

THE VASCULAR FLORA OF MONTGOMERY COUNTY, ARKANSAS

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ABSTRACT

A floristic inventory in Montgomery County, Arkansas, documented 1,110 vascular plant taxa. Fifty-nine taxa (5% of county total) in Montgomery County are considered to be of conservation concern and are tracked by the Arkansas Natural Heritage Commission. One hundred and thirty-four taxa (12% of county total) were introduced, 21 (2% of county total) of which are considered invasive. The families with the most taxa represented in the flora are Asteraceae (144), Poaceae (120), Cyperaceae (82), Fabaceae (75), and Rosaceae (38). *Elatine triandra* Schkuhr represents a species never before collected in Arkansas. A single federally endangered species, *Ptilimnium nodosum* (Rose) Mathias, was noted. *Hydrilla verticillata* (L.f.) Royle, a federally listed noxious weed was collected. Montgomery County has one of the highest proportions of sensitive species in Arkansas, but has fewer than 20% of the State's known alien species, probably due to its high diversity of rare habitats and a relatively intact landscape. With 1,110 taxa, Montgomery County is the sixth best-collected county in Arkansas. However, since most Arkansas counties have fewer than 800 documented taxa, there is a clear need for increased floristic work if the species that grow in Arkansas are to be known.

RESUMEN

Se llevó a cabo un inventario florístico en el condado de Montgomery, Arkansas, que proporcionó una lista de 1.110 taxa de plantas vasculares. Cincuenta y nueve taxa (5% del total) del condado de Montgomery son considerados raros y están siendo monitoreados por la Comisión Herencia Natural de Arkansas (Arkansas Natural Heritage Commission). Ciento treinta y cuatro taxa (12% del total del condado) son introducidos y 21 (2% del total del condado) son considerados especies invasoras. Las familias con un mayor número de taxa representados en la flora son Asteraceae (144), Poaceae (120), Cyperaceae (82), Fabaceae (75), y Rosaceae (38). *Elatine triandra* Schkuhr es una especie que fue colectada por primera vez en Arkansas. Fue encontrada una sola especie federal en peligro, *Ptilimnium nodosum* (Rose) Mathias. Se colectó *Hydrilla verticillata* (L. f.) Royle, una especie nociva federal mencionada. El condado de Montgomery tiene una de las más elevadas proporciones de especies sensibles de Arkansas, pero tiene menos del 20% de las especies introducidas en el estado, probablemente debido al gran número de hábitats raros y un paisaje relativamente intacto. Con 1.110 taxa, el condado de Montgomery es el sexto condado muestreado de Arkansas. Sin embargo, puesto que la mayoría de los condados de Arkansas tienen menos de 800 taxa documentados, hay una necesidad de más estudios florísticos con el fin de conocer las especies que crecen en Arkansas.

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INTRODUCTION

Floristic studies have long provided botanists with baseline knowledge of plant species distribution and habitat preference, so proportionately more is known from locations that have had extensive inventories (Duncan 1953). Descriptive studies are needed before subsequent ecological endeavors can be conducted. No systematic inventory of the Ouachita Mountains' flora has been conducted to date with the exception of Hot Springs National Park (Palmer 1926; Scully 1937, 1941, 1942). In addition, certain areas of botanical interest in the Ouachitas (e.g., Rich Mountain, Mount Magazine, and Albert Pike) have received much attention by botanists, but very frequently for their charismatic plant species, and a comprehensive flora accompanied by vouchered specimens is lacking. This study is the first one of its scale in the physiographic region of the Ouachita Mountains of Arkansas.

Geography, Geology, and Soils

Montgomery County is located in west central Arkansas in the Central Ouachita Mountains (Fig. 1). The county covers 2,023 km² (781 mi²), and is characterized by east-west trending ranges of the Ouachita Mountains, including the Fourche, Caddo, and Cossatot mountains. The Fourche Mountains are located in the northern part of the county. The central portion of the county consists of a large basin that contains the Ouachita and Caddo rivers. The Caddo Mountains are south of the basin, and southwest of the Caddo Mountains are the Cossatot Mountains. Elevation in Montgomery County ranges from a low of 149 m in the very southeast corner of the county along Sugarloaf Creek to a high of 673 m at Slatington Mountain in the southwest (490 to 2209 ft).

Geologically the area is old and the exposed rock and soils are varied. The oldest rock in the state, which dates from the Cambrian and lower Ordovician periods, is Collier Shale, which is partially exposed in Montgomery County (Braden 1999). The east-west geology of the Ouachita Mountains displays the rock in decreasing age both north and south of the center due to anticline folding during the Pennsylvanian Period.

All the sedimentary rocks in the Ouachita Mountains were deposited before the tectonic events of the late Pennsylvanian. Each rock type was deposited in a horizontal stratum, but was subsequently twisted and folded into its present shape (Palmer 1926). Thrust faulting and folding due to continental collision gave the Ouachita Mountains their compressed anticline/syncline deformation (Snider 1982). The Ouachita fold belt extends from southwest Alabama north through Arkansas, and southwest through Oklahoma, Texas, and into Mexico. The 2,100 km course of the Ouachitas is only exposed for 500 km (Flawn 1959). The rocks are shale, sandstone, quartzite, conglomerate, and novaculite (Palmer 1926). Novaculite, the slightly metamorphosed product of chert (Guccione 1993), is mined for high-quality whetstone in the area, and is interesting both geologically and

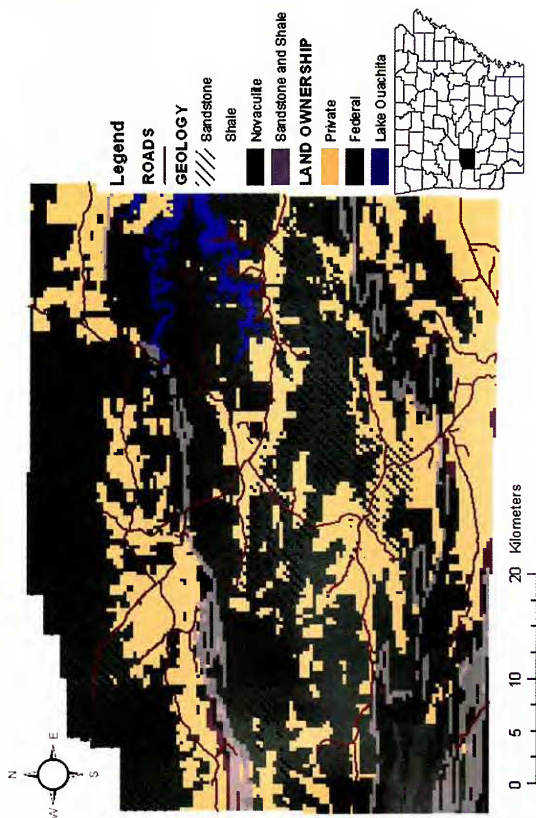


FIG. 1. Geology and land ownership in Montgomery County, Arkansas.

botanically. Additionally, novaculite glades are habitats unique to the Ouachita Mountains. Substantially due to its geology, Montgomery County is rich in regional endemics of both plants and animals. The area has a great diversity of habitats in close proximity to one another (Braun 1950) due to its rough and varied topography.

Soil orders in the region are Entisols and Ultisols. Entisols are young soils with little or no evidence of developed soil horizons. In the Ouachita Mountains they form in the vicinity of stream courses where erosion is extreme and equals or exceeds soil formation. Ultisols are old soils that form in warm, humid climates with a seasonal dry period under forest vegetation. Ultisols are the dominant soils in Montgomery County (Soil Survey Staff 1998, 1999). Soils in the area are commonly thin and in many places, including steep slopes and glades, the parent geologic material has far greater influence than that of the soil.

Climate

The climate of Montgomery County and the central Ouachita Mountains is broadly described as humid sub-tropical (Bailey 1995). The climate of the state of Arkansas is influenced by its latitude between 33 and 37 degrees north, the prevailing westerlies, polar fronts from the continent, and Gulf of Mexico moisture (Baldwin 1984). The following climate data were compiled from the National Oceanic and Atmospheric Administration (NOAA) observations collected in Mount Ida, Arkansas, in central Montgomery County, from 1931 through 2000, but represent 66 years of observation due to missing values from 1948, 1949, 1950, and 1954. The average annual high temperature is 23°C (73°F), the average annual low temperature is 8°C (47°F), and the overall average annual temperature is 15°C (60°F). Temperatures have ranged from an all-time high of 47°C (116°F) on August 10, 1936, to a low of -29°C (-21°F) on February 2, 1951. Even though extremes in precipitation or temperature occur, they are rare. The average hottest day for a given year is 39°C (103°F), but the most common value in the 66 years of data collection was 38°C (100°F). The average coldest temperature for a year is -15°C (5°F), and the most common value was -13°C (8°F). The average period without a freeze (growing-season) is typically between 200 and 240 days in the Ouachita Mountains province (USDA 1981).

The area receives some of the highest rainfall in Arkansas (Reinhold 1969) with an annual average of 141 cm (55 in.). The range of annual rainfall, however, is incredibly varied, with a maximum of 213 cm (84 in.) recorded in 1945 and a minimum of 83 cm (33 in.) recorded in 1936. The Ouachita Mountains are high enough to draw more rainfall from passing storm systems than other natural regions of Arkansas. Precipitation is seasonal with the spring months of March, April, and May commonly being wettest and typical dry times in July through September. Snow is limited in the region, and one out of every five years lacked snow entirely. The average annual snowfall for the area is 12 cm (5 in.).

The greatest yearly snowfall recorded was 47 cm (19 in) in 1988. Ice storms are uncommon, but may be severe. In December 2000, an ice storm struck the region and dramatically opened the forest canopy. There were long-term changes in vegetation structure due to the severity of that storm.

Anthropogenic Influence

Montgomery County and the greater Ouachita Mountain region were occupied by early Americans in the Dalton cultural period in the early Holocene for hunting grounds and short-term settlements. There is evidence that even in rugged areas of the Cossatot Mountains by the late Caddo period (15th Century), hunting and gathering was supplemented by small plots of maize, beans, and squash (Early 2000). Although First Nations peoples mined and farmed small plots, their impact to the landscape in the area appears small compared to that after European settlement.

European descendants typically from Mississippi, Alabama, and Georgia settled in the Ouachita Mountains in the 19th Century. They were predominately of English or Scotch-Irish heritage, and lived subsistence lives with only small farms, often surrounded by virgin woodland (Smith 1986). When mechanized logging arrived in the Ouachitas around 1900, the vegetation began to change rapidly as large tracts of shortleaf pine timber were logged. Virtually no virgin timber remained by 1950. The Arkansas National Forest was set aside in 1907 (changed to the Ouachita National Forest in 1926). Sustained yield forestry began to replace "cut out and get out" practices in the 1920s, but as a valuable timber resource the areas within the Ouachita National Forest experienced heavy logging. In the 1970s Weyerhaeuser Company began intensively managing its stands as monocultures of loblolly pine. The Ouachita National Forest began to use even-age management as well (Smith 1986). Such management regimes are now unacceptable on public lands. It is important to note that although none of the land is in its pre-settlement state, and all of it is managed, the majority of Montgomery County retains the landscape's original character, and allows for a great number of native species to persist or thrive. The Ouachita National Forest and Montgomery County will likely keep their semi-natural character long into the future.

Ever since the warming and drying after the most recent ice age, plant communities in the region have experienced human induced fires. Though Euro-American settlers in the South were casual in their feelings toward fire, national policy prevented fire in an effort to prevent damage to property. However, U.S. Forest Service policy in the South had always contained provisions for allowing fire, and interest in using fire as a management tool increased (Pyne 1982). Currently, the Ouachita National Forest prescribes burns to limit potential for catastrophic fire and improve wildlife habitat (http://www.fs.fed.us/r8/ouachita/fire/fire_management%20.shtml).

Although ecosystem degradation by land management practices is always a concern, most of Montgomery County is in federal land holding, and ecosystem destruction from development is of little concern. A potential problem, now, and the second most important cause for the decline of imperiled species is the introduction of non-native, invasive species (Stein et al. 2000). Common exotic invasive species in Montgomery County include *Elaeagnus umbellata*, *Lespedeza cuneata*, *Ligustrum sinense*, *Lonicera japonica*, and *Microstegium vimineum*.

Ecological Systems

The Ecological Systems Database (NatureServe 2003) was used as a framework for classifying ten plant communities in Montgomery County. The communities are defined on a meso-scale, allowing for patterns of ecological variability while remaining recognizable to guide conservation and land managers' needs (Comer et al. 2003). NatureServe lacked anthropogenically managed or created communities that did not fall under the categories of "natural" or "semi-natural." These include easily recognizable areas such as pastures, roadsides, and abandoned pits or quarries. A distinct community dominated by *Pinus taeda* was not included for the Ouachita Mountains. The only natural community that was lacking from the published list was the Shale Glade Ecological System. Shale glades are important botanically in Montgomery County because they are areas where unique plant assemblages form and include species found nowhere else in the county.

(PIN) *Ozark-Ouachita Shortleaf Pine-Oak Forest and Woodland*.—The Ozark-Ouachita Shortleaf Pine-Oak Forest and Woodland covers the largest land area in Montgomery County. It is classified as a natural or semi-natural, vegetated, and upland matrix. The thread that ties this variable system together is the presence and often dominance of *Pinus echinata*. The hardwood components, dominated by various *Quercus* species, vary with slope, aspect, and moisture conditions (Dale & Ware 1999). There are other hardwood canopy species in the system such as *Carya* spp. and *Prunus serotina*, but they are less abundant than oaks. The canopy ranges from completely closed to more commonly open with as little as 40% canopy cover. The system covers a wide range of topography from level to steep slopes, most aspects, and is not tied to a specific topographic feature (e.g., streams) or geology. Understory species include *Vaccinium* spp., *Solidago* spp., *Monarda* spp., and *Schizachyrium scoparium* as dominants.

(LOB) *Ouachita Mountain Planted Loblolly Pine Forest*.—This ecological system is not listed by NatureServe (2003) for Montgomery County probably because *Pinus taeda* is thought to be exotic to the Ouachita Mountains. The loblolly pine system is similar to the shortleaf pine system in the Ouachitas except that it is dominated by *Pinus taeda* rather than *Pinus echinata*. The com-

munity is located only in the southeastern portion of the county where the topography is less rugged and slopes are less steep than in other areas. Common herbaceous species include *Asclepias variegata*, *Lactuca canadensis*, *Pseudognaphalium helleri*, *Clitoria mariana*, and *Rhexia mariana*. Except for its location in the Ouachita Mountains, the community matches closely the *Pinus taeda* forest alliance of the West Gulf Coastal Plain Pine-Hardwood Forest (NatureServe 2003). Sites in Montgomery County range from obvious plantations with trees in straight rows to a more natural system managed by fire. Although all sites may represent plantings in this area, the system (at least non-plantation sites) can follow the semi-natural classification of the Ozark-Ouachita Shortleaf Pine-Oak Forest and Woodland with a different dominant canopy species, or the West Gulf Coastal Plain Pine-Hardwood Forest in a more northern location.

