubrum L. var. *rubrum—832*; FF, MF, UF; common.
Aesculus pavia L.—*910*; MF, FF; frequent.
*●*Cardiospermum halicacabum* L.—*1462*; DD, DA; uncommon.

Saururaceae

Saururus cernuus L.—*468*; MM, FF, DD; common.

Saxifragaceae

**Heuchera americana* L.—*306*; MF; rare.
Tiarella cordifolia L.—*G.W. Johnston s.n.* [MISSA]; MF; rare. **S2**

Scrophulariaceae

*●*Verbascum thapsus* L. ssp. *thapsus—560*; TU; occasional.

Smilacaceae

Smilax bona-nox L.—*809*; FF, UF, TU; common.
Smilax glauca Walter—*607*; FF, UF; common.
**Smilax herbacea* L.—*979*; MF; infrequent.
Smilax hispida Raf.—*T.E. Smith 334* [IBE]; UF, FF; occasional.
Smilax laurifolia L.—*488*; SS; occasional.
Smilax rotundifolia L.—*1026*; FF, UF; common.
Smilax smallii Morong—*198*; FF, UF; occasional.
**Smilax walteri* Pursh—*525*; FF, MF; infrequent.

Solanaceae

**Physalis angulata* L. var. *angulata—648*; F, TU; frequent.
**Physalis heterophylla* Nees—*877*; UF; infrequent.
**Physalis virginiana* Mill.var. *virginiana—974; 975; 999*; FF, MF, UF; occasional.
Solanum carolinense L. var. *carolinense—1126*; TU, F, DA; common.

Staphyleaceae

Staphylea trifolia L.—*811*; FF, SB; rare. **S3**

Styracaceae

Styrax americanus Lam. var. *americanus—1440*; FF; uncommon.
Styrax grandifolius Aiton—*334*; MF, UF; occasional.

Symplocaceae

**Symplocos tinctoria* (L.) L'Hér.—*839*; MF, FF, SB; frequent.

Tetrachondraceae

Polypremum procumbens L.—*741*; F, TU; common.

Trilliaceae

Trillium cuneatum Raf.—*228*; MF, FF; uncommon.
**Trillium recurvatum* Beck—*224*; *1253*; MF, FF; uncommon.

Typhaceae

**Sparganium americanum* Nutt.—*590*; FF, IMP; common.
Typha latifolia L.—*596*; MM, IMP, DD; frequent.

Ulmaceae

Planera aquatica (Walter) J.F. Gmel.—*932*; FF; occasional.
Ulmus alata Michx.—*911*; FF, MF, UF; common.
Ulmus americana L.—*912*; MF, FF; common.
Ulmus rubra Muhl.—*1031*; MF; frequent.

Urticaceae

Boehmeria cylindrica (L.) Sw.—*681*; FF, MM; common.
**Laportea canadensis* (L.) Wedd.—*1145*; MF, FF; uncommon.
Pilea pumila (L.) A. Gray—*812*; FF, SC; infrequent.

Valerianaceae

Valerianella radiata (L.) Dufr.—*238*; FF, TU, F; common.

Verbenaceae

**Glandularia canadensis* (L.) Nutt.—*s.n.;* OH; rare.
●*Verbena bonariensis* L.—*1081*; F, TU, DA; occasional.

●*Verbena brasiliensis* Vell.—*458; 1036*; F, TU, DA; common.
**Verbena halei* Small—*939*; F, TU; infrequent.
Verbena urticifolia L.—*1019*; FF; infrequent.

Violaceae

Cubelium concolor* (T.F. Forster) Raf. ex Britton & A. Br.—*1128*; MF; rare (locally common). **S3
Viola bicolor Pursh—*218*; F, TU; common.
**Viola palmata* L.—*293*; MF, UF; infrequent.
**Viola pedata* L. var. *pedata—249*; UF, TU; occasional.
**Viola primulifolia* L.—*880*; *838*; SS; uncommon.
Viola sororia Willd.—*253*; MF, FF, UF; common.
●*Viola tricolor* L.—*M.H. Massey* [MISSA?]; TU, F; infrequent.
Viola walteri House—*828*; MF; occasional.

Vitaceae

Muscadinia rotundifolia (Michx.) Small var. *rotundifolia—442*; FF, MF, UF; common.
**Nekemias arborea* (L.) J. Wen & Boggan—*1063*; FF, SB; occasional.
Parthenocissus quinquefolia (L.) Planch.—*970*; FF, MF, UF; common.
Vitis aestivalis Michx. var. *aestivalis—768; 1020;* MF, UF, FF; common.
Vitis cinerea (Engelm. in A. Gray) Engelm. ex Millardet var. *baileyana* (Munson) Comeaux—*1053*; MF, FF; occasional.
**Vitis palmata* Vahl—*766; 980;* MF, FF, UF; frequent.
Vitis vulpina L.—*M.H. Massey* [MISSA?]; FF, SB; occasional.

Xyridaceae

**Xyris difformis* Chapm.—*1088*; open SS; rare.
**Xyris iridifolia* Chapm.—*1089*; open SS; rare.
**Xyris torta* Sm.—*653*; *665*; open SS; uncommon.

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