(MES) *Ozark-Ouachita Mesic Hardwood Forest*.—The Ozark-Ouachita Mesic Hardwood Forest is classified as a natural or semi-natural vegetated upland small patch system. This community may be found on low, north-facing slopes and along river terraces in areas that are not distinctly riparian. *Quercus alba* and *Q. rubra* are common oak dominants, but the classic mesic species are *Fagus grandifolia* and *Acer barbatum*. *Tilia americana* is another canopy species, and *Asimina triloba* and *Magnolia tripetala* may be found in the understory. In the Crystal Campground area, the mesic forest includes a population of *Pinus strobus*, planted for timber in 1910, but subsequently naturalized, and it is the only reproducing population known in Arkansas. The herbaceous layer of this community contains a wide range of spring ephemeral species such as *Trillium recurvatum*, *Cypripedium kentuckiense*, and *Podophyllum peltatum*. Mesic forest habitat provides greater moisture to vegetation thus supporting different species than the shortleaf pine-oak forest and woodland system.

(RIP) *Ozark-Ouachita Riparian*.—The Ozark-Ouachita Riparian community is variable in vegetation, but has one main topographic feature that ties the system together—streams. The system is classified as natural or semi-natural, vegetated, and upland. The spatial pattern is linear. Canopy species may vary, but typically include *Liquidambar styraciflua* and *Platanus occidentalis* as canopy dominants. *Acer* spp. and various *Quercus* spp. are also canopy species in the riparian ecosystem. *Betula nigra* occurs infrequently. The understory and shrub layers often consist of *Lindera benzoin*, *Alnus serrulata*, *Hamamelis vernalis*, *Carpinus caroliniana*, and *Ostrya virginiana*. The herbaceous layer is diverse and commonly consists of *Festuca subverticillata*, *Osmorhiza longistylis*, *Galium aparine*, *Viola pubescens*, and *Elymus virginicus*. Certain riparian sites also include the Ouachita Mountain endemic, *Hydrophyllum brownei*. The riparian system does not often include *Fagus grandifolia* in its canopy. The riparian zone in Montgomery County is typically found from the immediate riverbank through a system of periodically flash flooded terraces. The size of

the stream dictates the distance away from the stream that the riparian community is encountered. The substrate consists of soils that are rich and well-drained and often with abundant gravel.

(SEE) *Ouachita Mountain Forested Seep*.—The Ouachita Mountain Forested Seep community is characterized as a natural, small patch, vegetated wetland. All seepage areas have water coming from below the ground surface. Seeps may occur at the headwaters of streams or along riparian areas. They are saturated or very moist throughout the year. The canopy may be dominated by *Liquidambar styraciflua*, *Quercus alba*, *Acer rubrum*, and *Magnolia tripetala*, which is also common in the understory. The coverage of the canopy is variable from fully covered to quite open. However, due to the soft substrate, which allowed for easy uprooting, much of the canopy in many seeps in Montgomery County was dramatically opened by an ice storm in December 2000. Subcanopy species commonly encountered are *Magnolia tripetala*, *Ilex opaca*, *Carpinus caroliniana*, and *Corylus americana*. Aside from the saturated soil, the herbaceous layer provides a distinctive sign of a forested seep. Ferns are abundant and diverse and include *Osmunda cinnamomea*, *Osmunda regalis*, *Athyrium filix-femina*, *Onoclea sensibilis*, and others.

(NOV) *Ouachita Novaculite Glade and Woodland*.—The Ouachita Novaculite Glade and Woodland system is defined as a small patch of natural occurrence that is vegetated and upland. The diagnostic feature for the community is novaculite geology. The system is found from 450–640 m (1476–2100 ft.) in elevation and is a mosaic of open glades, outcrops, and woodlands. Dominant species include *Quercus stellata*, *Quercus marilandica*, *Quercus rubra*, and *Carya texana*. The endemic *Quercus acerifolia* is found only in this and the Ouachita Montane Oak Forest system. A common and often distinctive member in the subcanopy is *Ptelea trifoliata*. The herbaceous layer is dense with grass species including *Bromus* spp., *Danthonia spicata*, *Dichanthelium* spp., and *Schizachyrium scoparium*. *Ambrosia artemisiifolia*, *Helianthus divaricatus*, and *Helianthus hirsutus* are other common associates. Trees are often stunted and gnarly due to drought, fire, wind, and ice, all of which are thought to play important roles in the maintenance of this system.

The Ouachita Montane Oak Forest is a similar community to the Novaculite Glade system except that it lacks novaculite substrate. The inclusion of this system under the Novaculite heading is appropriate here because the montane oak forest has a limited extent in Montgomery County. It is only found in high-elevation areas in the northwest part of the county. Although the geology differs, vegetation is remarkably similar in both high-elevation communities, and does not warrant a separate community designation in Montgomery County.

(SHA) *Ouachita Mountain Shale Glade*.—The Ouachita Mountain Shale Glade community is characterized as a small to large patch, natural or semi-

natural vegetated, upland system. The soil is very thin and shale (the dominant substrate) is often exposed at the surface. This ecosystem is found on level or slightly sloped topography in the basin regions of the Ouachita Mountains. There is often no tree canopy associated with this system, but *Juniperus virginiana* and *Carya texana* have become common canopy species. There is little shrub layer, as the system is dominated by a diverse array of herbs and grasses. The shale substrate acts as a fragipan, creating very wet surface conditions in the early spring that dry throughout the summer, when the system appears nearly barren. This hydro-xeric phenomenon characterizes the shale glade. Herbaceous species include *Talinum calycinum* and *Dodecatheon meadia*, as well as many members of the Asteraceae including *Coreopsis grandiflora*, *Silphium laciniatum*, and *Solidago* spp.

(ROA) *Ouachita Mountain Upland Herbaceous with Regular Interval Human-Induced Disturbance*.—This community includes those habitats that are managed by, at minimum, yearly grazing or mowing; roadsides, roadside ditches, pastures, and cemeteries. These are linear, small patch, or large patch, anthropogenic upland vegetated systems. They are typically without a tree or shrub layer and consist mostly of grasses and other herbaceous species such as *Daucus carota*, *Bidens* spp., *Trifolium campestre*, *Paspalum* spp., *Lolium* spp., and *Tridens flavus*. The species growing in these habitats are adapted to full sun and a range of moisture conditions. Although not considered by NatureServe, this system is important to the categorization of the plant species in the Ouachita Mountains. Pastures and roadsides favor grass species, which tolerate mowing/grazing, serve as entry points and corridors for invasive species, represent novel habitat for natives, and make up a large land area.

(WEE) *Ouachita Mountain Upland Herbaceous-Shrubby with Single Major Human-Induced Disturbance*.—This community is common along abandoned Forest Service roadways, but also is used for any land not actively managed, such as abandoned lots, pits, or mines. It is a linear or small patch vegetated, upland anthropogenic system. Though much less important in terms of land area covered than Regular Interval Disturbance system, it is distinct from it. The main difference between the ecosystems is type of disturbance. The Regular Interval Disturbance system has regular, at least annual mechanical disturbance, whereas this weedy community begins with a single major disturbance only. After this usually vegetation-voiding initial event, colonization and succession occur undisturbed, unless aided by plantings to reduce erosion. This system is characterized by weedy or early successional herbaceous and shrub species and represents an ever-changing continuum from unvegetated bare ground to late successional stages. These habitats are abundant with non-native species such as *Ligustrum sinense* and *Lespedeza cuneata*. Other abundant early colonizers include *Ambrosia* spp. and *Acalypha virginica*.

(WET) *Ouachita Mountain Human Created/Maintained Still Water Wetland and Gravel Bar*.—This system is a variable system that includes anthropogenic lakes and ponds (none of which are natural in the Ouachita Mountain landscape), a beaver created upland marsh, and natural gravel bars of rivers and streams. These are wetland systems that can often be described as early successional. Regulated lakes and ponds in the region have a fluctuating shoreline allowing for wetland plant growth and colonization that follows the water level. Stream gravel bars, though natural, mimic this pattern due to rapid water level changes in streams and rivers. Gravel bars also experience vegetation-voiding disturbance during flash floods. These systems are dominated by a mix of wetland herbaceous and shrub species and weedy early successional plants. True aquatic species include *Nymphaea odorata*, *Potamogeton* spp., and *Utricularia gibba*. Examples of emergent or terrestrial species in this system are *Justicia americana*, *Xanthium strumarium*, and *Cleome hassleriana*. Richardson Bottoms, a beaver created upland marsh, though a unique community in the Ouachita Mountains, fits under this category for ecological system description.

METHODS

Voucher collections were made from August 2001 through October 2003. Several primary collecting sites were established by conducting pilot searches early in the study, reviewing topographic maps, and consulting Ouachita National Forest and Arkansas Natural Heritage Commission unpublished document accounts (Orzell 1985; Bates 1993; Robison & Marsh undated). The primary sites are representative of the diversity of habitats found within the political boundary of Montgomery County. At primary sites, collections were made in each phase (spring, summer, fall) of the growing season. Auxiliary sites were visited only once or twice throughout the study period.

Vouchers were collected according to standard collecting methodology, and material was compared to UARK specimens and keyed with pertinent floras (e.g., Radford et al. 1968; Smith 1994a; Diggs et al. 1999; Yatskievych 1999) for the majority of the identifications. A representative voucher specimen for each taxon was deposited at the University of Arkansas Herbarium (UARK). Specimens were assigned a community type from which they were collected in order to provide a high resolution of species distribution within Montgomery County.

After all collections were identified, Smith (1988) by way of the Texas A&M Bioinformatics Working Group website (http://www.csdl.tamu.edu/FLORA/cgi/kartesz_ar_page_click?county=Montgomery) was consulted for species collected from Montgomery County by previous investigators. Taxa that were found on Smith's list that were not collected in the current field study (2001–2003) were noted. Subsequently, a search was conducted for the listed specimens. Identifications of specimens found at UARK were verified, and those at other

herbaria were accepted as correctly identified without review. Collections made by E.L. Hardcastle, C.S. Reid, D.X. Williams, and C.T. Witsell in Montgomery County since 1988 were also reviewed.

RESULTS

Plant collections resulted in 1,013 taxa at and below the species level, 474 genera, and 139 families. Further investigation led to the discovery of additional species collected by others for Montgomery County. These additions bring the total known taxa for Montgomery County to 1,110 species and subspecific assignments, 506 genera, and 143 families. The plant families with the greatest number of taxa are as follows: Asteraceae (144), Poaceae (120), Cyperaceae (82), Fabaceae (75), and Rosaceae (38). Forty-three taxa that had previously been reported from Montgomery County could not be supported by voucher specimens, and have subsequently been excluded from the flora. The specimens either never existed (a verbal report only), could not be found, or have been annotated as some other taxon.

Fieldwork resulted in the addition of one species not previously known to occur in Arkansas: *Elatine triandra* Schkuhr. *Elatine triandra* is native to the United States and the collection represents a range expansion from its known distribution. This wetland species was collected on the muddy shores of a recently constructed lake southwest of Mount Ida.

Fifty-nine of the 1,110 taxa in Montgomery County are tracked by the Arkansas Natural Heritage Commission. Species of special concern, therefore, make up 5% of the flora in Montgomery County. One population of the listed, federally endangered species *Ptilimnium nodosum* (Rose) Mathias was located. The voucher is a photograph (TD. Marsico 3247, UARK), since a permit to collect endangered species was not obtained. The location of the population had been studied by Hardcastle and Williams (2000), and as stated in their report, thousands of individuals were observed.

Non-native species have recently gained the attention of land managers. One hundred and thirty-four (12%) taxa of the 1,110 of the Montgomery County flora are represented by species categorized as non-native. Of those, 21 are considered invasive. Montgomery County also contains a native invasive, *Baccharis halimifolia* L. Invasive status follows the working list from the Rare and Invasive Plants of Arkansas Conference (RIPAC) in October 2003 (Arkansas Native Plant Society 2003). One of the taxa collected is a federally listed noxious weed, *Hydrilla verticillata* (L.f.) Royle.

Collections made during the course of the study revealed that the riparian and roadside communities are home to the greatest number of species, whereas the planted loblolly pine forest, forested seeps, and shale glades had the fewest species. Also of note is the three communities with the greatest percentage of introduced taxa are those that are human created and/or dominated (Table 1).

TABLE 1. Summary of plant collections by community type in Montgomery County. Because only Marsico collections were assigned to a community, 1013 taxa are used in "total" calculations. Community codes are lob—Planted loblolly pine forest, mes—Mesic hardwood forest, nov—Novaculite glade and woodland and montane oak forest, pin—Shortleaf pine-oak forest and woodland, rip—Riparian, roa—Roadside, roadside ditch, pasture, and cemetery, see—Forested seep, sha—Shale glade, wee—Weedy areas such as abandoned ONF roadways, abandoned lots, pits, or mines, wet—Wetlands including lakes, ponds, mudflats, gravel bars, and a marsh.

	Number of Native Taxa (N)	Number of Introduced Taxa (I)	Total Taxa (N+I)=T	Percent of County Total Marsico Collections (T/1013)*100	Percent in Habitat Introduced (I/T)*100
LOB	91	4	95	9%	4%
MES	283	14	297	29%	5%
NOV	196	15	211	21%	8%
PIN	289	14	303	30%	5%
RIP	418	36	454	45%	9%
ROA	355	68	423	42%	19%
SEE	167	4	171	17%	2%
SHA	145	13	158	16%	9%
WEE	149	53	202	20%	36%
WET	330	46	376	37%	14%

DISCUSSION

The 1,110 taxa documented for Montgomery County places it sixth among the best collected counties of the state. While it is important to remember that botanical diversity relates to land area, topographic diversity, and land use practice, many places in the state of Arkansas are still not well known botanically. The best collected county is Washington with 1,355 taxa, and the worst is Woodruff with 347 (Smith 1994b). The top five best collected counties, except for Pulaski, are in the Ozark Plateaus Natural Division. All counties in Arkansas that have had systematic botanical inventories conducted have over 900 known taxa; therefore, it is probable that all counties in the state have this potential. Still, 65% of Arkansas counties have fewer than 800 documented taxa. This underscores the need for increased floristic work if the flora of Arkansas is to be fully understood.

With 59 species of special concern, Montgomery County has one of the highest proportions of sensitive plant species in Arkansas. When combined with animals, the Ouachita Mountains have a high level of endemism (Robison & Allen 1995). Contributing to the diversity, Montgomery County contains disjunct species from the Ozark Plateaus and the nearby Gulf Coastal Plain. Also, shale and novaculite glades, forested seeps, and mesic and riparian communities are hot-spots for rare species. The high number of rare habitats provides adequate conditions for the plants that are specific for those habitats.

After habitat destruction, alien or introduced species are the second-greatest threat to imperiled species (Stein et al. 2000). Montgomery County has fewer than 20% of the known alien species in Arkansas, but over one-third of the total native species known to occur in the state. While the flora of Arkansas is comprised of about 24% non-native taxa (Arkansas Vascular Flora Committee, pers. comm.), Montgomery County has only half that (12%). One possible reason for this difference is the relatively intact landscape of Montgomery County. Even though anthropogenic influence has been pronounced, human activities have not prevented the landscape from retaining many of its original qualities. For example, where there was once pine-dominated forest, this system remains today. Human population remains low, and agriculture is not a prominent force. In contrast, the state of Missouri has seen its numbers of introduced taxa increase by 35% from the early 1960s through the late 1990s. This is at least partially attributable to unprecedented environmental changes including a highly and continually disturbed landscape, favoring the predominate annual and biennial habit of introduced taxa (Yatskievych 1999). Therefore, it is not surprising that the vast majority of introduced species in Montgomery County are found in the three main human created or dominated landscapes of roadsides, wet areas, and abandoned roadways or lots. Over one-third of the introduced taxa collected in this study were gathered from the community classified as "weedy areas," which by definition would include a high number of weeds.

Overall, roadside and riparian habitats include the highest diversity of species in Montgomery County. This is due primarily to the widespread nature of each of these communities in a linear system. While roadsides and streamsides do not amount to a majority of the Montgomery County landscape, they cut through all other communities, allowing for high numbers of species exclusive to those communities alongside species that spill out from other communities. The planted loblolly pine forest, novaculite and shale glades, and forested seeps have the lowest overall diversity simply due to the very low amount of land area each covers in the county.

ANNOTATED CHECKLIST OF VASCULAR PLANT TAXA

Taxa below all represent vouchers from Montgomery County, Arkansas. They are listed alphabetically by family, then alphabetically by genus, specific epithet, and subspecific designation where appropriate. For all vouchers collected by T.D. Marsico, following the Latin name is a collection number corresponding to a specimen deposited at UARK, the habitat codes for where the taxa were collected, whether the taxa are native (N) or introduced (I), and any other special designation such as a species of special concern (SC) or invasive (I*). Taxa listed that were not collected by the author have the Latin name followed by the collector of the voucher, his/her collection number, the herbarium in which the voucher is located, and its status as native or introduced. Habitat codes are

as follows: **lob**—Planted loblolly pine forest, **mes**—Mesic hardwood forest, **nov**—Novaculite glade and woodland and montane oak forest, **pin**—Shortleaf pine-oak forest and woodland, **rip**—Riparian, **roa**—Roadside, roadside ditch, pasture, and cemetery, **see**—Forested seep, **sha**—Shale glade, **wee**—Weedy areas such as abandoned ONF roadways, abandoned lots, pits, or mines, **wet**—Wetlands including lakes, ponds, mudflats, gravel bars, and a marsh. All nomenclature follows The PLANTS Database (USDA, NRCS 2004).

ACANTHACEAE

- Dicliptera brachiata* (Pursh) Spreng., 4626, rip, N
Justicia americana (L.) Vahl, 3138, pin, rip, roa, wet, N
Ruellia humilis Nutt., 2642, nov, roa, sha, N
Ruellia pedunculata Torr. ex Gray ssp. *pedunculata*, 2405, pin, wet, N
Ruellia strepens L., 4250, rip, see, N

ACERACEAE

- Acer barbatum* Michx., 834, mes, N
Acer leucoderme Small, 2754, nov, N, SC
Acer negundo L., 3261, rip, roa, wee, N
Acer rubrum L. var. *drummondii* (Hook. & Arn. ex Nutt.) Sarg., 4955, pin, rip, wet, N
Acer rubrum L. var. *rubrum*, 5053, lob, mes, pin, rip, roa, see, wet, N
Acer saccharinum L., 3135, rip, wet, N
Acer saccharum Marsh. var. *saccharum*, 5692, nov, rip, N

AGAVACEAE

- Manfreda virginica* (L.) Salisb. ex Rose, 3742, nov, roa, sha, N
Yucca arkansana Trel., 4994, pin, roa, N

Alismataceae

- Alisma subcordatum* Raf., 5539, roa, wet, N
Echinodorus cordifolius (L.) Griseb., 3295, wet, N
Sagittaria graminea Michx. var. *graminea*, 5485, rip, wet, N
Sagittaria latifolia Willd., 4027, roa, N
Sagittaria platyphylla (Engelm.) J.G. Sm., 5771, wet, N

Amaranthaceae

- Amaranthus retroflexus* L., R. D. Thomas, 131846, NLU, I
Amaranthus spinosus L., 4414, wet, N
Iresine rhizomatosa Standl., 3877, rip, wee, N

Anacardiaceae

- Rhus aromatica* Ait. var. *aromatica*, 3947, nov, pin, roa, sha, N

- Rhus copallinum* L., 5997, nov, pin, roa, wee, N
Rhus glabra L., 5534, pin, roa, wee, N
Toxicodendron pubescens P. Mill., 5061, pin, N
Toxicodendron radicans (L.) Kuntze, 2651, lob, mes, nov, pin, rip, roa, see, N

Annonaceae

- Asimina triloba* (L.) Dunal, 5447, mes, nov, rip, N

Apiaceae

- Chaerophyllum procumbens* (L.) Crantz var. *procumbens*, 4727, mes, nov, rip, roa, wee, wet, N
Chaerophyllum tainturieri Hook. var. *tainturieri*, 4699, mes, roa, N
Cicuta maculata L., 2308, rip, roa, N
Cryptotaenia canadensis (L.) DC., 5456, mes, pin, rip, see, wet, N
Daucus carota L., 5105, roa, wee, wet, I
Erigenia bulbosa (Michx.) Nutt., 540, rip, N
Eryngium prostratum Nutt. ex DC., 5473, lob, rip, roa, wet, N
Eryngium yuccifolium Michx., 3580, rip, roa, N
Hydrocotyle prolifera Kellogg, 4068, rip, wet, N
Hydrocotyle verticillata Thunb. var. *verticillata*, 3890, rip, N
Osmorhiza longistylis (Torr.) DC., 1626, mes, nov, rip, see, N
Oxypolis rigidior (L.) Raf., 3572, mes, pin, rip, N
Ptilimnium capillaceum (Michx.) Raf., 5478, wet, N
Ptilimnium nodosum (Rose) Mathias, 3247, wet, N, SC, Federally Endangered
Ptilimnium nuttallii (DC.) Britt., 2562, pin, sha, wee, wet, N
Sanicula canadensis L., 5503, lob, mes, nov, pin, rip, see, sha, wet, N
Sanicula odorata (Raf.) K.M. Pryer & L.R. Phillippe, 1718, mes, rip, N
Sanicula smallii Bickn., 1603, mes, N, SC
Spermolepis inermis (Nutt. ex DC.) Mathias & Constance, 2601, wee, N

Taenidia integerrima (L.) Drude, 1744, mes, rip, N
Thaspium barbinode (Michx.) Nutt., 3436, mes, rip,
 N

Thaspium trifoliatum (L.) Gray, 2514, mes, rip, see,
 N

Torilis arvensis (Huds.) Link, 2590, pin, wee, I

Trepocarpus aethusae Nutt. ex DC., 5452, pin, rip,
 wee, wet, N

Zizia aurea (L.) W.D.J. Koch, 4984, pin, rip, roa, wet,
 N

Apocynaceae

Amsonia ciliata Walt. var. *ciliata*, E. Sundell, 11139,
 UAM, N

Amsonia hubrichtii Woods., 3153, rip, sha, wet, N,
 SC

Amsonia tabernaemontana Walt., 4861, mes, nov,
 N

Apocynum cannabinum L., 5533, roa, N

Trachelospermum difforme (Walt.) Gray, 5521, lob,
 pin, rip, roa, sha, wee, wet, N

Vinca major L., 4762, pin, roa, I*

Aquifoliaceae

Ilex ambigua (Michx.) Torr., 3485, mes, N

Ilex decidua Walt., 3041, rip, roa, N

Ilex longipes Chapman ex Trel., 3484, mes, rip, N,
 SC

Ilex opaca Ait. var. *opaca*, 5467.5, mes, rip, see, N

Ilex vomitoria Ait., 5733, lob, mes, nov, pin, N

Araceae

Arisaema dracontium (L.) Schott, 5506, rip, wet, N

Arisaema triphyllum (L.) Schott, 1831, mes, rip, see,
 N

Araliaceae

Aralia spinosa L., 4197, mes, wee, N

Aristolochiaceae

Aristolochia serpentaria L., 3350, mes, pin, N

Aristolochia tomentosa Sims, 5597, rip, N

Asarum canadense L., 1495, rip, N

Asclepiadaceae

Asclepias longifolia Michx., 2392, sha, N

Asclepias quadrifolia Jacq., 1602, mes, pin, see, N

Asclepias tuberosa L. ssp. *interior* Woods., 2248,
 nov, roa, sha, N

Asclepias variegata L., 5492, lob, mes, pin, roa, see,
 N

Asclepias verticillata L., 3188, nov, roa, N

Matelea baldwyniana (Sweet) Woods., 2748, nov,
 rip, roa, sha, N

Matelea decipiens (Alexander) Woods., 334, mes,
 N

Matelea gonocarpus (Walt.) Shinnars, 2360, rip, N

Aspleniaceae

Asplenium platyneuron (L.) B.S.P., 5509, lob, mes,
 nov, pin, rip, roa, sha, wee, N

Asplenium bradleyi D.C. Eat., R.D. Thomas, 100549,
 UARK, N

Asplenium trichomanes L., J.L. Roberts, 254, UARK,
 N

Asteraceae

Achillea millefolium L., 2394, roa, sha, N

Ageratina altissima (L.) King & H.E. Robins. var.
altissima, 4534, mes, nov, pin, rip, N

Ambrosia artemisiifolia L., 4109, nov, pin, roa, wee,
 N

Ambrosia bidentata Michx., 4287, roa, wee, N

Ambrosia trifida L., 4161, rip, roa, wee, N

Antennaria parlinii Fern. ssp. *fallax* (Greene) Bayer
 & Stebbins, 984, pin, N

Antennaria parlinii Fern. ssp. *parlinii*, 717, mes, N

Antennaria plantaginifolia (L.) Richards., 4670,
 mes, nov, pin, rip, sha, N

Arnoglossum plantagineum Raf., 2395, pin, roa,
 sha, N

Astranthium integrifolium (Michx.) Nutt., 1544, rip,
 roa, wee, N

Baccharis halimifolia L., 5130, mes, roa, wet, N*

Bidens aristosa (Michx.) Britt., 4081, nov, pin, rip,
 roa, wee, wet, N

Bidens bipinnata L., J. E. Moore, 3347, UCAC, N

Bidens discoidea (Torr. & Gray) Britt., 6044, roa, N

Bidens frondosa L., 4604, roa, wet, N

Boltonia diffusa Ell., 3868, see, rip, wet, N

Brickellia eupatorioides (L.) Shinnars, 4510, pin, N

Carduus nutans L., 5089, roa, I*

Centaurea cyanus L., J. Hauser, 255, APCR, I

Chrysopsis pilosa Nutt., 4028, roa, wee, wet, N

Cirsium altissimum (L.) Hill, 3970, mes, pin, rip, roa,
 wet, N

Cirsium carolinianum (Walt.) Fern. & Schub., 1856,
 mes, pin, rip, roa, N

Cirsium discolor (Muhl. ex Willd.) Spreng., 6002,
 lob, roa, N

Cirsium horridulum Michx., 4943, see, N

Conoclinium coelestinum (L.) DC., 4001, mes, rip,
 roa, wet, N

Conyza canadensis (L.) Cronq. var. *canadensis*,
 4091, mes, nov, pin, N

- Coryza canadensis* (L.) Cronq. var. *pusilla* (Nutt.) Cronq., 4286, roa, wee, N
- Coreopsis grandiflora* Hogg ex Sweet var. *grandiflora*, 2101, mes, pin, sha, N
- Coreopsis grandiflora* Hogg ex Sweet var. *harveyana* (Gray) Sherff, 2286, lob, nov, pin, sha, wee, N
- Coreopsis lanceolata* L., 1742, pin, rip, roa, wee, N
- Coreopsis palmata* Nutt., 2003, pin, N
- Coreopsis tinctoria* Nutt. var. *tinctoria*, 2199, sha, wee, N
- Coreopsis tripteris* L., 3708, lob, rip, roa, see, N
- Croptilon divaricatum* (Nutt.) Raf., D. M. Moore, 410229, UARK, N
- Doellingeria sericocarpoides* Small, 4011, see, wee, N
- Echinacea pallida* (Nutt.) Nutt., 2380, pin, roa, sha, N
- Echinacea pupurea* (L.) Moench, 2414, mes, nov, pin, rip, roa, wet, N
- Eclipta prostrata* (L.) L., 5737, wet, N
- Elephantopus carolinianus* Raesch., 3883, mes, rip, see, wet, N
- Elephantopus tomentosus* L., 3373, lob, mes, see, wet, N
- Erechtites hieraciifolia* (L.) Raf. ex DC. var. *hieraciifolia*, 3509, pin, roa, sha, wet, N
- Erigeron annuus* (L.) Pers., 2489, mes, pin, rip, roa, wet, N
- Erigeron philadelphicus* L., 791, rip, N
- Erigeron pulchellus* Michx., 880, mes, N
- Erigeron strigosus* Muhl. ex Willd., 1562, mes, nov, rip, roa, sha, wee, wet, N
- Eupatorium altissimum* L., 320, nov, N
- Eupatorium fistulosum* Barratt, 3824, see, N
- Eupatorium perfoliatum* L. var. *perfoliatum*, 4365, roa, wet, N
- Eupatorium purpureum* L., 3762, mes, pin, N
- Eupatorium rotundifolium* L., 4325, lob, pin, N
- Eupatorium serotinum* Michx., 6007, lob, pin, rip, roa, wee, wet, N
- Eurybia hemispherica* (Alexander) Nesom, 3800, lob, nov, pin, roa, sha, wet, N
- Gamochaeta purpurea* (L.) Cabrera, 2118, nov, roa, N
- Grindelia lanceolata* Nutt., 3895, rip, N
- Helenium amarum* (Raf.) H. Rock, 3778, rip, roa, wet, N
- Helenium flexuosum* Raf., 5176, pin, rip, roa, wet, N
- Helianthus angustifolius* L., 4488, rip, wet, N
- Helianthus divaricatus* L., 5524, lob, mes, nov, pin, rip, roa, sha, wee, wet, N
- Helianthus hirsutus* Raf., 3951, nov, pin, rip, roa, N
- Helianthus mollis* Lam., R. D. Thomas, 128892A, NLU, N
- Helianthus occidentalis* Riddell ssp. *plantagineus* (Torr. & Gray) Shinnars, 3886, rip, N, SC
- Helianthus silphioides* Nutt., 4274, mes, roa, N
- Helianthus simulans* E.E. Wats., 477, roa, N
- Heliopsis helianthoides* (L.) Sweet, 1720, mes, rip, N
- Hieracium gronovii* L., 2004, nov, pin, rip, roa, see, N
- Ionactis linariifolius* (L.) Greene, 4589, pin, N
- Krigia biflora* (Walt.) Blake var. *biflora*, 5041, mes, rip, see, wet, N
- Krigia caespitosa* (Raf.) Chambers, 4696, rip, N
- Krigia dandelion* (L.) Nutt., 4807, rip, wet, N
- Krigia virginica* (L.) Willd., 4899, roa, N
- Lactuca canadensis* L., 3175, lob, mes, nov, pin, roa, sha, N
- Lactuca floridana* (L.) Gaertn., 6001, mes, roa, wee, wet, N
- Lactuca serriola* L., 3208, rip, wee, I
- Lapsana communis* L., Pias, 959, NLU, I
- Leucanthemum vulgare* Lam., 2283, roa, sha, wee, I
- Liatris aspera* Michx., 3627, nov, N
- Liatris elegans* (Walt.) Michx., 4348, roa, N
- Liatris pycnostachya* Michx., 3713, lob, rip, roa, N
- Liatris squarrosa* (L.) Michx. var. *compacta* Torr. & Gray, 2648, nov, N, SC
- Liatris squarrosa* (L.) Michx. var. *squarrosa*, 3400, roa, N
- Liatris squarrosa* Michx., 3944, nov, pin, roa, N
- Marshallia caespitosa* Nutt. ex DC. var. *caespitosa*, 1759, sha, N, SC
- Packera aurea* (L.) A. & D. Love, 4766, mes, pin, rip, see, N
- Packera glabella* (Poir.) C. Jeffrey, Hawkins, 18, APCR, N
- Packera obovata* (Muhl. ex Willd.) W.A. Weber & A. Love, 1075, mes, rip, wet, N
- Packera tomentosa* (Michx.) C. Jeffrey, 4698, roa, N
- Parthenium integrifolium* L. var. *integrifolium*, 3037, roa, N
- Pityopsis graminifolia* (Michx.) Nutt., 4587, nov, pin, N

- Pluchea camphorata* (L.) DC., 4225, pin, see, wee, N
- Polymnia cossatotensis* A.B. Pittman & V. Bates, 3675, mes, N, SC
- Prenanthes altissima* L., 4351, pin, rip, see, N
- Pseudognaphalium helleri* (Britt.) A. Anderb. ssp. *helleri*, 4620, lob, pin, sha, N
- Pseudognaphalium obtusifolium* (L.) Hilliard & Burttt ssp. *obtusifolium*, 4238, mes, rip, wee, N
- Pyrrochloa caroliniana* (Walt.) DC., 2345, roa, wee, wet, N
- Rudbeckia fulgida* Ait. var. *umbrosa* (C.L. Boynt. & Beadle) Cronq., 4044, wet, N
- Rudbeckia grandiflora* (D. Don) J.F. Gmel. ex DC. var. *grandiflora*, 5633, pin, roa, sha, N
- Rudbeckia hirta* L., 5507, lob, mes, pin, rip, roa, sha, wee, wet, N
- Rudbeckia laciniata* L. var. *laciniata*, 3341, mes, rip, see, N
- Rudbeckia subtomentosa* Pursh, 3577, rip, N
- Rudbeckia triloba* L. var. *triloba*, 3422, pin, rip, roa, wet, N
- Silphium asteriscus* L. var. *asteriscus*, 3570, mes, rip, roa, N
- Silphium integrifolium* Michx., 3582, mes, pin, rip, roa, N
- Silphium laciniatum* L., 3232, roa, sha, N
- Silphium perfoliatum* L. var. *perfoliatum*, 3872, rip, roa, N
- Silphium radula* Nutt., Mrs. J. Miller, 176, UARK, N
- Smilacina uvealium* (L.) Mackenzie ex Small, 3264, rip, wee, N
- Solidago arguta* Ait. var. *bootii* (Hook.) Palmer & Steyermark, D. Demaree, 56954, BRIT, N
- Solidago auriculata* Shuttlw. ex Blake, 335, mes, N, SC
- Solidago caesia* L. var. *caesia*, 4428, mes, pin, rip, wee, N
- Solidago canadensis* L., 6024, lob, mes, nov, roa, wet, N
- Solidago hispida* Muhl. ex Willd., 4586, mes, pin, rip, roa, see, N
- Solidago nemoralis* Ait., 4022, lob, nov, pin, rip, roa, sha, wee, N
- Solidago odora* Ait., 4332, nov, pin, rip, sha, N
- Solidago ouachitensis* C. & J. Taylor, 4214, mes, rip, N, SC
- Solidago petiolaris* Ait., 4406, nov, pin, rip, sha, wet, N
- Solidago radula* Nutt., 4393, nov, pin, N
- Solidago rugosa* P. Mill., 6006, lob, N
- Solidago ulmifolia* Muhl. ex Willd. var. *microphylla* Gray, 4171, mes, pin, rip, roa, wet, N, SC
- Solidago ulmifolia* Muhl. ex Willd. var. *palmeri* Cronq., 4336, mes, nov, pin, rip, roa, sha, wee, wet, N
- Solidago ulmifolia* Muhl. ex Willd. var. *ulmifolia*, 3630, nov, N
- Sonchus oleraceus* L., 3200, wee, I
- Symphotrichum anomalum* (Engelm.) Nesom, 4330, mes, nov, pin, roa, N
- Symphotrichum drummondii* (Lindl.) Nesom var. *texanum* (Burgess) Nesom, 4492, nov, rip, sha, N
- Symphotrichum dumosum* (L.) Nesom, 4478, wet, N
- Symphotrichum lateriflorum* (L.) A. & D. Love, 6026, pin, roa, see, N
- Symphotrichum oblongifolium* (Nutt.) Nesom, J. Logan, 155, UCAC, N
- Symphotrichum ontanone* (Wieg.) Nesom, 4623, rip, N
- Symphotrichum oolentangiense* (Riddell) Nesom var. *oolentangiense*, 4622, nov, pin, sha, N
- Symphotrichum patens* (Ait.) Nesom var. *patens*, 4089, nov, pin, roa, wet, N
- Symphotrichum pilosum* (Willd.) Nesom, 6023, pin, rip, roa, wee, wet, N
- Symphotrichum racemosum* (Ell.) Nesom, 4594, pin, N
- Symphotrichum turbinellum* (Lindl.) Nesom, 4593, pin, rip, N
- Symphotrichum lanceolatum* (Willd.) Nesom, 4631, mes, rip, see, sha, N
- Taraxacum officinale* G.H. Weber ex Wiggers, 4816, roa, wee, wet, N & I
- Thelesperma filifolium* (Hook.) Gray, D. M. Moore, 54-112, UARK, N
- Verbesina alternifolia* (L.) Britt. ex Kearney, 4163, rip, N
- Verbesina helianthoides* Michx., 5470, mes, pin, rip, roa, sha, N
- Verbesina virginica* L. var. *virginica*, 4222, rip, roa, wee, wet, N
- Vernonia baldwinii* Torr. ssp. *baldwinii*, 3549, nov, pin, rip, roa, sha, wee, N
- Vernonia baldwinii* Torr. ssp. *interior* (Small) Faust, 5666, pin, roa, N
- Vernonia fasciculata* Michx. ssp. *fasciculata*, 3611, rip, N, SC

- Vernonia lettermannii* Engelm. ex Gray, D. M. Moore, 55-290, UARK, N, SC
Vernonia missurica Raf., 3711, lob, pin, see, wet, N
Xanthium strumarium L., 4421, rip, wet, N
- Azollaceae**
Azolla mexicana Schlecht. & Cham. ex K. Presl, J. Peck, 94511, LRU, N
- Balsaminaceae**
Impatiens capensis Meerb., 5458, rip, see, wet, N
- Berberidaceae**
Nandina domestica Thunb., 4797, mes, I*
Podophyllum peltatum L., 5515, mes, nov, rip, see, wet, N
- Betulaceae**
Alnus serrulata (Ait.) Willd., 2326, mes, rip, see, wet, N
Betula nigra L., 6038, rip, wet, N
Carpinus caroliniana Walt., 5437, rip, see, wet, N
Corylus americana Walt., 5445, mes, rip, see, N
Ostrya virginiana (P. Mill.) K. Koch, 5467, mes, nov, pin, rip, roa, N
- Bignoniaceae**
Bignonia capreolata L., 1011, rip, N
Campsis radicans (L.) Seem. ex Bureau, 6000, lob, rip, roa, wee, wet, N
Catalpa bignonioides Walt., 1680, wet, N
- Blechnaceae**
Woodwardia areolata (L.) T. Moore, 3550, pin, see, wet, N
- Boraginaceae**
Cynoglossum amabile Stapf & Drummond, Mrs. J. Miller, 179, UARK, I
Cynoglossum virginianum L., 1694, mes, see, N
Hackelia virginiana (L.) I.M. Johnston, D.M. Moore, 430153, UARK, N
Heliotropium indicum L., 4070, rip, wet, I
Lithospermum latifolium Michx., 4942, rip, N
Mysotis verna Nutt., 5038, mes, rip, see, wet, N
Onosmodium molle Michx. ssp. *subsetosum* (Mackenzie & Bush) Cochrane, 4401, nov, N
- Brassicaceae**
Arabis canadensis L., 2361, sha, N
Arabis laevigata (Muhl. ex Willd.) Poir. var. *laevigata*, 1812, rip, N
Arabis missouriensis Greene, 1657, mes, nov, pin, rip, roa, wet, N
Barbarea verna (P. Mill.) Aschers., 1295, pin, rip, roa, I
Brassica rapa L., 769, roa, I
Cardamine angustata O.E. Schultz, 576, rip, see, N, SC
Cardamine bulbosa (Schreb. ex Muhl.) B.S.P., W. Butler, 28, UCAC, N
Cardamine concatenata (Michx.) Sw., 619, mes, pin, rip, see, sha, N
Cardamine hirsuta L., 688, mes, rip, roa, see, sha, wet, I
Cardamine parviflora L. var. *arenicola* (Britt.) O.E. Schultz, M.C. Black, 44, UARK, N
Cardamine pensylvanica Muhl. ex Willd., 4713, wet, N
Draba aprica Beadie, F. Sundell, 11143, UAM, N, SC
Lepidium virginicum L. var. *medium* (Greene) C.L. Hitchc., 2179, roa, wee, N
Lepidium virginicum L. var. *virginicum*, 2570, rip, roa, wee, wet, N
Rorippa nasturtium-aquaticum (L.) Hayek, C. Reid, 1961, UARK, N
Rorippa palustris (L.) Bess. ssp. *feraldiana* (Butters & Abbe) Jonsell, 4819, roa, wet, N
Selenia aurea Nutt., 696, sha, wet, N
Streptanthus maculatus Nutt. ssp. *obtusifolius* (Hook.) Rollins, 5699, nov, N, SC
- Buddlejaceae**
Polypremum procumbens L., 3297, wet, N
- Cabombaceae**
Brasenia schreberi J.F. Gmel., 5021, wet, N
- Cactaceae**
Opuntia humifusa (Raf.) Raf. var. *humifusa*, 2362, nov, roa, sha, N
- Callitrichaceae**
Callitriche heterophylla Pursh ssp. *heterophylla*, 5031, mes, pin, roa, sha, wet, N
- Campanulaceae**
Campanulastrum americanum (L.) Small, 3643, mes, nov, rip, N
Lobelia appendiculata A. DC., 5069, lob, pin, roa, N
Lobelia cardinalis L., 4264, rip, roa, see, wet, N
Lobelia inflata L., 3454, mes, rip, wee, N
Lobelia puberula Michx., 6028, lob, mes, pin, roa, wee, wet, N
Lobelia siphilitica L., 4467, roa, N
Lobelia spicata Lam., 2374, lob, pin, rip, sha, N
Triodanis lamprosperma McVaugh, 1903, nov, pin, roa, sha, wee, wet, N

Triodanis leptocarpa (Nutt.) Nieuwl., 1760, sha, N
Triodanis perfoliata (L.) Nieuwl. var. *biflora* (Ruiz & Pavon) Bradley, 2220, roa, wet, N
Triodanis perfoliata (L.) Nieuwl. var. *perfoliata*, 2011, nov, pin, rip, roa, wet, N

Capparaceae

Cleome hassleriana Chod., 3866, wet, I
Polanisia dodecandra (L.) DC., G. E. Tucker, 5297, APCR, N

Caprifoliaceae

Lonicera flava Sims, Mrs. J. Miller, 63, UARK, N
Lonicera japonica Thunb., 1673, mes, rip, see, wee, wet, I*
Lonicera sempervirens L., 993, lob, mes, nov, rip, roa, sha, N
Sambucus nigra L. ssp. *canadensis* (L.) R. Bolli, 5525, mes, rip, roa, wee, wet, N
Symphoricarpos orbiculatus Moench, 3637, nov, pin, rip, roa, N
Viburnum nudum L., 2446, see, N
Viburnum prunifolium L., 1134, pin, N
Viburnum rafinesquianum J.A. Schultes, 1026, mes, N
Viburnum rufidulum Raf., 2010, mes, nov, pin, roa, N

Caryophyllaceae

Arenaria serpyllifolia L., 4781, wee, I
Cerastium glomeratum Thuill., 759, mes, rip, roa, wee, wet, I
Dianthus armeria L., 5490, nov, roa, sha, wee, I
Minuartia muscorum (Fassett) Rabeler, 2331, rip, roa, sha, N
Paronychia fastigiata (Raf.) Fern. var. *fastigiata*, J. E. Moore, 3088, UCAC, N
Saponaria officinalis L., 3440, wet, I
Silene stellata (L.) Ait.f., 3259, nov, pin, rip, roa, see, N
Silene virginica L., 1282, mes, nov, pin, rip, roa, N
Stellaria media (L.) Vill. ssp. *media*, 881, mes, nov, pin, rip, wee, wet, I
Stellaria media (L.) Vill. ssp. *pallida* (Dumort.) Aschers. & Graebn., 686, roa, wet, I

Celastraceae

Euonymus americana L., 1792, mes, rip, N

Ceratophyllaceae

Ceratophyllum demersum L., 5486, wet, N

Chenopodiaceae

Chenopodium ambrosioides L., 4416, rip, wet, I

Chenopodium standleyanum Aellen, 4404, nov, N

Cistaceae

Lechea mucronata Raf., 3677, lob, N
Lechea tenuifolia Michx., 1296, roa, sha, wee, wet, N

Clusiaceae

Hypericum drummondii (Grev. & Hook.) Torr. & Gray, 3554, pin, roa, sha, wee, wet, N
Hypericum gentianoides (L.) B.S.P., 3617, nov, pin, roa, N
Hypericum gymnanthum Engelm. & Gray, 3242, roa, N
Hypericum hypericoides (L.) Crantz, 3748, nov, pin, rip, roa, wee, wet, N
Hypericum lobocarpum Gattinger, 3285, rip, N
Hypericum mutilum L., 5736, rip, roa, see, wet, N
Hypericum prolificum L., 3185, mes, pin, rip, roa, sha, wet, N
Hypericum pseudomaculatum Bush, 2267, nov, sha, wee, wet, N
Hypericum punctatum Lam., 3284, mes, nov, rip, roa, wee, wet, N
Triadenum walteri (J.G. Gmel.) Gleason, 4305, wet, N

Commelinaceae

Commelina communis L. var. *communis*, 2587, mes, rip, wee, wet, I
Commelina diffusa Burm. f., 4611, wet, N
Commelina erecta L. 3559, rip, wee, wet, N
Commelina virginica L., 5738, rip, see, wet, N
Murdannia keisak (Hassk.) Hand.-Mazz., 4408, wet, I*
Tradescantia bracteata Small ex Britt., 2415, pin, N
Tradescantia ernestiana E.S., Anderson & Woods., 998, mes, rip, roa, wet, N
Tradescantia hirsuticaulis Small, 4809, nov, pin, roa, wet, N
Tradescantia hirsutiflora Bush, 2586, nov, wee, N
Tradescantia longipes E.S. Anderson & Woods., 694, sha, N, SC
Tradescantia occidentalis (Britt.) Smyth, 2679, lob, mes, wet, N
Tradescantia ohiensis Raf., 5052, mes, nov, rip, roa, wee, wet, N
Tradescantia ozarkana E.S. Anderson & Woods., R. Kirkwood, K-26, UCAC, N, SC

Convolvulaceae

Ipomoea hederacea Jacq., 4630, rip, I

- Ipomoea lacunosa* L., 3855, rip, wee, wet, N
Ipomoea pandurata (L.) G.F.W. Mey., 3147, mes, rip, roa, wet, N
- Cornaceae**
Cornus drummondii C.A. Mey., 1575, rip, N
Cornus florida L., 2230, mes, nov, pin, rip, roa, see, N
Cornus foemina P. Mill., 5763, rip, wet, N
Cornus obliqua Raf., 2089, mes, pin, rip, roa, N
- Crassulaceae**
Penthorum sedoides L., 5767, lob, see, wet, N
Sedum nuttallianum Raf., J.L. Roberts, 277, UARK, N
Sedum pulchellum Michx., 1757, sha, N
Sedum ternatum Michx., 778, mes, rip, N, SC
- Cucurbitaceae**
Melothria pendula L., 3590, rip, roa, N
Sicyos angulatus L., 4115, roa, wee, N
- Cupressaceae**
Juniperus virginiana L. var. *virginiana*, 5504, nov, pin, roa, sha, wet, N
- Cuscutaceae**
Cuscuta compacta Juss. ex Choisy, 4005, rip, roa, see, wet, N
Cuscuta cuspidata Engelm., E. B. Smith, 3370, UARK, N
Cuscuta gronovii Willd. ex J.A. Schultes, 6020, roa, wee, N
Cuscuta indecora Choisy, 4226, wee, N
Cuscuta pentagona Engelm., 6022, rip, sha, roa, wet, N
Cuscuta polygonorum Engelm., 3642, nov, N
- Cyperaceae**
Bulbosytis capillaris (L.) Kunth ex C. B. Clarke, 220, sha, N, SC
Carex albicans Willd. ex Spreng. var. *albicans*, 770, rip, N
Carex albolutescens Schwein., 2393, sha, N
Carex amphibola Steud., 1588, mes, rip, see, N
Carex blanda Dewey, 1476, mes, rip, wet, N
Carex bushii Mackenzie, 2372, roa, sha, N
Carex caroliniana Schwein., 5179, wet, N
Carex cephalophora Muhl. ex Willd., 2098, mes, nov, pin, rip, roa, see, N
Carex cherokeensis Schwein., 4714, mes, rip, wet, N
Carex complanata Torr. & Hook., 2160, lob, pin, rip, wet, N
Carex crinita Lam., 4967, mes, rip, see, wet, N
Carex davisii Schwein. & Torr., 1632, mes, N, SC
Carex debilis Michx. var. *debilis*, 1652, mes, N
Carex digitalis Willd., C. T. Bryson, 4344, UARK, N
Carex festucacea Schkuhr ex Willd., 2542, rip, see, wet, N
Carex flaccosperma Dewey, 5469, pin, rip, roa, wet, N
Carex frankii Kunth, 5481, mes, pin, rip, roa, see, wee, wet, N
Carex glaucodea Tuckerman ex Olney, 5087, pin, roa, wet, N
Carex granularis Muhl. ex Willd. var. *granularis*, 5111, roa, N
Carex grayi Carey, 3603, rip, N
Carex hirsutella Mackenzie, 2100, mes, nov, pin, roa, sha, wet, N
Carex intumescens Rudge, 4958, rip, wet, N
Carex jamesii Schwein., P. E. Hyatt, 6937, UARK, N
Carex jaorii Bailey, 3898, rip, N
Carex laevivaginata (Kukenth.) Mackenzie, J. H. Rettig, 540, UARK, N, SC
Carex latebracteata Waterfall, 5002, pin, sha, N, SC
Carex laxiculmis Schwein., P. E. Hyatt, 7329, UARK, N, SC
Carex laxiflora Lam., J. H. Rettig, 560, BRIT, N, SC
Carex leavenworthii Dewey, 1548, rip, roa, N
Carex leptalea Wahlenb., 2444, see, N
Carex lupulina Muhl. ex Willd., 4959, rip, wet, N
Carex lurida Wahlenb., 5460, mes, pin, rip, roa, see, wet, N
Carex muehlenbergii Schkuhr ex Willd., 3089, mes, nov, pin, roa, sha, N
Carex nigromarginata Schwein., 762, mes, pin, roa, N
Carex oklahomensis Mackenzie, 2384, rip, roa, sha, N
Carex oligocarpa Schkuhr ex Willd., 1435, rip, N
Carex ouachitana Kral, Manhart & Bryson, 2791, mes, N
Carex oxylepis Torr. & Hook. var. *oxylepis*, 2417, mes, pin, roa, N
Carex oxylepis Torr. & Hook. var. *pubescens* J.K. Underwood, 1076, mes, see, N, SC
Carex retroflexa Muhl. ex Willd., 1513, mes, rip, see, N
Carex rosea Schkuhr ex Willd., 2437, mes, rip, see, N
Carex squarrosa L., 5172, pin, N
Carex stricta Lam., E. B. Smith, 3801, BRIT, N, SC

Carex swanii (Fern.) Mackenzie, 2739, nov, N, SC
Carex texensis (Torr.) Bailey, 1499, rip, N
Carex torta Boott ex Tuckerman, 1097, mes, rip,
 see, N, SC
Carex tribuloides Wahlenb., 5494, wet, N
Carex vulpinoidea Michx., 5475, lob, mes, nov, pin,
 rip, roa, see, wet, N
Cyperus aristatus Rottb., E. Sundell, 10606, UARK,
 N
Cyperus echinatus (L.) Wood, 2066, pin, wee, N
Cyperus erythrorhizos Muhl., 4482, wet, N
Cyperus esculentus L., 436, wee, wet, N
Cyperus flavescens L., D. M. Moore, 32971, UARK,
 N
Cyperus iria L., 4549, wee, wet, I
Cyperus lupulinus (Spreng.) Marcks, 3725, nov,
 wee, N
Cyperus polystachyos Rottb. var. *texensis* (Torr.)
 Fern., 4560, wet, N
Cyperus pseudovegetus Steud., 5747, wet, N
Cyperus retroflexus Buckl., 3729, nov, wee, N
Cyperus squarrosus L., 382, wet, N
Cyperus strigosus L., 3324, roa, see, sha, wet, N
Dulichium arundinaceum (L.) Britt., 3257, wet, N,
 SC
Eleocharis acicularis (L.) Roemer & J.A. Schultes,
 3300, wet, N
Eleocharis engelmannii Steud., 2304, rip, sha, wet, N
Eleocharis lanceolata Fern., 5553, roa, N
Eleocharis obtusa (Willd.) J.A. Schultes, 2724, mes,
 rip, roa, sha, wee, wet, N
Eleocharis quadrangulata (Michx.) Roemer & J.A.
 Schultes, 5131, wet, N
Fimbristylis annua (All.) Roemer & J.A. Schultes,
 180, sha, N
Fimbristylis autumnalis (L.) Roemer & J.A.
 Schultes, 4235, wee, wet, N
Fimbristylis vahlII (Lam.) Link, 396, wet, N
Kyllinga pumila Michx., 4419, wee, wet, N
Rhynchospora caduca Ell., 3178, roa, N, SC
Rhynchospora corniculata (Lam.) Gray, 5751, rip,
 wet, N
Rhynchospora globularis (Chapman) Small, 5611,
 roa, N
Rhynchospora glomerata (L.) Vahl, 3568, rip, N
Rhynchospora recognita (Gale) Kral, 2687, lob, rip,
 roa, N
Schoenoplectus pungens (Vahl) Palla var. *pungens*,
 3849, wet, N
Scirpus atrovirens Willd., 5578, roa, wet, N

Scirpus cyperinus (L.) Kunth, 5731, lob, wet, N
Scirpus georgianus Harper, 2310, mes, rip, N
Scirpus pendulus Muhl., 5128, roa, N
Scleria oligantha Michx., 2229, lob, nov, pin, roa,
 sha, N
Scleria triglomerata Michx., 2497, pin, N

Dennstaedtiaceae

Dennstaedtia punctilobula (Michx.) T. Moore, G.
 Oleson, 87-017, UARK, N, SC
Pteridium aquilinum (L.) Kuhn var. *latiusculum*
 (Desv.) Underwood ex Heller, 2151, mes, pin,
 roa, N
Pteridium aquilinum (L.) Kuhn var. *pseudo-*
caudatum (Clute) Heller, 5510, roa, N

Dioscoreaceae

Dioscorea oppositifolia L., 3587, rip, I
Dioscorea villosa L., 5442, mes, pin, rip, N

Dryopteridaceae

Athyrium filix-femina (L.) Roth ssp. *asplenioides*
 (Michx.) Hulten, 5491, lob, mes, rip, see, N
Cystopteris protrusa (Weatherby) Blasdel, 3413,
 rip, N
Cystopteris tennesseensis Shaver, 2770, mes, rip, N
Dryopteris celsa (Wm. Palmer) Knowl., Palmer &
 Pollard ex Small, 2536, see, N, SC
Dryopteris marginalis (L.) Gray, 2430, mes, pin, see,
 N
Onoclea sensibilis L., 1687, see, N
Polystichum acrostichoides (Michx.) Schott, 5479,
 mes, pin, rip, see, wet, N
Woodsia obtusa (Spreng.) Torr. ssp. *obtusa*, 3663,
 mes, nov, pin, N
Woodsia obtusa (Spreng.) Torr. ssp. *occidentalis*
 Windham, 3330, rip, sha, wee, N

Ebenaceae

Diospyros virginiana L., 5500, nov, rip, roa, wet, N

Elaeagnaceae

Elaeagnus umbellata Thunb., 3592, pin, rip, roa,
 wet, I*

Elatinaceae

Elatine triandra Schkuhr, 4041, wet, N

Equisetaceae

Equisetum hyemale L. var. *affine* (Engelm.) A.A. Eat.,
 4457, roa, N

Ericaceae

Gaylussacia baccata (Wangenh.) K. Koch, V. Bates,
 10455, UARK, N, SC

- Lyonia ligustrina* (L.) DC., 5529, mes, rip, see, wet, N
- Rhododendron prinophyllum* (Small) Millais, 289, rip, see, N
- Rhododendron viscosum* (L.) Torr., 2309, mes, pin, rip, see, wee, N
- Vaccinium arboreum* Marsh., 2657, nov, pin, rip, sha, wet, N
- Vaccinium fuscatum* Ait., 2483, see, N
- Vaccinium pallidum* Ait., 1898, mes, nov, pin, see, N
- Vaccinium stamineum* L., 1129, mes, nov, pin, rip, N
- Vaccinium virgatum* Ait., 5040, lob, pin, rip, see, wet, N
- Euphorbiaceae**
- Acalypha gracilens* Gray, 3088, nov, pin, N
- Acalypha monococca* (Engelm. ex Gray) L. Mill. & Gandhi, 3733, nov, pin, sha, wet, N
- Acalypha rhomboidea* Raf., 4132, roa, N
- Acalypha virginica* L., 3136, roa, wee, wet, N
- Chamaesyce humistrata* (Engelm.) Small, 3853, wee, wet, N
- Chamaesyce maculata* (L.) Small, 4157, rip, roa, N
- Chamaesyce nutans* (Lag.) Small, 3854, nov, rip, roa, wee, wet, N
- Croton capitatus* Michx., 4424, roa, N
- Croton glandulosus* L. var. *septentrionalis* Muell.-Arg., 3164, wee, wet, N
- Croton monanthogynus* Michx., 3224, nov, roa, sha, wee, wet, N
- Croton willdenowii* G.L. Webster, 3331, nov, sha, wet, N
- Euphorbia corollata* L., 5519, mes, nov, pin, roa, see, sha, N
- Euphorbia cyathophora* Murr., 3332, mes, nov, sha, N
- Euphorbia dentata* Michx., 6004, rip, roa, wet, N
- Euphorbia spathulata* Lam., 6004, roa, N
- Leptopus phyllanthoides* (Nutt.) G.L. Webster, 5000, pin, N
- Phyllanthus caroliniensis* Walt., 3852, roa, see, wet, N
- Tragia cordata* Michx., 3340, mes, sha, N
- Tragia urticifolia* Michx., R. D. Thomas, 128945, NLU, N
- Fabaceae**
- Albizia julibrissin* Durazz., 3119, pin, rip, wee, I*
- Amorpha fruticosa* L., 4961, lob, rip, roa, N
- Amorpha nitens* Boynt., D. M. Moore, 55-289, UARK, N
- Amorpha ouachitensis* Wilbur, T. Huffman, sn, UARK, N
- Amphicarpaea bracteata* (L.) Fern. var. *bracteata*, 3749, pin, rip, see, N
- Amphicarpaea bracteata* (L.) Fern. var. *comosa* (L.) Fern., 4130, rip, N
- Apios americana* Medik., 5543, pin, rip, roa, see, wet, N
- Astragalus canadensis* L., 3548, nov, pin, N
- Astragalus crassicaipus* Nutt. var. *trichocalyx* (Nutt.) Barneby, L. A. Barloia, 85, UARK, N, SC
- Astragalus distortus* Torr. & Gray var. *distortus*, J.W. Gibbons, 33, UARK, N
- Astragalus distortus* Torr. & Gray var. *engelmannii* (Sheldon) M.E. Jones, 4794, sha, N
- Baptisia alba* (L.) Vent. var. *macrophylla* (Larisey) Isely, 4945, roa, N
- Baptisia bracteata* Muhl. ex Ell. var. *leucophaea* (Nutt.) Kartesz & Gandhi, 1981, nov, pin, rip, roa, wet, N
- Baptisia nuttalliana* Small, 2086, roa, N
- Baptisia sphaerocarpa* Nutt., 4946, roa, N
- Cercis canadensis* L. var. *canadensis*, 5444, mes, pin, rip, roa, sha, N
- Chamaecrista fasciculata* (Michx.) Greene, 3959, nov, sha, wee, N
- Chamaecrista nictitans* (L.) Moench ssp. *nictitans*, 2563, nov, sha, wee, wet, N
- Clitoria mariana* L., 3118, lob, nov, pin, rip, roa, N
- Crotalaria sagittalis* L., 3833, wet, N
- Desmodium canescens* (L.) DC., E. B. Smith, 3773, UARK, N
- Desmodium cuspidatum* (Muhl. ex Willd.) DC. ex Loud. var. *cuspidatum*, 6021, roa, see, N
- Desmodium glutinosum* (Muhl. ex Willd.) Wood, 3933, mes, N
- Desmodium laevigatum* (Nutt.) DC., 4388, lob, N
- Desmodium marilandicum* (L.) DC., 4087, pin, N
- Desmodium nudiflorum* (L.) DC., 3476, lob, mes, pin, N
- Desmodium nuttallii* (Schindl.) Schub., 3404, rip, N
- Desmodium obtusum* (Muhl. ex Willd.) DC., 6009, lob, pin, rip, N
- Desmodium paniculatum* (L.) DC. var. *paniculatum*, 4266, mes, nov, pin, roa, see, N
- Desmodium pauciflorum* (Nutt.) DC., 3366, mes, pin, rip, see, N

Desmodium perplexum Schub., 3997, mes, pin, rip, see, wet, N
Desmodium rotundifolium DC., 4577, mes, N
Galactia regularis (L.) B.S.P., 3731, lob, nov, N
Galactia volubilis (L.) Britt., 3401, roa, sha, N
Gleditsia triacanthos L., 2215, nov, rip, roa, wet, N
Kummerowia stipulacea (Maxim.) Makino, 237, roa, l
Kummerowia striata (Thunb.) Schindl., 3312, lob, nov, roa, wet, l
Lathyrus hirsutus L., 1936, pin, l
Lathyrus latifolius L., 2532, roa, l
Lathyrus venosus Muhl. ex Willd., 1064, mes, nov, pin, N
Lespedeza cuneata (Dum.-Cours.) G. Don, 3288, nov, rip, roa, wee, wet, I*
Lespedeza hirta (L.) Hornem., 3932, lob, nov, pin, roa, N
Lespedeza procumbens Michx., 4591, pin, roa, N
Lespedeza repens (L.) W. Bart., 4387, lob, pin, roa, wee, wet, N
Lespedeza violacea (L.) Pers., 3652, rip, wee, wet, N
Lespedeza virginica (L.) Britt., 4021, pin, roa, N
Medicago lupulina L., 3207, wee, l
Orbexilum pedunculatum (P. Mill.) Rydb. var. *pedunculatum*, 4818, mes, wet, N
Pueraria montana (Lour.) Merr. var. *lobata* (Willd.) Maesen & S. Almeida, 4310, wee, I*
Rhynchosia latifolia Nutt. ex Torr. & Gray, 5563, pin, N
Robinia hispida L., 5088, roa, N
Robinia pseudoacacia L., 3143, mes, nov, pin, rip, wee, wet, N
Robinia viscosa Vent., 1666, roa, N
Senna marilandica (L.) Link, 3620, nov, pin, rip, N
Strophostyles helvula (L.) Eil., 3148, roa, wet, N
Strophostyles umbellata (Muhl. ex Willd.) Britt., 5758, lob, pin, roa, wet, N
Stylosanthes biflora (L.) B.S.P., 4272, pin, roa, sha, N
Tephrosia onobrychoides Nutt., G. Barber, 2201, UARK, N
Tephrosia virginiana (L.) Pers., 2499, nov, pin, roa, N
Trifolium areense L., 5210, roa, l
Trifolium campestre Schreb., 1341, roa, l
Trifolium dubium Sibthorp, C. Reid, 1949, UARK, l
Trifolium incarnatum L., 4854, nov, roa, wee, l
Trifolium pratense L., 1150, pin, rip, roa, wee, wet, l

Trifolium reflexum L., 1315, roa, N
Trifolium repens L., 1149, mes, pin, roa, wee, l
Trifolium vesiculosum Savi, 2604, wee, wet, l
Vicia caroliniana Walt., 1119, pin, wee, wet, N
Vicia minutiflora F.G. Diétr., 4723, wet, N
Vicia sativa L., 4703, nov, rip, roa, wee, wet, l
Vicia tetrasperma (L.) Schreb., 5108, roa, l
Vicia villosa Roth ssp. *varia* (Host) Corb., 2069, nov, roa, wee, l
Vicia villosa Roth ssp. *villosa*, 2713, wet, l
Wisteria floribunda (Willd.) DC., 4300, wet, I*
Wisteria sinensis (Sims) DC., 3369, roa, I*

Fagaceae

Castanea pumila (L.) P. Mill. var. *ozarkensis* (Ashe) Tucker, 5630, mes, nov, pin, see, N, SC
Castanea pumila (L.) P. Mill. var. *pumila*, 195, see, N
Fagus grandifolia Ehrh., 1637, mes, rip, see, N
Quercus acerifolia (Palmer) Stoyanoff & Hess, 3615, nov, N, SC
Quercus alba L., 5472, mes, pin, rip, roa, see, wee, N
Quercus falcata Michx., 5153, lob, mes, nov, pin, N
Quercus marilandica Muenchh., 2633, nov, pin, N
Quercus muehlenbergii Engelm., 4395, mes, nov, pin, rip, roa, sha, N
Quercus nigra L., 4674, rip, wet, N
Quercus pagoda Raf., 1518, rip, N
Quercus palustris Muenchh., 4964, wet, N
Quercus phellos L., 2329, lob, pin, rip, roa, wet, N
Quercus rubra L., 4391, mes, nov, N
Quercus shumardii Buckl. var. *shumardii*, 1739, rip, N
Quercus stellata Wangenh., 4507, nov, pin, wee, N
Quercus velutina Lam., 5620, nov, pin, N

Fumariaceae

Corydalis crystallina Engelm., W. Butler, 57, UCAC, N
Corydalis flavula (Raf.) DC., 4683, rip, N
Corydalis micrantha (Engelm. ex Gray) Gray ssp. *australis* (Chapman) G.B. Ownbey, 774, rip, N

Gentianaceae

Bartonia paniculata (Michx.) Muhl. ssp., *paniculata*, 4007, see, N
Frasera carolinensis Walt., 1750, rip, N
Sabatia angularis (L.) Pursh, 3371, roa, sha, wee, N

Sabatia campestris Nutt., D.M. Eggers Ware, 5483, UARK, N

Geraniaceae

Geranium carolinianum L., 1152, mes, roa, wet, N

Geranium dissectum L., 1563, roa, I

Geranium maculatum L., 1247, rip, N

Grossulariaceae

Itea virginica L., 3267, rip, see, N

Ribes curvatum Small, J. L. Roberts, 617, UARK, N, SC

Haloragaceae

Myriophyllum heterophyllum Michx., 5549, wet, N

Myriophyllum spicatum L., 5161, wet, I*

Proserpinaca palustris L., 5750, wet, N

Hamamelidaceae

Hamamelis vernalis Sarg., 1000, mes, pin, rip, wet, N

Hamamelis virginiana L., 442, mes, nov, pin, rip, see, N

Liquidambar styraciflua L., 3875, pin, rip, see, wee, wet, N

Hippocastanaceae

Aesculus glabra Willd., 4859, mes, nov, rip, see, N

Aesculus pavia L., 1058, mes, N

Hydrangeaceae

Hydrangea arborescens L., 5448, mes, rip, see, N

Hydrocharitaceae

Hydrilla verticillata (L.f.) Royle, 5168, wet, I

Hydrophyllaceae

Hydrolea ovata Nutt. ex Choisy, 5724, wet, N

Hydrophyllum brownei Kral & Bates, 1712, mes, rip, see, N, SC

Nemophila phacelioides Nutt., 4938, rip, roa, wet, N

Phacelia hirsuta Nutt., 1148, mes, roa, wet, N

Phacelia ranunculacea (Nutt.) Constance, 4690, mes, rip, N

Hymenophyllaceae

Trichomanes petersii Gray, J. Peck, 82457, LRU, N, SC

Iridaceae

Belamcanda chinensis (L.) DC., J. E. Moore, sn, UARK, I

Iris cristata Ait., 2095, mes, nov, pin, rip, see, N

Iris pseudacorus L., 4924, wet, I

Iris verna L., D. M. Moore, 510023, UARK, N, SC

Iris virginica L., 4965, wet, N

Sisyrinchium angustifolium P. Mill., 5028, mes, rip, roa, sha, wet, N

Sisyrinchium campestre Bickn., 4795, roa, N

Sisyrinchium langloisii Greene, M. C. Black, 81, UARK, N

Isoetaceae

Isoetes melanopoda Gay & Durieu ex Durieu, 852, see, sha, N

Juglandaceae

Carya alba (L.) Nutt. ex Ell., 5502, lob, mes, nov, pin, roa, wee, wet, N

Carya cordiformis (Wangenh.) K. Koch, 5438, mes, nov, rip, N

Carya texana Buckl., 3645, mes, nov, pin, sha, N

Juglans nigra L., 3463, lob, mes, N

Juncaceae

Juncus acuminatus Michx., 4969, mes, rip, roa, wet, N

Juncus brachycarpus Engelm., 5610, roa, N

Juncus coriaceous Mackenzie, 5732, lob, mes, pin, rip, roa, see, wee, wet, N

Juncus debilis Gray, 4301, wet, N

Juncus dichotomus Ell., 2301, rip, N

Juncus diffusissimus Buckl., 5554, rip, roa, wee, N

Juncus effusus L., 5547, mes, roa, wet, N

Juncus interior Wieg., 5557, roa, N

Juncus marginatus Rostk., 5555, lob, roa, wee, wet, N

Juncus secundus Beauv. ex Poir., 3384, roa, sha, wet, N

Juncus tenuis Willd., 2083, pin, rip, roa, see, sha, wee, wet, N

Juncus torreyi Coville, 3684, lob, wet, N

Juncus validus Coville, 3535, roa, N

Luzula acuminata Raf. var. *acuminata*, 2786, mes, N

Luzula acuminata Raf. var. *carolinae* (S. Wats.) Fern., 613, rip, N, SC

Luzula bulbosa (Wood) Smyth & Smyth, 4791, mes, roa, sha, N

Luzula echinata (Small) F.J. Herm., 647, mes, pin, rip, roa, see, N

Lamiaceae

Ayuga reptans L., 763, roa, I

Clinopodium arkansanum (Nutt.) House, 5573, roa, N

Cunila organoides (L.) Britt., 4106, mes, pin, rip, see, wee, N

- Hedeoma hispida* Pursh, 5199, sha, wet, N
Hedeoma pulegioides (L.) Pers., Simpson, sn, UARK, N
Isanthus brachiatus (L.) B.S.P., E. B. Smith, 3767, UARK, N
Lamium amplexicaule L., 676, rip, roa, N
Lamium purpureum L., 677, rip, roa, wet, N
Lycopus rubellus Moench, 4207, mes, rip, see, wet, N
Lycopus virginicus L., 4655, see, N
Mentha spicata L., Simpson, sn, UARK, I
Monarda fistulosa L. ssp. *fistulosa* var. *stipitatoglandulosa* (Waterfall) Scora, comb. nov. ined., 2571, nov, pin, roa, sha, wee, wet, N
Monarda punctata L., D. Demaree, 57040, APCR, N
Monarda russeliana Nutt. ex Sims, 2045, mes, pin, rip, N
Perilla frutescens (L.) Britt., 4146, mes, pin, rip, I
Physoctegia angustifolia Fern., 5605, roa, N
Prunella vulgaris L., 4953, lob, mes, pin, rip, roa, wee, wet, N
Pycnanthemum albescens Torr. & Gray, 3176, lob, roa, wet, N
Pycnanthemum muticum (Michx.) Pers., 3253, rip, N
Pycnanthemum tenuifolium Schrad., 5497, lob, pin, roa, sha, wet, N
Salvia azurea Michx. ex Lam., D. Demaree, 62848, NLU, N
Salvia lyrata L., 904, mes, rip, roa, wet, N
Scutellaria elliptica Muhl. ex Spreng. var. *elliptica*, 5043, mes, rip, wet, N
Scutellaria lateriflora L., 4049, wet, N
Scutellaria ovata Hill, 2409, mes, nov, pin, wet, N
Stachys eplingii J. Nelson, 3461, mes, pin, N, SC
Stachys tenuifolia Willd., 3594, mes, rip, N
Teucrium canadense L. var. *canadense*, 3420, rip, N
Trichostema dichotomum L., Simpson, sn, UARK, N

Lauraceae

- Lindera benzoin* (L.) Blume, 1619, mes, rip, see, N
Sassafras albidum (Nutt.) Nees, 5511, mes, nov, pin, see, wet, N

Lemnaceae

- Lemna aquinoctialis* Welw., 4030, wet, N
Spirodela punctata (G.F.W. Mey.) C.H. Thompson, 5026, wet, N

Lentibulariaceae

- Urticularia gibba* L., 4303, wet, N

Liliaceae

- Allium canadense* L. var. *canadense*, 1234, pin, rip, roa, wet, N
Allium canadense L. var. *mobile* (Regel) Owenby, 2242, sha, N
Allium vineale L., 2191, wee, I
Amianthium muscitoxicum (Walt.) Gray, 2459, mes, see, N
Camassia scilloides (Raf.) Cory, 4849, nov, N
Erythronium albidum Nutt., 544, rip, N
Erythronium rostratum W. Wolf, 604, nov, rip, see, N
Hemerocallis fulva (L.) L., 1920, nov, I
Lilium michiganense Farw., Mrs. J. Miller, 166, UARK, N
Maianthemum racemosum (L.) Link, 1307, mes, pin, rip, roa, see, N
Melanthium virginicum L., 5483, lob, pin, roa, see, N
Melanthium woodii (J.W. Robbins ex Wood) Bodkin, R. Davis, 1967, APCR, N, SC
Muscari botryoides (L.) P. Mill., 682, roa, I
Nothoscordum bivalve (L.) Britt., 1091, mes, nov, rip, roa, sha, wet, N
Ornithogalum umbellatum L., 957, rip, I
Polygonatum biflorum (Walt.) Ell., 1702, rip, see, N
Stenanthium gramineum (Ker-Gawl.) Morong var. *gramineum*, G. E. Tucker, 15000, APCR, N, SC
Trillium pusillum Michx. var. *ozarkanum* (Palmer & Steyermark) Steyermark, 609, rip, N, SC
Trillium recurvatum Beck, 4941, mes, rip, N
Trillium viridescens Nutt., 1256, rip, wet, N
Uvularia grandiflora Sm., 2412, pin, N
Uvularia perfoliata L., 701, mes, N, SC
Uvularia sessilifolia L., 5044, wet, N

Linaceae

- Linum medium* (Planch.) Britt. var. *texanum* (Planch.) Fern., 3513, roa, wet, N
Linum striatum Walt., 3280, pin, rip, roa, N

Loganiaceae

- Spigelia marilandica* (L.) L., 1439, mes, pin, rip, roa, N

Lycopodiaceae

- Lycopodium digitatum* Dill. ex A. Braun, 1117, pin, N

Lythraceae

- Ammannia coccinea* Rottb., 400, wet, N
Didiplis diandra (Nutt. ex DC.) Wood, 5725, wet,
 N, SC
Rotala ramosior (L.) Koehne, 6042, wee, wet, N

Magnoliaceae

- Magnolia acuminata* (L.) L., 4575, mes, N
Magnolia grandiflora L., 2147, pin, see, N
Magnolia tripetala (L.) L., 1622, mes, rip, see, N

Malvaceae

- Abutilon theophrasti* Medik., D. X Williams,
 ARF0078, UARK, I
Callirhoe pedata (Nutt. ex Hook.) Gray, 1753, sha,
 N
Hibiscus laevis Allioni, 3847, wet, N
Malva neglecta Wallr., Simpson, sn, UARK, I
Sida spinosa L., 3843, roa, wet, N

Marsileaceae

- Pilularia americana* A. Braun, 5201, sha, N, SC

Melastomataceae

- Rhexia mariana* L. var. *interior* (Pennell) Kral &
 Bostick, 3282, rip, roa, sha, N
Rhexia mariana L. var. *mariana*, 2700, lob, wet, N
Rhexia virginica L., 5723, wet, N

Menispermaceae

- Calycocarpum lyonii* (Pursh) Gray, 2581, rip, see,
 wee, N
Cocculus carolinus (L.) DC., 2732, nov, pin, rip, roa,
 wee, wet, N
Menispermum canadense L., 1353, rip, N

Mollugaceae

- Mollugo verticillata* L., 402, wet, N

Monotropaceae

- Monotropa uniflora* L., 4579, pin, N

Moraceae

- Maclura pomifera* (Raf.) Schneid., 1723, rip, wet,
 N
Morus rubra L., 5538, rip, roa, see, wet, N

Najadaceae

- Najas guadalupensis* (Spreng.) Magnus, 4281,
 wet, N

Nyctaginaceae

- Mirabilis albidia* (Walt.) Heimerl, 2600, roa, wee, N

Nymphaeaceae

- Nuphar lutea* (L.) Sm., 5019, wet, N
Nymphaea odorata Ait., 5018, wet, N

Nyssaceae

- Nyssa sylvatica* Marsh., 4966, mes, nov, pin, rip, roa,
 wet, N

Oleaceae

- Fraxinus americana* L., 5493, lob, mes, pin, rip, N
Fraxinus pennsylvanica Marsh., T. Huffman, sn,
 UARK, N
Ligustrum sinense Lour., 4466, lob, mes, rip, roa,
 see, wee, I*

Onagraceae

- Gaura demareei* Raven & Gregory, 250, roa, N
Gaura longiflora Spach, 3840, roa, wee, N
Ludwigia alternifolia L., 5459, lob, mes, pin, roa,
 see, wet, N
Ludwigia decurrens Walt., 3885, lob, wet, N
Ludwigia glandulosa Walt., 3389, wet, N
Ludwigia palustris (L.) Ell., 5097, roa, wet, N
Oenothera fruticosa L., 5010, mes, pin, N
Oenothera laciniata Hill, 2580, roa, wee, N
Oenothera linifolia Nutt., 4978, pin, roa, sha, N
Oenothera villosa Thunb., 4140, rip, roa, N

Ophioglossaceae

- Botrychium biternatum* (Sav.) Underwood, 4628,
 pin, rip, see, N
Botrychium dissectum Spreng., J. E. Moore, sn,
 UARK, N
Botrychium virginianum (L.) Sw., 1069, mes, rip,
 see, N
Ophioglossum crotalophorioides Walt., C. Reid,
 3393.5, UARK, N
Ophioglossum vulgatum L., 2363, sha, N

Orchidaceae

- Cypripedium kentuckiense* C.F. Reed, 841, mes, rip,
 N, SC
Goodyera pubescens (Willd.) R. Br. ex Ait. f., J. E.
 Moore, 3081, UCAC, N
Isotria verticillata Raf., 5661, see, N
Platanthera ciliaris (L.) Lindl., 192, rip, see, N
Platanthera clavellata (Michx.) Luer, 3787, see, N
Platanthera lacera (Michx.) G. Don, 5100, roa, N
Spiranthes cernua (L.) L. C. Rich., 4483, roa, wet, N
Spiranthes tuberosa Raf., 208, sha, N
Spiranthes vernalis Engelm. & Gray, 2706, roa, wet,
 N

Orobanchaceae

- Epifagus virginiana* (L.) W. Bart., 3407, rip, N
Orobanche uniflora L., C. Hunter, 70, UARK, N

Osmundaceae

- Osmunda cinnamomea* L., 986, rip, see, N
Osmunda regalis L., 5753, mes, pin, see, wet, N

Oxalidaceae

- Oxalis corniculata* L., 675, roa, N
Oxalis stricta L., 5034, lob, mes, pin, rip, roa, wee, wet, N
Oxalis violacea L., 884, mes, pin, rip, roa, see, sha, N

Papaveraceae

- Sanguinaria canadensis* L., 610, rip, roa, see, N

Passifloraceae

- Passiflora incarnata* L., 5523, rip, roa, wee, N
Passiflora lutea L., 5518, nov, pin, rip, roa, wee, wet, N

Phytolaccaceae

- Phytolacca americana* L., 5526, nov, pin, rip, roa, wee, wet, N

Pinaceae

- Pinus echinata* P. Mill., 3086, pin, rip, N
Pinus strobus L., 4574, mes, N
Pinus taeda L., 5761, lob, nov, wet, N

Plantaginaceae

- Plantago aristata* Michx., 2578, roa, sha, wee, N
Plantago heterophylla Nutt., Hardin, 606, APCR, N
Plantago lanceolata L., 2124, roa, wee, I
Plantago rugelii Dcne., 2540, rip, roa, see, N
Plantago virginica L., 4774, rip, roa, wee, N

Platanaceae

- Platanus occidentalis* L., 1813, rip, N

Poaceae

- Agrostis gigantea* Roth, 4544, pin, rip, I
Agrostis hyemalis (Walt.) B.S.P., 5078, rip, roa, wet, N
Agrostis perennans (Walt.) Tuckerman, E. B. Smith, 3753, UARK, N
Aira caryophylla L., 1163, roa, I
Aira elegans Willd. ex Kunth, D. M. Moore, 55- 291, UARK, I
Alopecurus carolinianus Walt., 910, roa, N
Andropogon gerardii Vitman, 3546, lob, nov, pin, rip, roa, sha, N
Andropogon ternarius Michx., 4505, rip, N
Andropogon virginicus L. var. *virginicus*, 6025, roa, N
Anthoxanthum aristatum Boiss., 5149, roa, I
Anthoxanthum odoratum L., 878, mes, I

- Aristida dichotoma* Michx., 218, roa, sha, N
Aristida oligantha Michx., 4312, wee, N
Arthraxon hispidus (Thunb.) Makino, 4254, roa, wet, I
Arundinaria gigantea (Walt.) Muhl., 5480, mes, rip, see, N
Axonopus furcatus (Fluegge) A.S. Hitchc., 4613, wet, N
Brachyelytrum erectum (Schreb. ex Spreng.) Beauv., 3356, mes, nov, pin, rip, see, N
Bromus catharticus Vahl, 4895, roa, I
Bromus commutatus Schrad., 1682, wet, I
Bromus hordeaceus L., 1030, wee, I
Bromus japonicus Thunb. ex Murr., 2072, nov, wee, I
Bromus pubescens Muhl. ex Willd., 1809, mes, nov, pin, rip, roa, sha, N
Bromus racemosus L., 1569, roa, wee, I
Bromus secalinus L., 2749, nov, rip, roa, I
Chasmanthium latifolium (Michx.) Yates, 2250, mes, pin, rip, roa, sha, N
Chasmanthium laxum (L.) Yates, 3489, lob, mes, see, N
Chasmanthium sessiliflorum (Poir.) Yates, 3480, mes, pin, roa, wet, N
Cynodon dactylon (L.) Pers., 4474, roa, wee, wet, I*
Dactylis glomerata L., 5601, nov, pin, roa, sha, wee, I
Danthonia spicata (L.) Beauv. ex Roemer & J.A. Schultes, 1925, nov, pin, roa, sha, wee, N
Diarrhena americana Beauv., 3676, mes, nov, N
Diarrhena obovata (Gleason) Brandenburg, 3873, rip, sha, N
Dichantherium acuminatum (Sw.) Gould & C.A. Clark var. *acuminatum*, 5436, pin, rip, roa, sha, wee, wet, N
Dichantherium boscii (Poir.) Gould & C.A. Clark, 2022, mes, nov, pin, rip, N
Dichantherium clandestinum (L.) Gould, 3493, mes, N
Dichantherium commutatum (J.A. Schultes) Gould, 1354, mes, nov, pin, rip, roa, see, N
Dichantherium depauperatum (Muhl.) Gould, 1327, pin, roa, N
Dichantherium dichotomum (L.) Gould, 2346, mes, pin, rip, roa, see, wet, N
Dichantherium laxiflorum (Lam.) Gould, 2062, roa, wee, wet, N
Dichantherium linearifolium (Scribn. ex Nash) Gould, 4982, mes, nov, pin, sha, N

- Dichanthelium oligosanthes* (J.A. Schultes) Gould, 1370, wee, N
- Dichanthelium ravenelii* (Scribn. & Merr.) Gould, 5062, pin, N
- Dichanthelium scoparium* (Lam.) Gould, 3240, pin, roa, sha, wet, N
- Dichanthelium sphaerocarpon* (Ell.) Gould var. *isophyllum* (Scribn.) Gould & C.A. Clark, 5463, lob, mes, pin, rip, roa, sha, wet, N
- Dichanthelium sphaerocarpon* (Ell.) Gould var. *sphaerocarpon*, 2693, lob, mes, pin, sha, N
- Digitaria ciliaris* (Retz.) Koel., 3162, roa, wee, wet, N
- Digitaria ischaemum* (Schreb.) Schreb. ex Muhl., 4232, mes, roa, wee, wet, I
- Digitaria sanguinalis* (L.) Scop., 3775, pin, rip, wet, N
- Digitaria violascens* Link, 213, sha, I
- Echinochloa colona* (L.) Link, 4609, wet, I
- Echinochloa muricata* (Beauv.) Fern., 5721, rip, roa, wee, wet, I
- Elyusine indica* (L.) Gaertn., 4409, wee, wet, I
- Elymus canadensis* L., 2592, wee, N
- Elymus hystrix* L., 5579, nov, rip, N
- Elymus villosus* Muhl. ex Willd., 2583, nov, wee, N
- Elymus virginicus* L. var. *virginicus*, 5474, pin, rip, roa, see, wee, wet, N
- Eragrostis capillaris* (L.) Nees, 3714, nov, N
- Eragrostis curvula* (Schrad.) Nees, 3456, mes, roa, wee, I
- Eragrostis hirsuta* (Michx.) Nees, 4309, wee, N
- Eragrostis hypnoides* (Lam.) B.S.P., 5994, roa, wet, N
- Festuca paradoxa* Desv., 1961, lob, pin, N
- Festuca subverticillata* (Pers.) Alexeev, 1621, mes, pin, rip, see, wee, N
- Glycena striata* (Lam.) A.S. Hitchc., 2325, mes, pin, rip, see, sha, N
- Holcus lanatus* L., 5151, roa, I*
- Hordeum pusillum* Nutt., 1558, roa, wet, N
- Leersia oryzoides* (L.) Sw., 4377, roa, wet, N
- Leersia virginica* Willd., 4514, lob, mes, pin, rip, see, N
- Lolium arundinaceum* (Schreb.) S.J. Darbyshire, 2187, mes, roa, sha, wee, I*
- Lolium perenne* L. ssp. *multiflorum* (Lam.) Husnot, 2200, roa, sha, wee, I
- Lolium perenne* L. ssp. *perenne*, 1794, nov, rip, roa, sha, wet, I
- Melica nutans* (Scribn.) Nutt. ex Piper, 2750, nov, N
- Microstegium vimineum* (Trin.) A. Camus, 441, mes, pin, rip, roa, wee, wet, I*
- Muhlenbergia schreberi* J.F. Gmel., D. M. Moore, 420407, UARK, N
- Muhlenbergia sobolifera* (Muhl. ex Willd.) Trin., 3957, mes, nov, N
- Muhlenbergia sylvatica* Torr. ex Gray, 4219, mes, wee, N
- Muhlenbergia tenuiflora* (Willd.) B.S.P., No collector listed, sn, UAM, N
- Oplismenus hirtellus* (L.) Beauv., D. M. Moore, 410404, UARK, N
- Panicum anceps* Michx., 3827, lob, nov, pin, rip, roa, see, wet, N
- Panicum capillare* L., 3736, nov, roa, N
- Panicum dichotomiflorum* Michx., 4616, nov, pin, wet, N
- Panicum flexile* (Gattinger) Scribn., 4308, wee, N
- Panicum philadelphicum* Bernh. ex Trin., 217, sha, N
- Panicum rigidulum* Bosc ex Nees, 4138, rip, roa, wet, N
- Panicum virgatum* L., 3865, lob, nov, pin, rip, roa, wee, wet, N
- Paspalum dilatatum* Poir., 3537, roa, wee, wet, I
- Paspalum dissectum* (L.) L., 378, wet, N
- Paspalum flordanum* Michx., 4267, roa, N
- Paspalum laeve* Michx., 3202, wee, wet, N
- Paspalum notatum* Fluegge var. *saurae* Parodi, 3654, lob, roa, wee, I
- Paspalum setaceum* Michx., 3524, roa, wet, N
- Paspalum urvillei* Steud., 4278, wet, I
- Pennisetum glaucum* (L.) R.Br., 3777, pin, rip, wee, wet, I
- Phleum pratense* L., 4719, sha, wet, I
- Piptochaetium avenaceum* (L.) Parodi, 1330, mes, pin, roa, N
- Poa annua* L., 4709, rip, roa, wet, I
- Poa autumnalis* Muhl. ex Ell., 895, mes, see, N
- Poa bulbosa* L., 4910, roa, I
- Poa pratensis* L., 4912, roa, N
- Poa sylvestris* Gray, 1114, mes, rip, N
- Saccharum alopecuroidum* (L.) Nutt., 4211, roa, N
- Saccharum brevibarbe* (Michx.) Pers. var. *contortum* (Ell.) R. Webster, 3553, rip, roa, wee, N
- Sacciolepis striata* (L.) Nash, 4497, rip, N, SC
- Schizachyrium scoparium* (Michx.) Nash, 4355, nov, pin, roa, sha, N

Secale cereale L., 1342, roa, sha, wee, I
Setaria parviflora (Poir.) Kerguelen, 2386, roa, sha, wee, wet, N
Sorghastrum nutans (L.) Nash, 4018, roa, N
Sorghum halepense (L.) Pers., 3612, rip, roa, wee, wet, I*
Sphenopholis nitida (Biehler) Scribn., 2008, nov, N
Sphenopholis obtusata (Michx.) Scribn., 1322, rip, roa, N
Sporobolus clandestinus (Biehler) A.S. Hitchc., R. L. McGregor, 38721, UARK, N
Sporobolus compositus (Poir.) Merr. var. *compositus*, 219, sha, N
Sporobolus vaginiflorus (Torr. ex Gray) Wood, 4320, wee, N
Steinchisma hians (Ell.) Nash, 2176, rip, roa, sha, wee, wet, N
Stenotaphrum secundatum (Walt.) Kuntze, 4060, roa, N
Tridens flavus (L.) A.S. Hitchc. var. *flavus*, 3235, mes, nov, pin, roa, sha, N
Tridens strictus (Nutt.) Nash, 3923, roa, wet, N
Tripsacum dactyloides (L.) L., 3530, roa, N
Vulpia myuros (L.) K.C. Gmel., 2231, roa, sha, wee, I
Vulpia octoflora (Walt.) Rydb., 1288, pin, wet, N

Podostemaceae
Podostemum ceratophyllum Michx., J. E. Moore, sn, UARK, N, SC

Polemoniaceae
Phlox divaricata L. ssp. *laphamii* (Wood) Wherry, 1464, rip, wee, N
Phlox paniculata L., 3588, rip, roa, N
Phlox pilosa L. ssp. *ozarkana* (Wherry) Wherry, 4985, pin, N
Phlox pilosa L. ssp. *pilosa*, 902, mes, nov, pin, rip, roa, N
Polemonium reptans L., 1589, rip, N

Polygalaceae
Polygala ambigua Nutt., 2185, nov, pin, sha, wee, N
Polygala polygama Walt., D.M. Moore, 4176, UARK, N
Polygala sanguinea L., 5075, roa, sha, N

Polygonaceae
Eriogonum longifolium Nutt., 4651, sha, N
Polygonella americana (Fisch. & C.A. Mey.) Small, 3633, nov, N

Polygonum aviculare L., 492, wee, I
Polygonum caespitosum Blume var. *longisetum* (de Bruyn) A.N. Stewart, 3995, mes, rip, see, wee, N
Polygonum convolvulus L., 1921, nov, I
Polygonum hydropiperoides Michx., 6041, lob, rip, roa, sha, wet, N
Polygonum lapathifolium L., 4554, wet, N
Polygonum pensylvanicum L., 4149, rip, roa, wet, N
Polygonum punctatum Ell., 3994, rip, see, wee, wet, N
Polygonum sagittatum L., 266, rip, see, N
Polygonum scandens L., 325, mes, nov, rip, N
Polygonum setaceum Baldw., 3528, roa, N
Polygonum tenue Michx., 4397, nov, sha, N
Polygonum virginianum L., 3839, mes, rip, see, N
Rumex acetosella L., 1553, rip, roa, sha, I
Rumex altissimus Wood, 1477, wet, N
Rumex conglomeratus Murr., H.H. Iltis, 5110, UARK, I
Rumex crispus L., 3206, nov, roa, wee, wet, I
Rumex hastatulus Baldw., 5175, wee, wet, N
Rumex obtusifolius L., 1707, rip, roa, I
Rumex pulcher L., 2602, wee, I

Polypodiaceae

Pleopeltis polypodioides (L.) Andrews & Windham ssp. *michauxianum* (Weatherby) Andrews & Windham, 1111, mes, nov, pin, rip, see, sha, N

Pontederiaceae

Heteranthera limosa (Sw.) Willd., 4031, wet, N

Portulacaceae

Claytonia virginica L., 1050, lob, mes, nov, pin, rip, roa, see, wet, N
Talinum calycinum Engelm., 2644, nov, sha, N

Potamogetonaceae

Potamogeton diversifolius Raf., 6029, wet, N
Potamogeton nodosus Poir., 3887, wet, N
Potamogeton pulcher Tuckerman, 5015, wet, N
Potamogeton pusillus L., 5024, wet, N

Primulaceae

Dodecatheon meadia L., 4782, sha, N
Lysimachia lanceolata Walt., 2339, mes, rip, N
Lysimachia quadriflora Sims, 4948, roa, N
Sarnolus valerandi L. ssp. *parviflorus* (Raf.) Hulten, 3181, mes, roa, see, wee, N

Pteridaceae

Adiantum capillus-veneris L., Mayo, 275, HEND, N

Adiantum pedatum L., 4576, mes, N
Cheilanthes lanosa (Michx.) D.C. Eat., 2731, nov,
 pin, N
Cheilanthes tomentosa Link, W. C. Taylor, 918,
 UARK, N

Ranunculaceae

Actaea pachypoda Ell., 2785, mes, N
Anemone virginiana L., 6008, lob, rip, see, N
Clematis reticulata Walt., 2589, wee, N
Delphinium carolinianum Walt. ssp. *carolinianum*,
 1752, mes, pin, sha, N
Delphinium newtonianum Moore, E. Hardcastle,
 AR13, UARK, N, SC
Delphinium tricornis Michx., 1010, mes, rip, N
Enemion biternatum Raf., C. Hunter, 58, UARK, N
Hepatica nobilis Schreb. var. *obtusata* (Pursh)
 Steyermark, 611, mes, rip, N
Ranunculus abortivus L., 4747, rip, wet, N
Ranunculus bulbosus L., 4684, rip, I
Ranunculus fascicularis Muhl. ex Bigelow, 4783,
 sha, N
Ranunculus harveyi (Gray) Britt., 4784, mes, rip, roa,
 sha, N
Ranunculus hispidus Michx. var. *nitidus* (Chap-
 man) T. Duncan, M. C. Black, 39, UARK, N
Ranunculus laxicaulis (Torr. & Gray) Darby, 4957,
 wet, N
Ranunculus micranthus Nutt., 4687, nov, rip, roa,
 wet, N
Ranunculus pusillus Poir., 5508, roa, see, wet, N
Ranunculus recurvatus Poir., 1505, mes, rip, see, N
Ranunculus sardous Crantz, 2186, roa, wee, wet, I
Thalictrum dasycarpum Fisch. & Ave-Lall., 1778,
 rip, N
Thalictrum revolutum DC., 3602, rip, N
Thalictrum thalictroides Eames & Boivin, 706, mes,
 nov, pin, rip, see, wet, N

Rhamnaceae

Berberis scandens (Hill) K. Koch, 5742, mes, rip,
 roa, see, wet, N
Ceanothus americanus L., 5003, pin, N
Ceanothus herbaceus Raf., J. C. Baker, 60, UAM, N
Fragula caroliniana (Walt.) Gray, 5537, mes, nov,
 pin, rip, sha, wee, wet, N

Rosaceae

Agrimonia parviflora Ait., 4256, roa, N
Agrimonia rotostellata Wallr., 5740, lob, mes, pin, rip,
 see, N

Amelanchier arborea (Michx. f.) Fern., 5749, lob,
 mes, pin, rip, sha, N
Chaenomeles speciosa (Sweet) Nakai, 744, see, I
Crataegus berberifolia Torr. & Gray, 2201, rip, roa,
 wet, N
Crataegus crus-galli L., 2629, nov, N
Crataegus intricata Lange, D. M. Moore, 56-55,
 UARK, N
Crataegus marshallii Egglest., 5532, mes, nov, pin,
 rip, wet, N
Crataegus spatulata Michx., 5450, pin, rip, roa,
 wet, N
Crataegus uniflora Muenchh., 4508, pin, N
Crataegus viridis L. var. *viridis*, 1023, roa, N
Duchesnea indica (Andr.) Focke, 1523, rip, I
Fragaria virginiana Duchesne, 1309, rip, roa, N
Geum canadense Jacq., 5454, mes, nov, rip, see, N
Photinia pyrifolia (Lam.) Robertson & Phipps,
 2447, see, N
Physocarpus opulifolius (L.) Maxim., 2330, mes, rip,
 wet, N
Porteranthus stipulatus (Muhl. ex Willd.) Britt,
 3638, lob, nov, roa, wee, N
Potentilla recta L., 2282, nov, rip, roa, sha, I
Potentilla simplex Michx., 1115, nov, pin, rip, roa,
 wee, N
Prunus americana Marsh., 3920, nov, pin, rip, roa,
 N
Prunus mexicana S. Wats., 5505, nov, pin, wet, N
Prunus persica (L.) Batsch, 2617, wee, I
Prunus serotina Ehrh., 5522, lob, nov, pin, roa, wee,
 wet, N
Prunus umbellata Ell., 4856, nov, N
Pyrus calleryana Dcne., 571, roa, I*
Pyrus communis L., 2616, wee, I
Rosa carolina L., 2040, lob, mes, nov, pin, rip, roa,
 N
Rosa chinensis Jacq., 5139, roa, I
Rosa multiflora Thunb. ex Murr., 1345, roa, I*
Rosa setigera Michx., 5462, pin, rip, roa, see, wee,
 N
Rubus argutus Link, 5032, lob, rip, see, wet, N
Rubus bushii Bailey, 1126, pin, N
Rubus discolor Weihe & Nees, 5091, roa, I
Rubus flagellaris Willd., 1908, mes, nov, pin, roa,
 wee, N
Rubus ostryfolius Rydb., 1997, pin, N
Rubus pensilvanicus Poir., 2726, mes, nov, N
Rubus trivialis Michx., 2131, roa, wee, wet, N

Spiraea xbilliardii Herincq. (pro sp.) [*douglasii* x *salicifolia*], 2797, roa, N

Rubiaceae

Cephalanthus occidentalis L., 3301, rip, roa, wet, N

Cruciata pedemontana (Bellardi) Ehrend., 5101, roa, I

Diodia teres Walt., 388, nov, roa, wee, wet, N

Diodia virginiana L., 5760, rip, wee, wet, N

Galium aparine L., 1444, mes, nov, rip, roa, see, N

Galium arkansanum Gray, 1999, mes, nov, pin, see, N

Galium circaeazans Michx., 3700, lob, mes, pin, rip, N

Galium obtusum Bigel. ssp. *obtusum*, 4956, sha, wet, N

Galium pilosum Ait., 5528, lob, rip, wee, wet, N

Galium tinctorium L., 2712, roa, wet, N

Galium triflorum Michx., 2433, rip, see, N

Hedyotis nigricans (Lam.) Fosberg, 3896, rip, sha, N

Houstonia caerulea L., 4804, roa, sha, wet, N

Houstonia longifolia Gaertn., 4980, pin, N

Houstonia micrantha (Shinners) Terrell, 679, roa, N

Houstonia ouachitana (E.B.Sm.) Terrell, 1107, mes, nov, pin, rip, N, SC

Houstonia purpurea L., 5451, mes, pin, rip, see, N

Houstonia pusilla Schoepf, 716, mes, pin, rip, roa, sha, wet, N

Mitchella repens L., 1398, lob, mes, pin, rip, see, N

Sherardia arvensis L., 4734, rip, roa, wee, I

Rutaceae

Poncirus trifoliata (L.) Raf., 1401, rip, roa, wet, I*

Ptelea trifoliata L., 2741, nov, N

Zanthoxylum clava-herculis L., 4003, roa, N

Salicaceae

Populus alba L., 3557, wee, I

Populus deltoides Bartr. ex Marsh. ssp. *deltoides*, R. Avra, sn, UCAC, N

Salix caroliniana Michx., 1089, mes, rip, roa, see, wet, N

Salix nigra Marsh., 4975, roa, wet, N

Sapindaceae

Cardiospermum halicacabum L., 4119, rip, N

Sapotaceae

Sideroxylon lanuginosum Michx., 2751, nov, pin, rip, wet, N

Saxifragaceae

Heuchera americana L. var. *americana*, 2763, mes, nov, pin, N

Heuchera americana L. var. *hirsuticaulis* (Wheelock) Rosendahl, Butters & Lakela, 4835, nov, N

Saxifraga palmeri Bush, 600, rip, N

Scrophulariaceae

Agalinis fasciculata (Ell.) Raf., 4386, lob, wet, N

Agalinis tenuifolia (Vahl) Raf., 4501, pin, rip, N

Aureolaria grandiflora (Benth.) Pennell, 439, pin, rip, roa, wet, N

Aureolaria pectinata (Nutt.) Pennell, M. Stewart, 87-529, UAM, N

Gratiola brevifolia Raf., 3269, rip, N

Gratiola neglecta Torr., 5033, wet, N

Gratiola pilosa Michx., 3382, wet, N

Lindernia dubia (L.) Pennell, 5476, rip, wee, wet, N

Mecardonia acuminata (Walt.) Small, 4384, lob, N

Mimulus alatus Ait., 3278, mes, rip, see, wet, N

Nuttallianthus canadensis (L.) D.A. Sutton, 1147, roa, N

Pedicularis canadensis L., 4725, mes, rip, N

Penstemon arkansanus Pennell, 4989, pin, rip, roa, N

Penstemon digitalis Nutt. ex Sims, 1726, mes, rip, roa, sha, N

Penstemon tubiflorus Nutt., 1834, mes, N

Scrophularia marilandica L., 3961, mes, rip, N

Verbascum blattaria L., 5208, roa, wee, wet, I

Verbascum thapsus L., 3746, wee, I

Veronica arvensis L., 4722, rip, roa, wet, I

Veronica peregrina L., 4710, wet, N

Veronica persica Poir., 566, roa, I

Veronicastrum virginicum (L.) Farw., 3764, pin, N

Selaginellaceae

Selaginella apoda (L.) Spring, D.M. Moore, 430154, UARK, N

Smilacaceae

Smilax bona-nox L., 5046, lob, mes, nov, pin, rip, roa, see, wee, wet, N

Smilax glauca Walt., 5045, mes, rip, see, wee, wet, N

Smilax herbacea L., 3632, nov, N

Smilax lasioneura Hook., 1593, mes, N

Smilax laurifolia L., 451, see, N

Smilax rotundifolia L., 4962, lob, mes, pin, rip, see, sha, wee, wet, N

Smilax tamnoides L., 3425, rip, wet, N

Solanaceae

- Datura stramonium* L., Simpson, sn, UARK, I
Physalis angulata L., 3867, wet, N
Physalis heterophylla Nees, 3518, rip, roa, N
Physalis pubescens L., 4556, mes, wet, N
Solanum carolinense L., 5030, rip, roa, wee, wet, N
Solanum ptychanthum Dunal, 4118, mes, nov, pin, rip, wee, wet, N

Sparganiaceae

- Sparganium androcladum* (Engelm.) Morong, 5772, wet, N

Staphyleaceae

- Staphylea trifolia* L., 5455, rip, N

Styracaceae

- Halesia tetraptera* Ellis var. *monticola* (Rehd.) Reveal & Seldin, D. M. Moore, 69007, UARK, N
Styrax grandifolius Ait., 5471, mes, rip, N

Thelypteridaceae

- Phegopteris hexagonoptera* (Michx.) Fee, 4341, mes, pin, rip, N
Thelypteris noveboracensis (L.) Nieuwl., 4245, rip, N, SC

Thymelaeaceae

- Dirca palustris* L., 708, mes, N

Tiliaceae

- Tilia americana* L. var. *americana*, 5443, mes, nov, pin, rip, N
Tilia americana L. var. *caroliniana* (P. Mill.) Castigl., 2105, pin, rip, N

Typhaceae

- Typha angustifolia* L., 5516, wet, I
Typha latifolia L., 5545, roa, wet, N

Ulmaceae

- Celtis laevigata* Willd., 6014, lob, nov, rip, sha, wet, N
Celtis occidentalis L., R. D. Thomas, 128988, NLU, N
Celtis tenuifolia Nutt., 1899, nov, pin, rip, sha, N
Ulmus alata Michx., 5051, pin, rip, roa, wet, N
Ulmus americana L., 6005, nov, rip, see, wet, N
Ulmus pumila L., 4597, roa, I
Ulmus rubra Muhl., 1943, pin, rip, see, N

Urticaceae

- Boehmeria cylindrica* (L.) Sw., 3250, mes, rip, roa, see, N
Laportea canadensis (L.) Weddell, 4444, rip, N
Pilea pumila (L.) Gray, 3879, mes, rip, see, N

- Urtica chamaedryoides* Pursh, M. C. Black, 43, UARK, N

Valerianaceae

- Valerianella longiflora* (Torr. & Gray) Walp., T. Witsell, 01-0251, UARK, N
Valerianella nuttallii (Torr. & Gray) Walp., E. Sundell, 2304, UAM, N, SC
Valerianella palmeri Dyal, 4678, rip, N, SC
Valerianella radiata (L.) DuRoi, 1320, mes, pin, rip, roa, sha, wee, wet, N

Verbenaceae

- Callicarpa americana* L., 5513, nov, pin, rip, wet, N
Glandularia canadensis (L.) Nutt., 661, mes, roa, sha, N
Phryma leptostachya L., 5449, mes, nov, pin, rip, N
Verbena brasiliensis Vell., 4559, rip, wet, I
Verbena stricta Vent., Simpson, sn, UARK, N
Verbena urticifolia L., 3999, mes, rip, wee, N

Violaceae

- Hybanthus concolor* (T. F. Forst.) Spreng., 3670, mes, N
Viola affinis Le Conte, 4887, mes, pin, rip, see, N
Viola bicolor Pursh, 652, nov, roa, sha, wet, N
Viola lanceolata L., 4728, rip, N
Viola palmata L., 4812, pin, wet, N
Viola pedata L., 587, mes, nov, pin, rip, roa, sha, wee, wet, N
Viola pubescens Ait., 790, rip, see, N
Viola sagittata Ait., 653, lob, pin, rip, roa, sha, wet, N
Viola sororia Willd., 732, mes, rip, see, N
Viola striata Ait., 954, rip, see, N
Viola villosa Walt., 779, rip, N

Vitaceae

- Ampelopsis arborea* (L.) Koehne, 4114, rip, roa, N
Ampelopsis cordata Michx., 3472, mes, roa, N
Parthenocissus quinquefolia (L.) Planch., 5446, mes, nov, pin, rip, roa, see, sha, N
Vitis aestivalis Michx., 3596, mes, pin, nov, rip, N
Vitis cinerea (Engelm.) Millard var. *cinerea*, 5517, pin, rip, roa, wee, wet, N
Vitis palmata Vahl, 4048, wet, N
Vitis rotundifolia Michx. var. *rotundifolia*, 5050, nov, pin, rip, roa, see, wet, N
Vitis rupestris Scheele, V. Bates, 10447, UARK, N
Vitis vulpina L., 5744, mes, pin, rip, wee, wet, N

Xyridaceae

- Xyris jupicai* L. C. Rich., 3889, rip, N

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